

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-0028886

Owner: City of Blue Springs
Address: 903 West Main, Blue Spring, MO 64015

Continuing Authority: Same as above
Address: Same as above

Facility Name: Sni-A-Bar Wastewater Treatment Facility
Facility Address: 4600 Block South Seymore Rd, Grain Valley, MO 64029

Legal Description: See page two (2)
Latitude/Longitude: See page two (2)

Receiving Stream: See page two (2)
First Classified Stream and ID: See page two (2)
USGS Basin & Sub-watershed No.: See page two (2)

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

FACILITY DESCRIPTION

See page two (2).

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

September 1, 2014
Effective Date


Sara Parker Pauley, Director, Department of Natural Resources

August 31, 2019
Expiration Date


John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued)

Outfall #001 - POTW - SIC #4952 - Certified "B" Operator Required

Activated Sludge / Secondary Clarification / Tertiary Filtration/ Ultraviolet Disinfection / Sludge Digestion / Sludge Reed Beds / Sludge Treatment Lagoons. Sludge is hauled by contractor.

Design population equivalent is 98,883
Design flow is 10.0 MGD.
Actual flow is 4.3 MGD.
Design sludge production is 2,131 dry tons/year.

Legal Description: NW ¼, SE ¼, NW ¼, Sec. 25, T49N, R30W, Jackson County
UTM: X=397997 Y=4320905
Receiving Stream: Sni-A-Bar Creek (P)
First Classified Stream and ID: Sni-A-Bar Creek (P) (00399) 303(d) List
USGS Basin & Sub-watershed No.: (10300101-0504)

Outfall #002 – Discharges from this outfall is no longer authorized, and shall be subject to 40 CFR 122.41(m) and reported according to 40 CFR 122.41(m)(3)(i) & (ii).

Outfall S1 - In-Stream monitoring. Sample immediately above the confluence of Sni-A-Bar Creek and Outfall #001.

Legal Description: NW ¼, SE ¼, NW ¼, Sec. 25, T49N, R30W, Jackson County
UTM Coordinates: X=398011; Y=4320889
Receiving Stream: Sni-A-Bar Creek (P)
First Classified Stream and ID: Sni-A-Bar Creek (P) (00399) 303(d) List
USGS Basin & Sub-watershed No.: (10300101-0504)

Outfall S2 - In-Stream monitoring. Approximately 0.25 miles below the discharge location of Outfall #001 of this facility.

Legal Description: SE ¼, NE ¼, NW ¼, Sec. 25, T49N, R30W, Jackson County.
UTM Coordinates: X=398293; Y= 432103
Receiving Stream: Sni-A-Bar Creek (P)
First Classified Stream and ID: Sni-A-Bar Creek (P) (00399) 303(d) List
USGS Basin & Sub-watershed No.: (10300101-0504)

OUTFALL #001	TABLE A-1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				PAGE NUMBER 3 of 11	
					PERMIT NUMBER MO-0028886	
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 September 1, 2014 , and remain in effect until expiration of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	MGD	*		*	once/day	24 hr. total
Biochemical Oxygen Demand ₅ (May 1 – October 31) (November 1 – April 30)	mg/L		21 27	14 18	once/week	composite**
Total Suspended Solids (May 1 – October 31) (November 1 – April 30)	mg/L		23 27	15 18	once/week	composite**
pH – Units	SU	***		***	once/week	grab
Ammonia as N (April 1 – September 30) (October 1 – March 31)	mg/L	2.2 4.7		0.8 1.8	once/week	grab
<i>E. coli</i> (Note 1)	#/100 mL		1030	206	once/week	grab
Oil & Grease	mg/L	15		10	once/month	grab
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	DAILY MINIMUM	WEEKLY AVERAGE MINIMUM	MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Dissolved Oxygen (May 1 – October 31) (November 1 – April 30)	mg/L	6.0 7.5		6.0 7.5	once/week	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2014</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

* Monitoring requirement only.

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

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

OUTFALL #001	TABLE A-2. WHOLE EFFLUENT TOXICITY FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS			PAGE NUMBER 4 of 11		
				PERMIT NUMBER MO-0028886		
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 on September 1, 2014 , 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
Acute Whole Effluent Toxicity (Note 2)	TU _a	*			once/year	composite**
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2015</u> .						
Chronic Whole Effluent Toxicity (Note 3)	TU _c	*			once/permit cycle	composite**
<u>WET TEST</u> REPORTS SHALL BE SUBMITTED <u>ONCE PER PERMIT CYCLE</u> ; THE FIRST REPORT IS DUE BY <u>JANUARY 28, 2019</u> .						

* Monitoring requirement only.

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

Note 2 – The Acute WET test shall be conducted once per year during the 1st, 2nd, 3rd, and 5th year of the permit cycle. See Special Condition #13 for additional requirements.

Note 3 –The Chronic WET test shall be conducted during the 4th year of the permit cycle. See Special Condition #14 for additional requirements.

TABLE A-3. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 5 of 11	
					PERMIT NUMBER MO-0028886	
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 this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #S1, S2 – In Stream Monitoring</u>						
Stream Flow	CFS	*		*	once/quarter****	grab
Dissolved Oxygen	mg/L	*		*	once/quarter****	grab
pH – Units	SU	*		*	once/quarter****	grab
Temperature	°C	*		*	once/quarter****	grab
Ammonia as N	mg/L	*		*	once/quarter****	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2015</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I, II, & III</u> STANDARD CONDITIONS DATED <u>August 1, 2014, May 1, 2013, and March 1, 2014</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN. (See Note 4)						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- **** See table below for quarterly sampling:

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

Note 4 - The Sni-A-Bar WWTF sludge treatment cell operates as a sludge treatment unit per MDNR and US EPA approval. Therefore, because the cell is a treatment cell rather than a storage unit, the sludge removal frequency requirement in Standard Part III Section G. 3 is modified from two years to a minimum of ten years or if the sludge attains an average depth of 3 feet in the sludge treatment cells.

**TABLE C.
INFLUENT MONITORING REQUIREMENTS**

PAGE NUMBER 6 of 11

PERMIT NUMBER MO-0028886

The facility is required to meet a removal efficiency of 85% or more. The monitoring requirements shall become effective upon issuance and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:

SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Influent</u>			
Biochemical Oxygen Demand ₅	mg/L	once/month	composite**
Total Suspended Solids	mg/L	once/month	composite**

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE OCTOBER 28, 2014.

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

D. SPECIAL CONDITIONS

1. This permit establishes final ammonia limitations based on Missouri's current Water Quality Standard. On August 22, 2013, the U.S. 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 has initiated stakeholder discussions on how to best incorporate these new criteria into the State's rules. A date for when this rule change will occur has not been determined. Also, refer to Section VI of this permit's factsheet for further information including estimated future effluent limits for this facility. It is recommended the permittee view the Department's 2013 EPA criteria Factsheet located at <http://dnr.mo.gov/pubs/pub2481.htm>.
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 Publicly 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. Bypasses are not authorized at this facility unless they meet the criteria in 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3)(i), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the Kansas City Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. Blending, which is the practice of combining a partially-treated wastewater process stream with a fully-treated wastewater process stream prior to discharge, is not considered a form of bypass. If the permittee wishes to utilize blending, the permittee shall file an application to modify this permit to facilitate the inclusion of appropriate monitoring conditions.

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. Reporting of Non-Detects:

- (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
- (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
- (c) The permittee shall provide the "Non-Detect" sample result using the less than sign and the minimum detection limit (e.g. <10).
- (d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
- (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.

10. 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.

11. 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)

12. The Department has approved the Sewer Extension Construction Permit Authority under this operating permit to regulate and approve construction of sanitary sewers (tributaries, force mains, and lift stations) only, which are within the entire municipal boundary of the City of Blue Springs. This approval is only granted for the life of this operating permit, which shall expire on the day that this operating permit expires. This approval may be revoked by the Department if the sewage collection, transportation, or the treatment facility reaches their design limitation, if the facility falls into chronic noncompliance with the permit, or if the permittee fails to follow the Terms and Conditions of the approved program.
- (a) This permit may be reopened and modified or alternatively revoked or reissued, to incorporate new or modified conditions to the Sewer Extension Construction Permit Authority, if information indicates modifications are necessary to assure compliance with Missouri’s Clean Water Law and its implementing regulations.
 - (b) When any of the above mentioned conditions occur, the permittee will be notified prior to any modifications of this permit condition.
 - (c) The permittee shall submit quarterly reports to the department’s Kansas City Regional Office regarding activities on the Sewer Extension Construction Permit Authority by the twenty-eighth (28th) day of January, April, July, and October of each year. The report shall include the following:
 - (1) List the name of each individual approved project constructed for the respective reporting quarter to include the length of the sewer tributary and/or force main;
 - (2) Inspections made during the construction for each individual approved project and the findings, and the design flow (design P.E.);
 - (3) A summary of total flow at the treatment facility and a discussion regarding possible implications on operations and maintenance;
 - (4) A summary indicating that the individual project has been completed and certified by a professional engineer licensed in the State of Missouri in accordance with 10 CSR 20-6.010((5)(D)); and
 - (5) A Letter of Authorization for operation requesting that the extension be considered part of the treatment facility to which it is tributary.
 - (d) Upon future renewals of this operating permit and the permittee’s desire to continue the Sewer Extension Construction Permit Authority, the permittee shall submit a written request in accordance with 10 CSR 20-6.010(6)(A)1. Failure to submit the request with future renewals of this operating permit will indicate that the permittee no longer authorizing construction activities.
 - (e) For Sewer Extension Construction Permit Authority activities that are completed in the permittee’s collection system that this operating permit does not serve, the permittee shall submit the same report to the Little Blue Valley Sewer District.
 - (f) The Sewer Extension Construction Permit Authority does not authorize the construction of holding basins. These construction activities will need to be approved of by the department’s Kansas City Regional Office.
 - (g) Failure to obtain future approval of the Sewer Extension Construction Permit Authority for future renewals of this operating permit and the authorizing of construction of sewer collection systems will be considered a violation of the Missouri Clean Water Law and its implementing regulations.
13. Acute Whole Effluent Toxicity (WET) tests shall be conducted as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT					
OUTFALL	AEC	Acute Toxic Unit (TU _a)	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	*	once/year	composite **	Any

* Monitoring only

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

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

- a) Freshwater Species and Test Methods
 - (1) Species and short-term test methods for estimating the acute toxicity of NPDES effluents are found in the fifth edition of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012, 2002; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 48-hour static non-renewal toxicity tests with the following vertebrate species:

D. SPECIAL CONDITIONS (continued)

- The fathead minnow, *Pimephales promelas* (Acute Toxicity Test Method 2000.0).

And the following invertebrate species:

- The daphnid, *Ceriodaphnia dubia* (Acute Toxicity Test Method 2002.0).

- (2) Chemical and physical analysis of an upstream control sample 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. Where upstream receiving water is not available, synthetic laboratory control water may be used.
- (3) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
- (4) 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.
- (5) All chemical analyses shall be performed and results shall be recorded in the appropriate field of the report form. The parameters for chemical analysis include Temperature (°C), pH (SU), Conductivity (µmohs/cm), Dissolved Oxygen (mg/L), Total Residual Chlorine (mg/L), Un-ionized Ammonia (mg/L), Total Alkalinity (mg/L), and Total Hardness (mg/L).

b) Reporting of Acute Toxicity Monitoring Results

- (1) WET test results shall be submitted to the Kansas City Regional Office, or by eDMR, with the permittee's Discharge Monitoring Reports annually by **January 28, 2015**. The submittal shall include:
 - (i) A full laboratory report for all toxicity testing.
 - (ii) Copies of chain-of-custody forms.
 - (iii) The WET form provided by the Department upon permit issuance.
- (2) The report must include a quantification of acute toxic units ($TU_a = 100/LC_{50}$) reported according to the test methods manual chapter on report preparation and test review. The Lethal Concentration, 50 Percent (LC_{50}) is the toxic or effluent concentration that would cause death in 50 percent of the test organisms over a specified period of time.

c) Permit Reopener for Acute Toxicity

In accordance with 40 CFR Parts 122 and 124, this permit may be modified to include effluent limitations or permit conditions to address acute toxicity in the effluent or receiving waterbody, as a result of the discharge; or to implement new, revised, or newly interpreted water quality standards applicable to acute toxicity.

14. Chronic Whole Effluent Toxicity (WET) tests shall be conducted as follows:

SUMMARY OF CHRONIC WET TESTING FOR THIS PERMIT					
OUTFALL	AEC	Chronic Toxic Unit (TU_c)	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	*	once/year	composite**	Any

* Monitoring only

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

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

a) Freshwater Species and Test Methods

- (1) Species and short-term test methods for estimating the chronic toxicity of NPDES effluents are found in the fourth edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 7-day, static, renewal toxicity tests with the following vertebrate species:

- The fathead minnow, *Pimephales promelas* (Survival and Growth Test Method 1000.0).

And the following invertebrate species:

- The daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0).

D. SPECIAL CONDITIONS (continued)

- (2) Chemical and physical analysis of an upstream control sample 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. Where upstream receiving water is not available, synthetic laboratory control water may be used.
 - (3) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
 - (4) 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.
 - (5) All chemical analyses shall be performed and results shall be recorded in the appropriate field of the report form.
 - b) Reporting of Chronic Toxicity Monitoring Results
 - (1) WET test results shall be submitted to the Kansas City Regional Office, or by eDMR, with the permittee's Discharge Monitoring Reports by **January 28, 2019**. The submittal shall include:
 - (i) A full laboratory report for all toxicity testing.
 - (ii) Copies of chain-of-custody forms.
 - (iii) The WET form provided by the Department upon permit issuance.
 - (2) The report must include a quantification of chronic toxic units ($TU_c = 100/IC_{25}$) reported according to the *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* chapter on report preparation and test review. The 25 percent Inhibition Effect Concentration (IC_{25}) is the toxic or effluent concentration that would cause 25 percent reduction in mean young per female or in growth for the test populations.
 - c) Permit Reopener for Chronic Toxicity

In accordance with 40 CFR Parts 122 and 124, this permit may be modified to include effluent limitations or permit conditions to address chronic toxicity in the effluent or receiving waterbody, as a result of the discharge; or to implement new, revised, or newly interpreted water quality standards applicable to chronic toxicity.
15. The permittee shall develop and implement a program for maintenance and repair of the collection system. The recommended guidance is the US EPA's Guide For Evaluating Capacity, Management, Operation, And Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems (Document number EPA 305-B-05-002). The permittee shall submit a report to the Kansas City Regional Office annually, by January 28th, for the previous calendar year. The report shall contain the following information:
- (a) A list of all:
 - (1) Sanitary Sewer Overflows (SSO) that occurred for the previous year, including SSOs that do not reach waters of the state and;
 - (2) Building backups in which the backup is attributable to the public sewer system.
 - (3) This does not include SSOs that occur due to routine maintenance of sewer lines.
 - (4) This list shall also include the following information for each individual SSO:
 - (i) The location of each SSO (GPS, 911 address, manhole number, etc.)
 - (ii) What portion of the collection system did the SSO occur at (manhole, lamphole, sewer cleanout, etc.)
 - (iii) The estimated volume (gallons) of each SSO.
 - (iv) The estimated duration of each SSO.
 - (v) If the SSO entered waters of the state, and include the name of receiving water. If the SSO entered a drainageway, use the first named stream that the drainageway enters (e.g. first named stream = Dry Creek; Report = Tributary to Dry Creek).
 - (vi) Cause for the SSO.
 - (vii) How each SSO was mitigated.
 - (viii) What actions were taken to prevent a reoccurrence of each SSO.
 - (b) A summary of the efforts to locate and eliminate sources of excessive infiltration and inflow into the collection system serving the facility for the previous year.
 - (c) A summary of the general maintenance and repairs to the collection system serving the facility for the previous year.
 - (d) A summary of any planned maintenance and repairs to the collection system serving the facility for the upcoming calendar year. This list shall include locations (GPS, 911 address, manhole number, etc.) and actions to be taken.
16. The facility must be sufficiently secured to restrict entry by children, livestock and unauthorized persons as well as to protect the facility from vandalism.
17. At least one gate must be provided to access the wastewater treatment facility and provide for maintenance and mowing. The gate shall remain closed except when temporarily opened by; the permittee to access the facility, perform operational monitoring, sampling, maintenance, mowing, or for inspections by the Department. The gate shall be closed and locked when the facility is not staffed.

D. SPECIAL CONDITIONS (continued)

18. At least one (1) warning sign shall be placed on each side of the facility enclosure in such positions as to be clearly visible from all directions of approach. There shall also be one (1) sign placed for every five hundred feet (500') (150 m) of the perimeter fence. A sign shall also be placed on each gate. Minimum wording shall be SEWAGE TREATMENT FACILITY—KEEP OUT. Signs shall be made of durable materials with characters at least two inches (2") high and shall be securely fastened to the fence, equipment or other suitable locations.
19. An Operation and Maintenance (O & M) manual shall be maintained by the permittee and made available to the operator. The O & M manual shall include key operating procedures and a brief summary of the operation of the facility.
20. An all-weather access road shall be provided to the treatment facility.
21. The discharge from the wastewater treatment facility shall be conveyed to the receiving stream via a closed pipe or a paved or rip-rapped open channel. Sheet or meandering drainage is not acceptable. The outfall sewer shall be protected against the effects of floodwater, ice or other hazards as to reasonably insure its structural stability and freedom from stoppage. The outfall shall be maintained so that a sample of the effluent can be obtained at a point after the final treatment process and before the discharge mixes with the receiving waters.
22. Land application of biosolids shall be conducted in accordance with Standard Conditions III and a Department approved biosolids management plan. Land application of biosolids during frozen, snow covered, or saturated soil conditions in accordance with the additional requirements specified in WQ426 shall occur only with prior approval from the Department.
23. RECEIVING WATER MONITORING CONDITIONS
 - a) In stream samples should be taken at the location specified on page 2 of this permit. In the event that a safe, accessible location is not present at this location, a suitable location can be negotiated with the department. Samples should be taken at least four feet from the bank or from the middle of the stream (whichever is less) and 6-inches below the surface. The upstream receiving water sample should be collected at a point upstream from any influence of the effluent, where the water is visibly flowing down stream.
 - b) When conducting in-stream monitoring, the permittee shall record observations that include: the time of day, weather conditions, unusual stream/lake characteristics (e.g., septic conditions, algae growth, etc.), the stream segment (e.g., riffle, pool or run) or the lake depth from where the sample was collected. These observations shall be submitted with the sample results.
 - c) Samples shall not be collected from areas with especially turbulent flow, still water or from the stream bank, unless these conditions are representative of the stream reach or no other areas are available for sample collection. Sampling should not be made when significant precipitation has occurred recently. The sampling event should be terminated and rescheduled if any of the following conditions occur:
 - If turbidity in the stream increases notably; or
 - If rainfall over the past two weeks exceeds 2.5 inches or exceeds 1 inch in the last 24 hours
 - d) Always use the correct sampling technique and handling procedure specified for the parameter of interest. Please refer to the latest edition of Standard Methods for the Examination of Water and Wastewater for further discussion of proper sampling techniques. All analyses must be conducted in accordance with an approved EPA method. Meters shall be calibrated immediately (within 1 hour) prior to the sampling event.
 - e) To obtain accurate measurements, D.O., temperature and pH analyses should be performed on-site in the receiving stream where possible. However, due to high flow conditions, access, etc., it may be necessary to collect a sample in a bucket or other container. When this is necessary, care must be taken not to aerate the sample upon collection. If for any reason samples must be collected from an alternate site from the one listed in the permit, the permittee shall report the location with the sample results.
 - f) Dissolved oxygen measurements are to be taken during the period from within 2.5 hours after sunrise in accordance with the 2013 continuous dissolved oxygen study.
 - g) Please contact the department if you need additional instructions or assistance.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL WITH MODIFICATION
OF
MO-0028886
SNI-A-BAR WASTEWATER TREATMENT FACILITY

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

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

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

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

Part I – Facility Information

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

Facility Description:

Activated Sludge / Secondary Clarification / Tertiary Filtration / Ultraviolet Disinfection / Sludge Digestion / Sludge Reed Beds / Sludge Treatment Lagoon . Sludge disposal by contract hauler.
Design Flow = 10 MGD

Application Date: 4/16/09
Expiration Date: New Construction
Last Inspection: New Construction

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	15.5	Tertiary	municipal	0.0

Outfall #001

Legal Description: NW ¼, SE ¼, NW ¼, Sec. 25, T49N, R30W, Jackson County
Latitude/Longitude: +3901525/-09410425
Receiving Stream: Sni-A-Bar Creek (P)
First Classified Stream and ID: Sni-A-Bar Creek (P)
USGS Basin & Sub-watershed No.: (10300101 - 110002)

Water Quality History:

Outfall #001 – TSS effluent violations in 2002, 2004, 2005, 2006, and two in 2007. NH3-N effluent violations in 2004, two in 2005, and three in 2008. pH violations 2005 and 2006.

Comments:

This application is for construction of an upgraded facility to address past violations.

Part II – Operator Certification Requirements

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

Check boxes below that are applicable to the facility;

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

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

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

Operator’s Name: Jeff Butner
Certification Number: 6629
Certification Level: WW-A

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

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

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

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:

Please see Water Quality and Antidegradation Review Sheet, Appendix 1.

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

Please see Water Quality and Antidegradation Review Sheet, Appendix 1.

MIXING CONSIDERATIONS:

Please see Water Quality and Antidegradation Review Sheet, Appendix 1.

RECEIVING STREAM MONITORING REQUIREMENTS:

Please see Water Quality and Antidegradation Review Sheet, Appendix 1.

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

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

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

Not Applicable ;

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

ANTI-BACKSLIDING:

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

- Backsliding proposed in this Factsheet 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.

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.

- New and/or expanded discharge, please see **APPENDIX # 1– ANTIDegradation ANALYSIS**.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

In accordance with 10 CSR 20-6.010(8)(A)10., when a continuing authority under paragraph (3)(B)1. or 2. is expected to be available for connection within the next five (5) years, any operating permit issued to a permittee under this paragraph, located within the service area of the paragraph (3)(B)1. or 2. facility, shall contain the following language: etc... The language is listed as Special Condition #3.

BIO-SOLIDS, SLUDGE, & SEWAGE SLUDGE:

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works.

- Bio-solids, sludge, sewage sludge is to be hauled and land applied by a contract (3rd) party entity.

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.

Not Applicable ;

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

REASONABLE POTENTIAL ANALYSIS (RPA):

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

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

REMOVAL EFFICIENCY:

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

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

SANITARY SEWER OVERFLOWS (SSOs), AND INFLOW & INFILTRATION (I&I):

Collection systems are a critical element in the successful performance of the wastewater treatment process. Under certain conditions, poorly designed, built, managed, operated, and/or maintained systems can pose risks to public health, the environment, or both. Causes of SSOs include, but are not limited to, the following: high levels of I&I during wet weather; blockages; structural, mechanical, or electrical failures; collapsed or broken sewer pipes; insufficient conveyance capacity; and vandalism. Effective and continuous management, operation, and maintenance, as well as ensuring adequate capacity and rehabilitation when necessary are critical to maintaining collection system capacity and performance while extending the life of the system.

Applicable ; The permittee is required to develop 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.

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.

Applicable ; The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(10)].

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

A plan to schedule activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. The plan may include, but is not limited to, treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

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.

Applicable ; Please see Water Quality and Antidegradation Review Sheet, Appendix 1.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

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

Applicable ;

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

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

Where C = downstream concentration
Cs = upstream concentration
Qs = upstream flow
Ce = effluent concentration
Qe = effluent flow

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

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

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.

Applicable ;

Please see Water Quality and Antidegradation Review Sheet, Appendix 1.

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 \geq 22,500 gpd.
- Other – please justify.

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

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

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

Applicable .

Sni-a-bar Creek is listed on the 2004/2006 Missouri 303(d) List for low dissolved oxygen.

– This facility is considered to be a source of or has the potential to contribute to the above listed pollutant(s).

Part V – Effluent Limits Determination

Whole Effluent Toxicity

- **Acute Whole Effluent Toxicity.** Monitoring requirement only. Monitoring is required to determine if reasonable potential exists for this facility's discharge to exceed water quality standards

Chronic Whole Effluent Toxicity. Monitoring requirement only. Monitoring is required to determine if reasonable potential exists for this facility's discharge to exceed water quality standards.

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(5)(A)4.B.(IV)(b)] are 100%, 50%, 25%, 12.5%, & 6.25%.

- **All Other Effluent Limits.** For all Effluent Limits Determination not described in this section, please see Water Quality and Antidegradation Review Sheet, Appendix 1.

Part VI – Administrative Requirements

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

PUBLIC NOTICE:

As per the Missouri Clean Water Law, the Missouri Clean Water Commission, and the federal Clean Water Act, persons wishing to comment on Missouri State Operating Permits are directed to do so by a department approved Public Notice coversheet. This Public Notice coversheet is attached to a Missouri State Operating Permit during the Public Notice period.

- The Public Notice period for this operating permit was from June 26, 2009 to July 29, 2009. Comments were received and incorporated into the final permit.

DATE OF FACT SHEET: AUGUST 10, 2009

COMPLETED BY:

ALAN MOREAU, ENVIRONMENTAL SPECIALIST
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Revised Date: May 2, 2014

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Part VII – Appendices

APPENDIX 1 – WATER QUALITY AND ANTIDegradation REVIEW SHEET:

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

Water Quality and Antidegradation Review

*For the Protection of Water Quality
and Determination of Effluent Limits for Discharge to the
Sni-A-Bar Creek*



May 2009

Sni-A-Bar Wastewater Treatment Facility
4600 Block South Seymore Road
Grain Valley, MO 64029

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1.0 FACILITY INFORMATION

FACILITY NAME: Sni-A-Bar WWTF NPDES #: MO-0028886

FACILITY TYPE/DESCRIPTION: Activated sludge facility with peak flow holding basin, secondary clarification, and UV disinfection. Proposed facility upgrade and expansion to 10.0 MGD.

EDU*: Central Plains/ Blackwater/ Lamine 8- DIGIT HUC: 10300101 COUNTY: Jackson

* - Ecological Drainage Unit

OUTFALL #001

LEGAL DESCRIPTION: NW ¼, SE ¼, NW ¼, S25, T49N, R30W LATITUDE/LONGITUDE: +3901525/-09410425

OUTFALL #002

LEGAL DESCRIPTION: Removed – see Comment Section below LATITUDE/LONGITUDE: Removed

2. WATER QUALITY INFORMATION

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)] and federal antidegradation policy at Title 40 Code of Federal Regulation (CFR) Section 131.12 (a), the Missouri Department of Natural Resources (MDNR) developed a statewide antidegradation policy and corresponding procedures to implement the policy. A proposed discharge to a water body will be required to undergo a level of Antidegradation Review which documents that the use of a water body's available assimilative capacity is justified. Effective August 30, 2008, a facility is required to use *Missouri's Antidegradation Rule and Implementation Procedure (AIP)* for new and expanded wastewater discharges.

2.1 WATER QUALITY HISTORY:

For Outfall #001 (Main Facility Outfall) – TSS effluent violations March 2002, March 2004, February 2005, and September 2006. NH₃-N effluent violations March 2004, March and April 2005, and January 2008. pH violation March 2005 and February 2006. For Outfall #002 (Discharge from Stormwater Retention Basin – Peak Flow) - As permitted in this facilities previous state operating permit, there has been four (4) Discharges from Outfall #002. Discharge in May 2007 had a TSS effluent violation.

3.0 OUTFALL CHARACTERISTICS

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	RECEIVING WATERBODY	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	15.5	Secondary	Sni-A-Bar Creek	0.0

4.0 RECEIVING WATERBODY INFORMATION

WATERBODY NAME	CLASS	WBID	LOW-FLOW VALUES (CFS)			DESIGNATED USES **
			1Q10	7Q10	30Q10	
Sni-A-Bar Creek	P	00399	0.1	0.1	1.0	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)

RECEIVING WATER BODY SEGMENT #1: Sni-A-Bar Creek

Upper end segment* UTM or Lat/Long coordinates: 39.01525/ - 94.10425 (Outfall)

Lower end segment* UTM or Lat/Long coordinates: 39.02419/ - 94.06268 (Confluence with unnamed tributary that receives continuous discharge from Oak Grove (MO-0130371))

*Segment is the portion of the stream where discharge occurs. Segment is used to track changes in assimilative capacity and is bound at a minimum by existing sources and confluences with other significant water bodies.

5. GENERAL COMMENTS

MEC Water Resources prepared, on behalf of the City of Blue Springs, the *Sni-A-Bar Creek Antidegradation Review* Report dated May 2008 and revised February 2009. Due to significant growth near the Kansas City Metropolitan Area (Missouri side), the City of Blue Springs (City) has determined that an upgrade/expansion of their existing 6.0 MGD WWTF to 10.0 MGD is needed to accommodate growing wastewater needs. The receiving stream is not considered to be losing; however, this statement does not release the City or any party on behalf of the City from submitting a Geohydrologic Evaluation during the submittal of the Construction Permit Application. The guidance and recommendations as presented in CWC-V-4-07 for the Matter of City of Blue Springs Variance Request (variance), which became effective on May 7, 2008 for a period of five (5) years was reviewed during drafting of this WQAR. The Department is also developing a temporary site specific criterion for Dissolved Oxygen for Sni-A-Bar Creek, , which is projected to be equivalent to the approved variance for Dissolved Oxygen during the warm summer months (4.4 mg/L daily mean concentration and 4.0 mg/L daily minimum from July through September). Some changes to the May 19, 2008 Water Quality Review Sheet were necessary due to the Antidegradation Review.

Please see the **Appendix A – Variance, Appendix B – Map, Appendix C – Dissolved Oxygen Model, and Appendix D – Antidegradation Review Summary** located at the end of this WQAR.

Outfall #002 has been eliminated. Discharges from Outfall #002 are no longer permitted as they are now considered to be bypasses. This is due to the EPA's position that all discharges from municipalities must meet secondary treatment requirements, at a minimum, and more stringent water quality based effluent limits when necessary.

6. ANTIDEGRADATION REVIEW INFORMATION:

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)] and federal antidegradation policy at Title 40 Code of Federal Regulation (CFR) Section 131.12 (a), the department was to develop a statewide antidegradation policy and corresponding procedures to implement the policy. A proposed discharge to a water body will be required to undergo a level of Antidegradation Review which documents that the use of a water body's available assimilative capacity is justified. Effective August 30, 2008, a facility is required to use *Missouri's Antidegradation Rule and Implementation Procedure (AIP)*. This procedure is applicable to new and expanded wastewater facilities. The following is a review of the *Sni-A-Bar Creek Antidegradation Review* Report dated February 9, 2009. The February 9, 2009 report states that the Sni-A-Bar Creek is Tier I for Dissolved Oxygen and Biochemical Oxygen Demand in the summer. For the other pollutants of concern (POCs), the proposed effluent limits of each of the POCs will result in no net increase in the ambient water quality concentration of the receiving water after mixing in accordance with Section II.A. of the AIP.

6.1 TIER DETERMINATION

Below is a list of pollutants of concern reasonably expected to be in the discharge (see Appendix C: Tier Determination and Effluent Limit Summary). Pollutants of concern are defined as those pollutants "proposed for discharge that affects beneficial use(s) in waters of the state. POCs include pollutants that create conditions unfavorable to beneficial uses in the water body receiving the discharge or proposed to receive the discharge." (AIP, Page 7).

Table 1. Pollutants of Concern and Tier Determination

POLLUTANTS OF CONCERN	TIER	COMMENT
Ammonia as Nitrogen	Determination Not Required	Non-degrading ¹
Biochemical Oxygen Demand		*
Dissolved Oxygen	1	
Bacteria (E. Coli & Fecal Coliform)	Determination Not Required	Non-degrading ¹
Oil and Grease	2	
pH	2	**
Total Suspended Solids	2	*

* No in-stream standards for these parameters, therefore tier determination was not possible.

** Standards for these parameters are ranges and therefore tier determination was not possible.

Non-degrading¹ – The total mass loading of this proposed expansion for this POC will less than or the same as the existing facility’s loading.

The following Antidegradation Review Summary attachments in Appendix C were used by the applicant:

Tier Determination and Effluent Summary

For pollutants of concern, the attachments are:

Attachment A, Tier 2 with significant degradation.

Attachment B, Tier 2 with minimal degradation.

Attachment D, Tier 1 Review. Additionally, a Tier 2 review must be conducted for each pollutant of concern on the appropriate water body segment

6.2 EXISTING WATER QUALITY

No existing water quality data was submitted. Sni-A-Bar Creek is on the 2006 303(d) list for low dissolved oxygen and was addressed in the variance. The variance is based in part on MEC Water Resources, Inc. (MEC) *Sni-A-Bar Creek Stream Evaluation Project Report* (Evaluation).

6.3 ASSIMILATIVE CAPACITY CALCULATIONS

This antidegradation review assumed Tier 1 for Dissolved Oxygen and less than significant degradation for all other Pollutants of Concern, so there is no need to calculate the assimilative capacity for this review.

6.4 DEMONSTRATION OF NECESSITY AND SOCIAL AND ECONOMIC IMPORTANCE

No demonstration of necessity (i.e., alternatives analysis) or determination of social and economic importance was required due to Dissolved Oxygen being a Tier 1 POC and all other POCs are less than significant degradation.

6.5 PRELIMINARY DETERMINATION

The proposed expansion of the Blue Springs, Sni-A-Bar WWTF from 6.0 MGD to 10.0 MGD is demonstrated to be less than significant degradation for all POCs in Sni-A-Bar Creek with the exception that Dissolved Oxygen is Tier 1. The technology-based effluent limits in this review were developed to be protective of beneficial uses and to retain the remaining assimilative capacity. MDNR has determined that the submitted report is sufficient and meets the requirement of the AIP. No further analysis is needed for this discharge.

7. GENERAL ASSUMPTIONS OF THE WATER QUALITY AND ANTIDegradation REVIEW

1. A Water Quality Review Sheet (WQRS) assumes that [10 CSR 20-6.010(3) Continuing Authorities] has been or will be addressed in a Missouri State Operating Permit or Construction Permit Application.
2. A WQRS does not indicate approval or disapproval of alternative analysis as per [10 CSR 20-7.015(4) Losing Streams], and/or any section of the effluent regulations.
3. Changes to Federal and State Regulations made subsequent to the drafting of this WQRS may alter Water Quality Based Effluent Limits (WQBEL).
4. Effluent limitations derived from Federal or Missouri State Regulations (FSR) may be WQBEL or Effluent Limit Guidelines (ELG).
5. WQBEL supercede ELG only when they are more stringent. Mass limits derived from technology based limits are still appropriate.
6. A WQRS does not allow discharges to waters of the state, and shall not be construed as a National Pollution Discharge Elimination System or Missouri State Operating Permit to discharge or a permit to construct, modify, or upgrade.
7. Limitations and other requirements in a WQRS may change as Water Quality Standards, Methodology, and Implementation procedures change.
8. Nothing in this WQAR removes any obligations to comply with county or other local ordinances or restrictions.

8. MIXING CONSIDERATIONS

Mixing Zone (MZ): One-quarter (1/4) of the stream volume of flow; length one-quarter (1/4) mile.

Zone of Initial Dilution (ZID): One-tenth (0.1) of the mixing zone volume of flow, not to exceed 10 times the effluent design flow.

	Flow (cfs)	MZ (cfs)	ZID (cfs)
1Q10	0.1	0.025	0.0025
7Q10	0.1	0.025	0.0025
30Q10	1.0	0.25	0.025

9. PERMIT LIMITS AND INFORMATION

WASTELOAD ALLOCATION
 STUDY CONDUCTED (Y OR N):

USE ATTAINABILITY
 ANALYSIS CONDUCTED (Y OR N):

WHOLE BODY CONTACT
 USE RETAINED (Y OR N):

9.1 OUTFALL #001

WET TEST (Y OR N): Y FREQUENCY: TWICE/YEAR AEC: 100 % METHOD: MULTIPLE

PARAMETER	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	WQBEL (NOTE 2)	MONITORING FREQUENCY
FLOW	*		*	N/A	ONCE/DAY
BOD ₅ (MG/L) (MAY 1 – OCT 31)	21		14	Y	ONCE/WEEKDAY***
BOD ₅ (MG/L) (NOV 1 – APR 30)	27		18	A	ONCE/WEEKDAY***
TSS (MG/L) (MAY 1 – OCT 31)	23		15	Y	ONCE/WEEKDAY***
TSS (MG/L) (NOV 1 – APR 30)	27		18	A	ONCE/WEEKDAY***
PH (S.U.)	6.0 – 9.0		6.0 – 9.0	FSR	ONCE/WEEKDAY***
TEMPERATURE (°C)	*		*	N/A	ONCE/WEEKDAY***
DISSOLVED OXYGEN (MG/L) (MAY 1 – OCT 31)	≥ 6.0		≥ 6.0	Y	ONCE/WEEKDAY***
DISSOLVED OXYGEN (MG/L) (NOV 1 – APR 30)	≥ 7.5		≥ 7.5	Y	ONCE/WEEKDAY***
AMMONIA AS N (MG/L) (MAY 1 – OCT 31)	2.2		0.8	Y	ONCE/WEEKDAY***
AMMONIA AS N (MG/L) (NOV 1 – APR 30)	4.7		1.8	Y	ONCE/WEEKDAY***
ESHERICHIA COLIFORM (E. COLI)	Please see the E. coli discussion in the Derivation & Discussion of Limits section of this WQRS below.				
FECAL COLIFORM (NOTE 1)	1000		400**	FSR	ONCE/WEEKDAY***
OIL & GREASE	15		10	FSR	ONCE/MONTH

* - Monitoring requirements only.

** - The Monthly Average for Fecal Coliform shall be reported as a Geometric Mean.

*** - Once/weekday means that the permittee shall take a sample for the given parameter on Monday, Tuesday, Wednesday, Thursday, & Friday. In addition, the once/weekday is based on Missouri's Effluent Limitation Minimum Sampling Requirements [10 CSR 20-7.015(8)(C)].

NOTE 1 – COLONIES/100 ML

NOTE 2 – THIS FIELD INFORMS THE APPLICANT IF THE PARAMETER'S EFFLUENT LIMITATION IS A WATER QUALITY BASED EFFLUENT LIMITATION (WQBEL): Y – YES; FSR – FEDERAL/STATE REGULATION; A-ANTIDEGRADATION; AND N/A – NOT APPLICABLE. ALSO, PLEASE SEE THE **GENERAL ASSUMPTIONS OF THE WQRS #4 & #5.**

10. RECEIVING WATER MONITORING REQUIREMENTS

Receiving stream monitoring is needed in order to verify that the effluent limitations proposed within this WQAR, based on the QUAL2k, meet appropriate concentrations in the receiving stream and do not cause a negative impact in the receiving stream.

Site 01. (Upstream)

PARAMETER(S)	SAMPLING FREQUENCY	SAMPLE TYPE	LOCATION
Flow (MGD)	Once/quarter	Grab	Immediately above the confluence of Sni-A-Bar Creek and Outfall #001 from this treatment facility.
Dissolved Oxygen (mg/L)	Once/quarter	Grab	
pH (SU)	Once/quarter	Grab	
Temperature (C°)	Once/quarter	Grab	
Ammonia as N (mg/L)	Once/quarter	Grab	

PARAMETER(S)	SAMPLING FREQUENCY	SAMPLE TYPE	LOCATION
Flow (MGD)	Once/quarter	Grab	Approximately 0.25 miles below the discharge location of Outfall #001 of this facility (D.M.S. ~ +3901565/-09410281) in the SE ¼, NW ¼, of Section 25, T49N, R30W, Jackson County.
Dissolved Oxygen (mg/L)	Once/quarter	Grab	
pH (SU)	Once/quarter	Grab	
Temperature (C°)	Once/quarter	Grab	
Ammonia as N (mg/L)	Once/quarter	Grab	

11. DERIVATION AND DISCUSSION OF LIMITS

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

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

Where C = downstream concentration
 Cs = upstream concentration
 Qs = upstream flow
 Ce = effluent concentration
 Qe = effluent flow

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

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

For the purposes of this WQRS and future operating permits, Seasonal Periods for each calendar year are as follows:

Summer: May 1st – October 31st; and
 Winter: November 1st – April 30th

11.1 Outfall #001 – Main Facility Outfall

- **Biochemical Oxygen Demand (BOD₅) (Summer).** The Sni-A-Bar Creek Qual2k model developed as part of the Evaluation established a Wasteload Allocation (WLA) of 14 mg/L for BOD₅ Summer Seasonal effluent limitations. The WLA is equal to the Average Monthly Limitation (AML). The Maximum Daily Limitation (MDL) = 1.5xAML. Influent monitoring may be required for this facility in its Missouri State Operating Permit. The DO modeling conducted by MEC shows no negative impact on Dissolved Oxygen (Tier I pollutant) from this proposed BOD limit.

WLA = 14 mg/L
 AML = WLA = 14 mg/L; and, AML x 1.5 = 21.

MDL = 21 mg/L
 AML = 14 mg/L

- **Biochemical Oxygen Demand (BOD₅) (Winter).** In accordance with the *Missouri Antidegradation Rule and Implementation Procedure* (AIP) for waters receiving pollutants from an existing source (where full design capacity has not been reached) on the effective date of this document, the EWQ shall include the levels of pollutants already permitted to be discharged at maximum design flow in accordance with page 6 of the AIP. Using the August 30, 2008 permitted effluent limits; we calculated the non-degrading winter effluent limits.

Calculation of Loading

Pollutant of Concern		Existing Treatment Plant				Proposed Treatment Plant		
Biochemical Oxygen Demand	Limit	Permit Limits (mg/L)	(lbs/MG)/(mg/L)	Design Flow (MGD)	Load (lbs/day)	(lbs/MG)/(mg/L)	Design Flow (MGD)	Permit Limits (mg/L)
Winter	Monthly	30	8.34	6	1501.2	8.34	10	18
Winter	Daily	45	8.34	6	2251.8	8.34	10	27

MDL = 27 mg/L
AML = 18 mg/L

• **Total**

Suspended Solids (TSS) (Summer). The Sni-A-Bar Creek Qual2k model developed as part of the Evaluation established a Wasteload Allocation (WLA) of 15 mg/L for TSS Summer Seasonal effluent limitations. As per EPA/505/2-90-001, the WLA = the Average Monthly Limitation (AML). The Maximum Daily Limitation (MDL) = 1.5xAML. Influent monitoring may be required for this facility in its Missouri State Operating Permit.

WLA = 15 mg/L

AML = WLA = 15 mg/L; and, AMLx1.5 = 22.5. This limitation shall be rounded up to 23 mg/L.

MDL = 23 mg/L

AML = 15 mg/L

- **Total Suspended Solids (TSS) (Winter).** According to EPA, because TSS and BOD are closely correlated, we apply the same limits for TSS as BOD. This limit will result in no net increase in the ambient water quality concentration of the receiving water after mixing.

MDL = 27 mg/L

AML = 18 mg/L

- **pH.** pH shall be maintained in the range from six to nine (6 – 9) standard units [10 CSR 20-7.015 (8)(B)2.].
- **Dissolved Oxygen.** Winter and summer minimum dissolved oxygen limits of 7.5 mg/L and 6.0 mg/L respectively are set in accordance with Table 9 of the Sni-A-Bar Creek Stream Evaluation Project Report (January 2008 Revision).
- **Total Ammonia Nitrogen.** For waters receiving pollutants from an existing source (where full design capacity has not been reached) on the effective date of this document, the EWQ shall include the levels of pollutants already permitted to be discharged at maximum design flow in accordance with page 6 of the AIP. The August 30, 2008 permitted effluent limits were determined not to be protective of the water quality standards, so default water quality based effluent limits are calculated for the design flow of 6 MGD and used for the mass loading calculations at the proposed flow of 10 MGD to verify no increase in loading to the stream.

Season	Temp (°C)	pH (SU)	Total Ammonia Nitrogen CCC (mg/L)	Total Ammonia Nitrogen CMC (mg/L)
Summer	26	7.8	1.5	12.1
Winter	6	7.8	3.1	12.1

Summer: May 1 – October 31, Winter: November 1 – April 30

Summer

$$WLA_{\text{chronic}} = ((9.3 + 0.25)1.5 - (0.25 * 0.01))/9.3$$

$$WLA_{\text{chronic}} = 1.5 \text{ mg/L}$$

$$WLA_{\text{acute}} = ((9.3 + 0.0025)12.1 - (0.0025 * 0.01))/9.3$$

$$WLA_{\text{acute}} = 12.1 \text{ mg/L}$$

$$LTA_c = 1.5 \text{ mg/L (0.780)} = \mathbf{1.2 \text{ mg/L}}$$

[CV = 0.6, 99th Percentile, 30 day avg.]

$$LTA_a = 12.1 \text{ mg/L (0.321)} = 3.9 \text{ mg/L}$$

[CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

$$MDL = \mathbf{1.2 \text{ mg/L}} (3.11) = 3.7 \text{ mg/L}$$

[CV = 0.6, 99th Percentile]

$$AML = \mathbf{1.2 \text{ mg/L}} (1.19) = 1.4 \text{ mg/L}$$

[CV = 0.6, 95th Percentile, n = 30]

Winter

$$WLA_{\text{chronic}} = ((9.3 + 0.25)3.1 - (0.25 * 0.01))/9.3$$

$$WLA_{\text{chronic}} = 3.2 \text{ mg/L}$$

$$WLA_{\text{acute}} = ((9.3 + 0.0025)12.1 - (0.0025 * 0.01))/9.3$$

$$WLA_{\text{acute}} = 12.1 \text{ mg/L}$$

$$LTA_c = 3.2 \text{ mg/L (0.780)} = \mathbf{2.5 \text{ mg/L}}$$

[CV = 0.6, 99th Percentile, 30 day avg.]

$$LTA_a = 12.1 \text{ mg/L (0.321)} = 3.9 \text{ mg/L}$$

[CV = 0.6, 99th Percentile]

$$MDL = \mathbf{2.5 \text{ mg/L}} (3.11) = 7.8 \text{ mg/L}$$

[CV = 0.6, 99th Percentile]

$$AML = \mathbf{2.5 \text{ mg/L}} (1.19) = 3.0 \text{ mg/L}$$

[CV = 0.6, 95th Percentile, n = 30]

Existing 6.0 MGD Default WQS Based Limits		
Season	Maximum Daily Limit (mg/l)	Average Monthly Limit (mg/l)
Summer	3.7	1.4
Winter	7.8	3.0

Mass Balance Calculation of Ammonia Loading

Pollutant of Concern		Existing Treatment Plant				Proposed Treatment Plant		
Ammonia	Limit	Permit Limits (mg/L)	(lbs/MG) / (mg/L)	Design Flow (MGD)	Load (lbs/day)	(lbs/MG) / (mg/L)	Design Flow (MGD)	Permit Limits (mg/L)
Summer	Monthly	1.4	8.34	6	70.0	8.34	10	0.8
Summer	Daily	3.7	8.34	6	185.1	8.34	10	2.2
Winter	Monthly	3.0	8.34	6	150.1	8.34	10	1.8
Winter	Daily	7.8	8.34	6	390.3	8.34	10	4.7

The Sni-A-Bar Creek Qual2k model developed as part of the Evaluation

established WLA that are contained in the table below. Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3]. Background total ammonia nitrogen = 0.01 mg/L.

Season	Temp (°C)	pH (SU)	Total Ammonia Nitrogen (mg N/L)
Summer	26	7.8	0.9 (QUAL2K)
Winter	6	7.8	3.1 (CCC & QUAL2K)

Summer

WLA = 0.9 mg/L

LTA_c = 0.9 mg/L (0.780) = 0.7 mg/L [CV = 0.6, 99th Percentile, 30 day avg.]

MDL = 0.7 mg/L (3.11) = 2.2 mg/L [CV = 0.6, 99th Percentile]

AML = 0.7 mg/L (1.19) = 0.8 mg/L [CV = 0.6, 95th Percentile, n = 30]

Winter

WLA = 3.1 mg/L

LTA_c = 3.1 mg/L (0.780) = 2.4 mg/L [CV = 0.6, 99th Percentile, 30 day avg.]

MDL = 2.4 mg/L (3.11) = 7.5 mg/L [CV = 0.6, 99th Percentile]

AML = 2.4 mg/L (1.19) = 2.8 mg/L [CV = 0.6, 95th Percentile, n = 30]

The model limits for the summer are the same as the water quality-based mass loading derived limits. The model limits for the winter are not applicable as they are higher than the non-degrading water quality-based mass loading calculated limits. Therefore, the non-degrading water quality-based mass balance calculated limits are used for this proposed upgrade as noted in the table below:

Proposed Ammonia Effluent Limits	Monthly Average	Daily Maximum
Summer (mg/L)	0.8	2.2
Winter (mg/L)	1.8	4.7

- **Escherichia coli (E. coli)**. Monthly average of 206 per 100 mL as a geometric mean and Weekly Average of 1030 per 100 mL as a geometric mean 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(5)(C). An effluent limit for both monthly average and weekly average is required by 40 CFR 122.45(d).
- **Fecal Coliform**. This parameter is no longer utilized by the Department.
- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum. It is recommended that this parameter have a minimum monitoring frequency of once/month.

Reviewer: Keith Forck
 Date: May 19, 2009
 Unit Chief: John Rustige
 Section Chief: Refaat Mefrakis

Monitoring and effluent limits contained within this document have been developed in accordance with EPA guidelines using the best available data and are believed to be consistent with Missouri's Water Quality Standards and Effluent Regulations. If additional water quality data or anecdotal information are available that may affect the recommended monitoring and effluent limits, please forward these data and information to the author.

Appendix A – Variance:

On July 15, 2007, the Department received a variance application from the City of Blue Springs (City) pursuant to RSMo §644.061. The City's application requested a variance from the state-wide Dissolved Oxygen (DO) Water Quality Standard (WQS). The City is planning an upgrade and expansion to the current facility and believes that attainment of the in-stream DO WQS is not economically feasible.

The Department reviewed and investigated the petition as required and determined that the application was complete and met the regulatory criteria associated with economic hardship as addressed in the City's application. The Department presented the City's application and recommendation to the Missouri Clean Water Commission (MCWC) on September 12, 2007.

The Department placed a Public Notice of the MCWC intention to approve the variance and invited the public to review and offer written comments on the application and the Department's recommendation during a 30-day public comment period, which began on January 22, 2008, and ended on February 21, 2008. A public hearing was conducted after the public notification on March 12, 2008, and comments received during the public notice, and during the ten days after the public hearing have been reviewed and responses sent to those who commented by Department staff.

Recommendation:

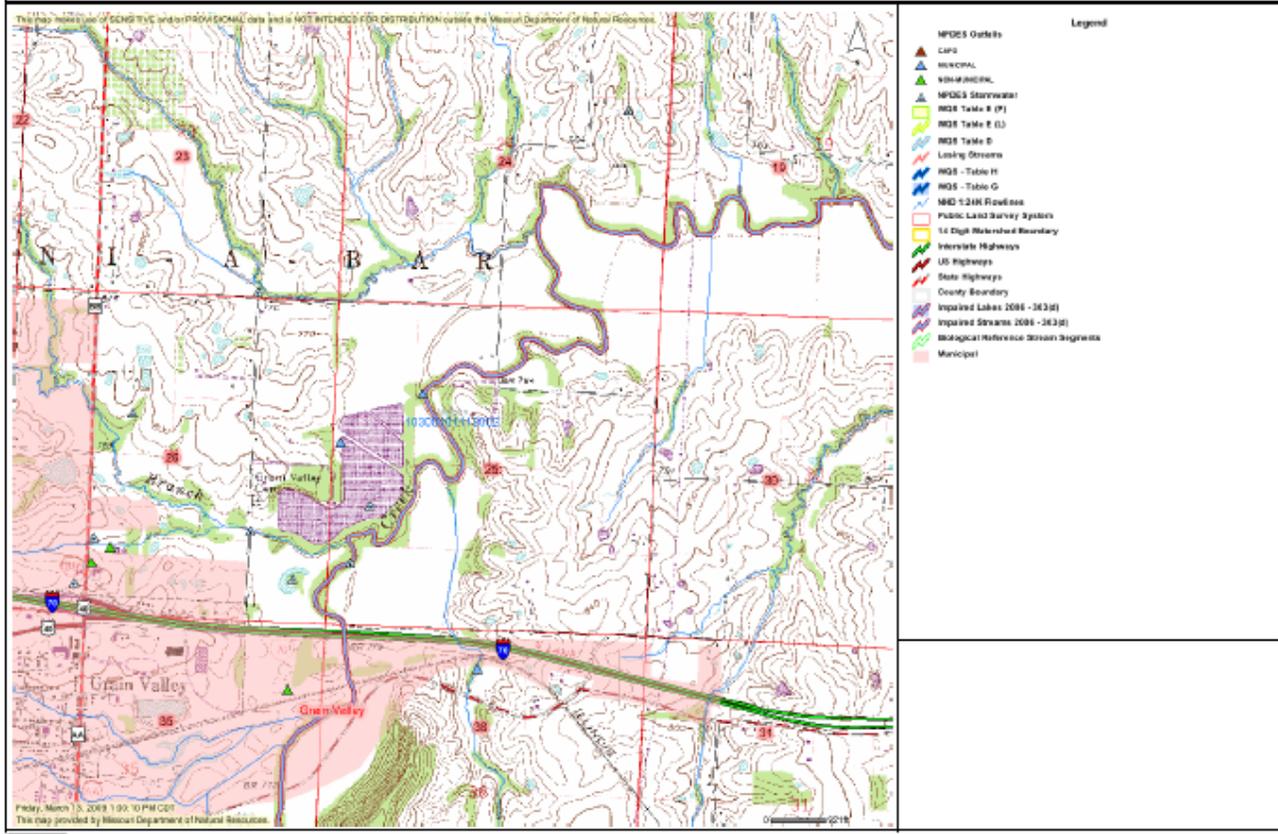
1. The review by staff of the construction permit application and the preparation of state operating permit will take into consideration that the highest seasonal level of naturally occurring DO attainable with this Ecological Drainage Unit (EDU) is 4.4 mg/L daily mean concentration and 4.0 mg/L daily minimum from July through September. It should be noted that the mean and minimum dissolved oxygen concentrations are supported by water chemistry data from a biocriteria reference stream supplied by the City. The reference stream selected is believed to represent a stream that has the highest attainable naturally occurring DO concentration in this EDU.
2. The permit should be drafted and contain limitations designed to ensure that DO levels attain these seasonal concentrations.

Order:

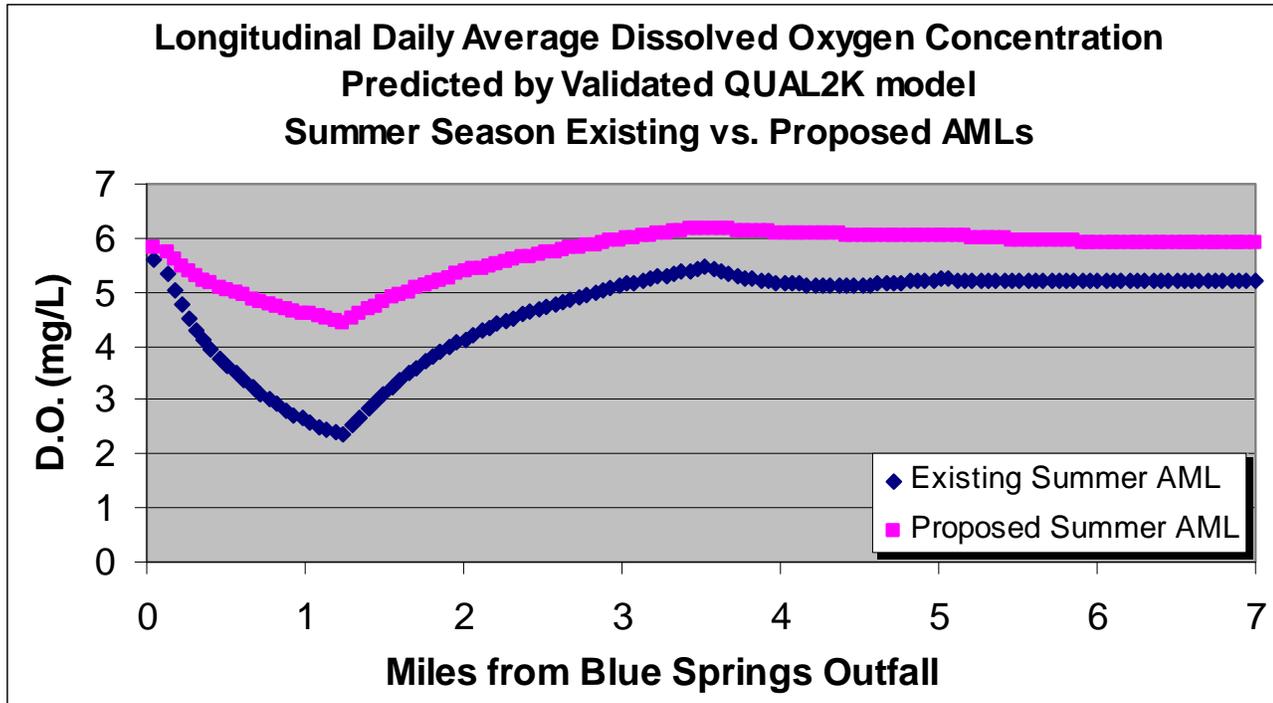
The MCWC finds that the City has presented adequate proof necessary to demonstrate that it has met the statutory requirements of RSMo §644.061 for the granting of a variance.

On May 7, 2008, the MCWC granted this variance for a five (5) year term.

Blue Springs, Sni-A-Bar WWTF



View Scale 1:25,116
 Disclaimer: Although this map has been compiled by the Missouri Department of Natural Resources, no warranty, expressed or implied, is made by the department as to the accuracy of the data and related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the department in the use of these data or related materials.



Appendix D: Antidegradation Review Summary
 Attachments



STATE OF MISSOURI
 MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER POLLUTION CONTROL PROGRAM
ANTIDEGRADATION REVIEW SUMMARY
TIER DETERMINATION AND EFFLUENT LIMIT SUMMARY
 UNDER MISSOURI CLEAN WATER LAW

1.00 FACILITY			
NAME Blue Springs, Sni-A-Bar Wastewater Treatment Facility		PHONE 816-228-0195	
ADDRESS (PHYSICAL) 4600 Block, S. Seymore Rd.	CITY Grain Valley	STATE MO	ZIP 64029
2.00 RECEIVING WATER BODY SEGMENT #1			
NAME Existing Sni-A-Bar WWTF Outfall to Unnamed Tributary Downstream of Horseshoe Creek (see Report, Section 2.2)			
2.0	UPPER END OF SEGMENT (Location of discharge) UTM 398011, 4320904		
2.1	LOWER END OF SEGMENT UTM 404155, 4322348		
3.00 WATER BODY SEGMENT #2 (IF APPLICABLE)			
NAME Segment 1 End to East Fork Sni-A-Bar Creek (See Report, Section 2.2)			
3.0	UPPER END OF SEGMENT UTM 404155, 4322348		
3.1	LOWER END OF SEGMENT UTM 413878, 4327382		
4.00 WATER BODY SEGMENT #3 (IF APPLICABLE)			
NAME NA			
4.0	UPPER END OF SEGMENT UTM _____ OR Lat _____ Long _____		
4.1	LOWER END OF SEGMENT UTM _____ OR Lat _____ Long _____		
5.00 PROJECT INFORMATION			
Is the receiving water body an Outstanding National Resource Water (ONRW), an Outstanding State Resource Water (OSRW), or drainage thereto? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <small>In Tables D and E of 10 CSR 20-7.031, ONRWs and OSRWs are listed. Per the Missouri Antidegradation Rule and Implementation Procedure (AIP) Section 1.B.3., "any degradation of water quality is prohibited in these waters unless the discharge only results in temporary degradation." Therefore, if degradation is significant or minimal, the Antidegradation Review will be denied.</small>			
Will the proposed discharge of all pollutants of concern (POCs) result in no net increase in the ambient water quality concentration of the receiving water after mixing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <small>If yes, submit a summary table showing the levels of each POC before and after the proposed discharge in the receiving water and then complete Attachment B for the first downstream classified Water Body Segment.</small> The results of a verified water quality model indicate that the POCs qualify for Tier 1 Review (See Attachment D and Report). Although the POCs are Tier 1, in-stream water quality will improve following the expansion project so the new discharge will also be insignificant (see Report).			
Will the discharge result in temporary degradation? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <small>If yes complete Attachment C.</small>			
Has the project been determined as non-degrading? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <small>If yes complete No Degradation Evaluation - Conclusion of Antidegradation Review Form. Submit with the appropriate Construction Permit Application as no antidegradation review is required.</small>			
Is Tier 2 with significant degradation assumed for all Pollutants of Concern? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <small>If yes, complete Attachment A. If AIP Section II.A. states that an applicant may avoid having to determine the assimilative capacity of receiving water and, consequently, may proceed directly into performing the alternatives analysis and the social and economic importance of the discharge.</small>			

6.00 WET WEATHER ANTICIPATIONS

If an applicant anticipates excessive inflow and/or infiltration and pursues approval from the department to bypass secondary treatment, a feasibility analysis is required. The feasibility analysis must comply with the criteria of all applicable state and federal regulations including 40 CFR 122.41(m)(4). Please attach the feasibility analysis to this report.

What is the Wet Weather Flow Peaking Factor in relation to Design Flow? For the WWTF, the proposed Design Average Daily Flow capacity is 10.0 mgd. The proposed Design Peak Daily Flow capacity is 36.0 mgd. Therefore the Peak to Design Flow Ratio is 3.6.

Wet Weather Design Summary:

The existing WWTF had a Design Peak Daily Flow capacity of 18.0 mgd. Flows above this amount are stored in the Peak Flow Holding Lagoon. Currently, when the storage capacity of the Peak Flow Holding Lagoon is exceeded, flows are directed to Outfall #002. The highest single day flow recorded at the Sni-A-Bar WWTF from Daily Monitoring Report data analyzed from January 2005 to January 2008 was approximately 46.3 mgd occurring on May 4th, 2007. This flow was the combination of a 15.0 mgd WWTF (#001) discharge, a 28.0 MG utilization of Peak Flow Holding Basin storage volume, and 3.3 mgd discharge from the Peak Flow Holding Basin (#002).

The existing Peak Flow Storage Lagoon provides a usable storage volume of 40.6 million gallons. Results from flow metering data from April 2005 to December of 2005 were tabulated and scaled up to calculate the peak daily flow associated with a 25-year design storm. The results of this analysis yielded a peak daily flow of approximately 55.0 mgd.

Utilizing the calculated 25-year design storm flow of 55.0 mgd and subtracting the 36.0 mgd proposed Design Peak Daily Flow capacity of the upgraded facility yields a remaining flow to be stored of 19.0 MG. The existing Peak Flow Storage Lagoon is capable of providing over two (2) times this volume of storage and is therefore not intended to discharge blended flows with Outfall #001.

If yes to one of the above questions, skip the Existing Water Quality Data (EWQ) or Model Summary Section and the Pollutants of Concern (POCs) and the Tier Determination(s) Section (Page 2). Continue on Page 3.

7.00 EXISTING WATER QUALITY (EWQ) DATA OR MODEL SUMMARY

Obtaining EWQ is possible by three methods according to the AIP Section II.A.1.: (1) using previously collected data with an appropriate Quality Assurance Project Plan (QAPP) (2) collecting water quality data by approved the Missouri Department of Natural Resources (department) methodology or (3) using an appropriate water quality model. QAPPs must be submitted to the department for approval well in advance (six months) of the proposed activity. Please provide all the appropriate corresponding data and reports which were approved by the department Water Quality Monitoring and Assessment Section (WQMA).

Date EWQ data was provided by the department WQMA: See Comments.
 Approval date of the QAPP by the department WQMA: See Comments.
 Approval date of the project sampling plan by the department WQMA: See Comments.
 Approval date of the data collected for all appropriate pollutants of concern (POC) by the department WQMA: See Comments.

Comments/Discussion:

See "Sni-A-Bar Creek Stream Evaluation Project Report" submitted to MDNR by MEC Water Resources, Inc. in 2008.

8.00 POLLUTANTS OF CONCERN (POCs) AND TIER DETERMINATION(S)

POCs to be considered include those pollutants reasonably expected to be present in the discharge per the AIP Section II.S. The tier protection levels are specified and defined in rule at 10 CSR 20-7.031 (2).

**Water Body Segment One
 Pollutants of Concern and Tier Determination (s)**

Tier 1	Tier 2 with Minimal Degradation	Tier 2 with Significant Degradation
Dissolved Oxygen/BOD5		
Ammonia-Nitrogen		
Bacteria (E.Coli)		

- For pollutants of concern that are Tier 2 with significant degradation, complete Attachment A.
- For pollutants of concern that are Tier 2 with minimal degradation, complete Attachment B.
- For pollutants of concern that are Tier 1, complete Attachment D. Additionally, a Tier 2 review must be conducted for each pollutant of concern on the appropriate water body segment.

8.00 SUMMARY OF THE PROPOSED ANTIDEGRADATION REVIEW EFFLUENT LIMITS

What are the proposed pollutants of concern and their respective effluent limits that the selected treatment option will comply with:

Pollutant of Concern	Units	Wasteload Allocation	Average Monthly Limit	Daily Maximum Limit
Summer BOD5	mg/L	14	14	21
Summer TSS	mg/L	15	15	22
Summer Effluent Dissolved Oxygen	mg/L	6 +/- 0.5	6	----
Summer Ammonia	mg/L	0.9	0.8	2.2
Winter BOD5	mg/L	43	30	45
Winter TSS	mg/L	30	30	45
Winter Effluent Dissolved Oxygen	mg/L	7.5 +/- 0.5	7.5	---
Winter Ammonia	mg/L	3.1	2.8	5.0
Bacteria (E. Coli)	cfu/100 mL	See Attached Antidegradation Report	206	206

These proposed limits will not violate water quality standards, be protective of beneficial uses, and achieve the highest statutory and regulatory requirements. Please attach the Antidegradation Review report and all supporting documentation.

CONSULTANT: I have prepared/reviewed this form and all attached reports and documentation. The conclusion proposed is consistent with the AIP and current state and federal regulation.

SIGNATURE	DATE
NAME AND OFFICIAL TITLES	

COMPANY NAME
 MEC Water Resources, Inc.

ADDRESS	CITY	STATE	ZIP CODE
1123 Wilkes Blvd., Suite 400	Columbia	MO	65201

TELEPHONE NUMBER	PHONE NUMBERS
573-443-4100	

OWNER: I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE	DATE
NAME AND OFFICIAL TITLES	

ADDRESS	CITY	STATE	ZIP CODE
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TELEPHONE NUMBER	PHONE NUMBERS
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CONTINUING AUTHORITY: Continuing Authority is the permanent organization which will be responsible for the operation, maintenance and modernization of the facility. The regulatory requirement regarding continuing authority is available at <http://www.sos.mo.gov/adrules/csr/current/10csr/10c20-6a.pdf>.

I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE	DATE
NAME AND OFFICIAL TITLES	

ADDRESS	CITY	STATE	ZIP CODE
---------	------	-------	----------

TELEPHONE NUMBER	PHONE NUMBERS
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STATE OF MISSOURI
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER POLLUTION CONTROL PROGRAM
ANTIDegradation REVIEW SUMMARY
ATTACHMENT D: TIER 1 REVIEW
UNDER MISSOURI CLEAN WATER LAW

1.00 FACILITY				
NAME Blue Springs, Sni-A-Bar Wastewater Treatment Facility			PHONE 816-228-0195	
ADDRESS (PHYSICAL) 4600 Block, S. Seymore Rd.		CITY Grain Valley	STATE MO	ZIP 64029
2.00 RECEIVING WATER BODY SEGMENT (WBS) #1				
NAME Existing Sni-A-Bar WWTF Outfall to Unnamed Tributary Downstream of Horseshoe Creek (see Report, Section 2.2)				
3.00 WATER BODY SEGMENT (WBS) #2 (IF APPLICABLE)				
NAME Segment 1 End to East Fork Sni-A-Bar Creek (See Report, Section 2.2)				
Tier 1 Pollutant of Concern	Concentration Units (mg/L or µg/L)	95% of Water Quality Standard	90 th Percentile of water body segment #1 sampling results	90 th Percentile of water body segment #2 sampling results
Dissolved Oxygen/BOD ₅	mg/L	NA – See Report	NA – See Report	NA – See Report
Total Ammonia-Nitrogen	mg/L	NA – See Report	NA – See Report	NA – See Report
Bacteria	mg/L	NA – See Report	NA – See Report	NA – See Report
4.00 IDENTIFYING NON-DISCHARGING ALTERNATIVES:				
Please supply a summary of non-discharging alternatives considered as stated in the AIP Section I.B.1 and in accordance with 10 CSR 20-6.010(4)(D)1. Please attach all supportive documentation in the Antidegradation Review report.				
Non-degrading alternatives: NA				
5.00 PROPOSED PROJECT SUMMARY:				
Results from a verified water quality model indicate that current effluent limitations, effective March 5, 2004, provide Tier 1 protection for Sni-A-Bar Creek downstream of the current Blue Springs facility. The model predicts proposed effluent limitations for the expanded discharge maintain Tier 1 protection. Furthermore, proposed effluent limitations are predicted to improve water quality rather than degrade it. Ammonia nitrogen and bacteria concentrations will both decrease and dissolved oxygen concentrations will increase.				
Please attach the Antidegradation Review report and all supporting documentation.				

CONSULTANT: I have prepared/reviewed this from and all attached reports and documentation. The conclusion proposed in consistent with the AIP and current state and federal regulations.	
SIGNATURE	DATE
PRINT NAME	
TELEPHONE NUMBER	E-MAIL ADDRESS:
OWNER: I have read and reviewed the prepared documents and agree with this submittal.	
SIGNATURE	DATE
CONTINUING AUTHORITY: I have read and reviewed the prepared documents and agree with this submittal.	
SIGNATURE	DATE

APPENDIX 2 - CLASSIFICATION WORKSHEET:

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt./10,000 PE or major fraction thereof.	10
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	10
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY:		
Missouri or Mississippi River	0	--
All other stream discharges except to losing streams and stream reaches supporting whole body contact	1	--
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	--
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	3
PRELIMINARY TREATMENT - Headworks		
Screening and/or comminution	3	3
Grit removal	3	3
Plant pumping of main flow (lift station at the headworks)	3	3
PRIMARY TREATMENT		
Primary clarifiers	5	--
Combined sedimentation/digestion	5	--
Chemical addition (except chlorine, enzymes)	4	--
REQUIRED LABORATORY CONTROL – performed by plant personnel (highest level only)		
Lab work conducted outside of plant	0	--
Push – button or visual methods for simple test such as pH, Settleable solids	3	--
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	5
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	--
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	--
ALTERNATIVE FATE OF EFFLUENT		
Direct reuse or recycle of effluent	6	--
Land Disposal – low rate	3	--
High rate	5	--
Overland flow	4	--
Total from page ONE (1)	----	37

APPENDIX 2 - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)		
Variation do not exceed those normally or typically expected	0	--
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	--
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	--
Raw wastes subject to toxic waste discharge	6	--
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers	10	--
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	15
Stabilization ponds without aeration	5	--
Aerated lagoon	8	--
Advanced Waste Treatment Polishing Pond	2	--
Chemical/physical – without secondary	15	--
Chemical/physical – following secondary	10	--
Biological or chemical/biological	12	--
Carbon regeneration	4	--
DISINFECTION		
Chlorination or comparable	5	--
Dechlorination	2	--
On-site generation of disinfectant (except UV light)	5	--
UV light	4	4
SOLIDS HANDLING – SLUDGE		
Solids Handling Thickening	5	--
Anaerobic digestion	10	--
Aerobic digestion	6	6
Evaporative sludge drying	2	--
Mechanical dewatering	8	--
Solids reduction (incineration, wet oxidation)	12	--
Land application	6	--
Total from page TWO (2)	----	25
Total from page ONE (1)	---	37
Grand Total	---	62

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



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
 - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
 - a. Records of monitoring information shall include:
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.
 - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee’s sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
 - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
 - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

Section B – Reporting Requirements

1. **Planned Changes.**
 - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
 - iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
 - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
 - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - ii. Any upset which exceeds any effluent limitation in the permit.
 - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
 - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
 4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
 5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
 6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
 7. **Discharge Monitoring Reports.**
 - a. Monitoring results shall be reported at the intervals specified in the permit.
 - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
 - c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.
- b. Notice.
 - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
 - c. Prohibition of bypass.
 - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
 1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 3. The permittee submitted notices as required under paragraph 2. b. of this section.
 - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
 - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being properly operated; and
 - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
 - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
 - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section C – Bypass/Upset Requirements

1. **Definitions.**
 - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
 - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
 - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
 - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
 - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittee with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
 - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
 - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
 - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
 - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
 - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
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MISSOURI CLEAN WATER COMMISSION
REVISED
MAY 1, 2013

PART II - SPECIAL CONDITIONS – PUBLICLY OWNED
TREATMENT WORKS
SECTION A – INDUSTRIAL USERS

1. Definitions

Definitions as set forth in the Missouri Clean Water Laws and approved by the Missouri Clean Water Commission shall apply to terms used herein.

Significant Industrial User (SIU). Except as provided in the *General Pretreatment Regulation* 10 CSR 20-6.100, the term Significant Industrial User means:

1. All Industrial Users subject to Categorical Pretreatment Standards; and
2. Any other Industrial User that: discharges an average of 25,000 gallons per day or more of process wastewater to the Publicly-Owned Treatment Works (POTW) (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's or for violating any Pretreatment Standard or requirement.

Clean Water Act (CWA) is the the federal Clean Water Act of 1972, 33 U.S.C. § 1251 et seq. (2002).

2. Identification of Industrial Discharges

Pursuant to 40 CFR 122.44(j)(1), all POTWs shall identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging to the POTW subject to Pretreatment Standards under section 307(b) of the CWA and 40 CFR 403.

3. Application Information

Applications for renewal or modification of this permit must contain the information about industrial discharges to the POTW pursuant to 40 CFR 122.21(j)(6)

4. Notice to the Department

Pursuant to 40 CFR 122.42(b), all POTWs must provide adequate notice of the following:

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging these pollutants; and
2. Any substantial change into the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
3. For purposes of this paragraph, adequate notice shall include information on:
 - i. the quality and quantity of effluent introduced into the POTW, and
 - ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

For POTWs without an approved pretreatment program, the notice of industrial discharges which was not included in the permit application shall be made as soon as practicable. For POTWs with an approved pretreatment program, notice is to be included in the annual pretreatment report required in the special conditions of this permit. Notice may be sent to:

Missouri Department of Natural Resources
Water Protection Program
Attn: Pretreatment Coordinator
P.O. Box 176
Jefferson City, MO 65102

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
March 1, 2014

**PART III – SLUDGE AND BIOSOLIDS FROM DOMESTIC AND
INDUSTRIAL WASTEWATER TREATMENT FACILITIES**

SECTION A – GENERAL REQUIREMENTS

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation for domestic wastewater and industrial process wastewater. This permit also incorporates applicable federal sludge disposal requirements under 40 CFR 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR 503 for domestic wastewater. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address the federal requirements.
2. These Part III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW), privately owned facilities and sludge or biosolids generated at industrial facilities.
3. Sludge and Biosolids Use and Disposal Practices:
 - a. The permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
 - b. The permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
 - c. The permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
4. Sludge Received from other Facilities:
 - a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
 - b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act under Chapter 644 RSMo.
8. In addition to STANDARD CONDITIONS, the Department may include sludge limitations in the special conditions portion or other sections of a site specific permit.
9. Alternate Limits in the Site Specific Permit.

Where deemed appropriate, the Department may require an individual site specific permit in order to authorize alternate limitations:

 - a. A site specific permit must be obtained for each operating location, including application sites.
 - b. To request a site specific permit, an individual permit application, permit fee, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the Department, as follows:
 - a. The Department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
 - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.

SECTION B – DEFINITIONS

1. Best Management Practices include agronomic loading rates, soil conservation practices and other site restrictions.
2. Biosolids means organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge.
3. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
4. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
5. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
6. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a (POTW) or a privately owned facility.
7. Industrial wastewater means any wastewater, also known as process water, not defined as domestic wastewater. Per 40 CFR Part 122, process water means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.
8. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include wastewater treatment lagoons and constructed wetlands for wastewater treatment.
9. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
10. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the growing seasons after biosolids application.
11. Public contact site is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
12. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks or equivalent facilities. Sludge does not include carbon coal byproducts (CCBs)
13. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
14. Septage is the material pumped from residential septic tanks and similar treatment works (with a design population of less than 150 people). The standard for biosolids from septage is different from other sludges.

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

1. Sludge shall be routinely removed from wastewater treatment facilities and handled according to the permit facility description and sludge conditions of this permit.
2. The permittee shall operate the facility so that there is no sludge discharged to waters of the state.
3. Mechanical treatment plants shall have separate sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove sludge from these storage compartments on the required design schedule is a violation of this permit.

SECTION D – SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR CONTRACT HAULER

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the Department; or the hauler transports the sludge to another permitted treatment facility.
3. Haulers who land apply septage must obtain a state permit.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility, unless it is required by the accepting facility.

SECTION E – INCINERATION OF SLUDGE

1. Sludge incineration facilities shall comply with the requirements of 40 CFR 503 Subpart E; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or if the ash is determined to be hazardous with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, quantity of sludge incinerated, quantity of ash generated, quantity of ash stored, and ash used or disposal method, quantity, and location. Permittee shall also provide the name of the disposal facility and the applicable permit number.

SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

1. Surface disposal sites of domestic facilities shall comply with the requirements in 40 CFR 503 Subpart C; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Sludge storage lagoons are temporary facilities and are not required to obtain a permit as a solid waste management facility under 10 CSR 80. In order to maintain sludge storage lagoons as storage facilities, accumulated sludge must be removed routinely, but not less than once every two years unless an alternate schedule is approved in the permit. The amount of sludge removed will be dependent on sludge generation and accumulation in the facility. Enough sludge must be removed to maintain adequate storage capacity in the facility.
 - a. In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of sludge on the bottom of the lagoon, upon prior approval of the Department; or
 - b. Permittee shall close the lagoon in accordance with Section H.

SECTION G – LAND APPLICATION

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the facility description or the special conditions of the issued NPDES permit.
2. Land application sites within a 20 miles radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless otherwise specified in a site specific permit. If the permittee's land application site is greater than a 20 mile radius of the wastewater treatment facility, approval must be granted from the Department.
3. Land application shall not adversely affect a threatened or endangered species or its designated critical habitat.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
 - a. This permit does not authorize the land application of domestic sludge except for when sludge meets the definition of biosolids.
 - b. This permit authorizes "Class A or B" biosolids derived from domestic wastewater and/or process water sludge to be land applied onto grass land, crop land, timber or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
5. Public Contact Sites:

Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the Department after two years of proper operation with acceptable testing documentation that shows the biosolids meet Class A criteria. A shorter length of testing will be allowed with prior approval from the Department. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site specific permit.

 - a. After Class B biosolids have been land applied, public access must be restricted for 12 months.
 - b. Class B biosolids are only land applied to root crops, home gardens or vegetable crops whose edible parts will not be for human consumption.

6. Agricultural and Silvicultural Sites:

Septage – Based on Water Quality guide 422(WQ422) published by the University of Missouri

- a. Haulers that land apply septage must obtain a state permit
- b. Do not apply more than 30,000 gallons of septage per acre per year.
- c. Septage tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to other mechanical type treatment facilities.
- d. To meet Class B sludge requirements, maintain septage at 12 pH for at least thirty (30) minutes before land application. 50 pounds of hydrated lime shall be added to each 1,000 gallons of septage in order to meet pathogen and vector stabilization for septage biosolids applied to crops, pastures or timberland.
- e. Lime is to be added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.

Biosolids - Based on Water Quality guide 423, 424, and 425 (WQ423, WQ424, WQ425) published by the University of Missouri;

- a. Biosolids shall be monitored to determine the quality for regulated pollutants
- b. The number of samples taken is directly related to the amount of sludge produced by the facility (See Section I of these Standard Conditions). Report as dry weight unless otherwise specified in the site specific permit. Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable Department approved material to reach the maximum concentration of pollutants allowed.
- c. Table 1 gives the maximum concentration allowable to protect water quality standards

TABLE 1

Biosolids Ceiling Concentration ¹	
Pollutant	Milligrams per kilogram dry weight
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

¹ Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

- d. The low metal concentration biosolids has reduced requirements because of its higher quality and can safely be applied for 100 years or longer at typical agronomic loading rates. (See Table 2)

TABLE 2

Biosolids Low Metal Concentration ¹	
Pollutant	Milligrams per kilogram dry weight
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	36
Zinc	2,800

¹ You may apply low metal biosolids without tracking cumulative metal limits, provided the cumulative application of biosolids does not exceed 500 dry tons per acre.

- e. Each pollutant in Table 3 has an annual and a total cumulative loading limit, based on the allowable pounds per acre for various soil categories.

TABLE 3

Pollutant	CEC 15+		CEC 5 to 15		CEC 0 to 5	
	Annual	Total ¹	Annual	Total ¹	Annual	Total ¹
Arsenic	1.8	36.0	1.8	36.0	1.8	36.0
Cadmium	1.7	35.0	0.9	9.0	0.4	4.5
Copper	66.0	1,335.0	25.0	250.0	12.0	125.0
Lead	13.0	267.0	13.0	267.0	13.0	133.0
Mercury	0.7	15.0	0.7	15.0	0.7	15.0
Nickel	19.0	347.0	19.0	250.0	12.0	125.0
Selenium	4.5	89.0	4.5	44.0	1.6	16.0
Zinc	124.0	2,492.0	50.0	500.0	25.0	250.0

¹ Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)

TABLE 4 - Guidelines for land application of other trace substances ¹

Cumulative Loading	
Pollutant	Pounds per acre
Aluminum	4,000 ²
Beryllium	100
Cobalt	50
Fluoride	800
Manganese	500
Silver	200
Tin	1,000
Dioxin	(10 ppt in soil) ³
Other	⁴

¹ Design of land treatment systems for Industrial Waste, 1979. Michael Ray Overcash, North Carolina State University and Land Treatment of Municipal Wastewater, EPA 1981.)

² This applies for a soil with a pH between 6.0 and 7.0 (salt based test) or a pH between 6.5 to 7.5 (water based test). Case-by-case review is required for higher pH soils.

³ Total Dioxin Toxicity Equivalents (TEQ) in soils, based on a risk assessment under 40 CFR 744, May 1998.

⁴ Case by case review. Concentrations in sludge should not exceed the 95th percentile of the National Sewage Sludge Survey, EPA, January 2009.

Best Management Practices – Based on Water Quality guide 426 (WQ426) published by the University of Missouri

- a. Use best management practices when applying biosolids.
- b. Biosolids cannot discharge from the land application site
- c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
- d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
- e. Do not apply more than the agronomic rate of nitrogen needed.
- f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil and crop removals unless the nitrogen content of the biosolids does not exceed 50,000 milligrams per kilogram of total nitrogen on a dry weight basis and biosolids application rate is less than two dry tons per acre per year.
 - i. PAN can be determined as follows and is in accordance with WQ426
 $(\text{Nitrate} + \text{nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor}^1)$.

¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application.

- g. Buffer zones are as follows:
 - i. 300 feet of a water supply well, sinkhole, lake, pond, water supply reservoir or water supply intake in a stream;
 - ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
 - iii. 150 feet if dwellings;
 - iv. 100 feet of wetlands or permanent flowing streams;
 - v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.
- h. Slope limitation for application sites are as follows;
 - i. A slope 0 to 6 percent has no rate limitation
 - ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels
 - iii. Slopes > 12, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
- i. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
- j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the Department.
- k. Biosolids / sludge applicators must keep detailed records up to five years.

SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the Department. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
 - a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
 - b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
 - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre.
 - i. PAN can be determined as follows:

$$(\text{Nitrate} + \text{nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor}^1)$$

¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application.
4. When closing a domestic wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works definition. See Section B of these standard conditions. Under the septage category, residuals may be left in place as follows:
 - a. Testing for metals or fecal coliform is not required
 - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
 - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above. Allowable PAN loading is 300 pounds/acre.

5. Residuals left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berm shall be demolished, and the site shall be graded and contain $\geq 70\%$ vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoons and/or earthen structure and/or ash pond closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200
7. When closing a mechanical wastewater and/or industrial process wastewater plant; all sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
 - a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain $\geq 70\%$ vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
 - b. Per 10 CSR 20-6.015(4)(B)6, Hazardous Waste shall not be land applied or disposed during industrial and mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations under 10 CSR 25.
 - c. After demolition of the mechanical plant / industrial plant, the site must only contain clean fill defined in RSMo 260.200 (5) as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill or other beneficial use. Other solid wastes must be removed.
8. If sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or H, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.

SECTION I – MONITORING FREQUENCY

1. At a minimum, sludge or biosolids shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed. Please see the table below.

TABLE 5

Design Sludge Production (dry tons per year)	Monitoring Frequency (See Notes 1 and 2)			
	Metals, Pathogens and Vectors	Nitrogen TKN ¹	Nitrogen PAN ²	Priority Pollutants and TCLP ³
0 to 100	1 per year	1 per year	1 per month	1 per year
101 to 200	biannual	biannual	1 per month	1 per year
201 to 1,000	quarterly	quarterly	1 per month	1 per year
1,001 to 10,000	1 per month	1 per month	1 per week	-- ⁴
10,001 +	1 per week	1 per week	1 per day	-- ⁴

¹ Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less

² Calculate plant available nitrogen, if biosolids application is more than 2 dry tons per acre per year.

³ Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) and toxicity characteristic leaching procedure (40 CFR 261.24) is required only for permit holders that must have a pre-treatment program.

⁴ One sample for each 1,000 dry tons of sludge.

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids. This data shall be used to calculate the dry tons of sludge applied per acre.

Note 2: Total Phosphorus: Total phosphorus and total potassium shall be tested at the same monitoring frequency as metals.

2. If you own a wastewater treatment lagoon or sludge lagoon that is cleaned out once a year or less, you may choose to sample only when the sludge is removed or the lagoon is closed. Test one composite sample for each 100 dry tons of sludge or biosolids removed from the lagoon during the year within the lagoon at closing. Composite sample must represent various areas at one-foot depth.
3. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the Department.
4. At this time, the Department recommends monitoring requirements shall be performed in accordance with, "POTW Sludge Sampling and Analysis Guidance Document," United States Environmental Protection Agency, August 1989, and the subsequent revisions.

SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in these standard conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting period
 - a. By January 28th of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
 - b. Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Forms. The annual report shall be submitted on report forms provided by the Department or equivalent forms approved by the Department.
4. Reports shall be submitted as follows:

Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the Department and EPA. Other facilities need to report only to the Department. Reports shall be submitted to the addresses listed as follows:

DNR regional office listed in your permit
(see cover letter of permit)
ATTN: Sludge Coordinator

EPA Region VII
Water Compliance Branch (WACM)
Sludge Coordinator
11201 Renner Blvd.
Lenexa, KS 66219

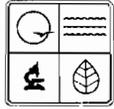
5. Annual Report Contents. The annual report shall include the following:
 - a. Sludge and biosolids testing performed. Include a copy or summary of all test results, even if not required by the permit.
 - b. Sludge or biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at the end of the year, and the quantity used or disposed.
 - c. Gallons and % solids data used to calculate the dry ton amounts.
 - d. Description of any unusual operating conditions.
 - e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
 - i. This must include the name, address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
 - ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.

f. Contract Hauler Activities

If contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge or biosolids use permit.

g. Land Application Sites:

- i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest $\frac{1}{4}$, $\frac{1}{4}$, Section, Township, Range, and county, or UTM coordinates. If biosolids application exceeds 2 dry tons/acre/year, reports biosolids nitrogen results, Plant Available Nitrogen (PAN) in pounds/acre, crop nitrogen requirement.
- ii. If the "Low Metals" criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
- iii. Report the method used for compliance with pathogen and vector attraction requirements.
- iv. Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.



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

WATER POLLUTION CONTROL PROGRAM

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	
PERMIT NO. MO-0028886	COUNTY Jackson

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.

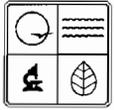
SUPPLEMENTAL APPLICATION INFORMATION

- 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

RECEIVED
 CN# 181008 Returned - No Fee Due @ Time of Renewal



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

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
10/7/13	ESK

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- 0028886 Expiration Date 03/19/2014

An operating permit modification: Permit #MO- 0028886 Reason: Incorporate Cnstr. Permit CP0000462 Imp.

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 Sni-A-Bar Wastewater Treatment Facility		TELEPHONE NUMBER WITH AREA CODE 816-935-2730	
ADDRESS (PHYSICAL) 4600 Block South Seymore Road	CITY Grain Valley	STATE MO	ZIP 64029
2.1 LEGAL DESCRIPTION (Plant Site): NW 1/4, SE 1/4, NW 1/4, Sec. , T , R 30W County Jackson			
2.2 UTM Coordinates Easting (X): 3901525 Northing (Y): -09410425 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)			

3. OWNER

NAME City of Blue Springs	TITLE	TELEPHONE NUMBER WITH AREA CODE 816-228-0110	
ADDRESS 903 W Main Street	CITY Blue Springs	STATE MO	ZIP 64015

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 of Blue Springs	CITY Blue Springs	
ADDRESS 903 W Main Street	CERTIFICATE NUMBER (IF APPLICABLE) 6629	STATE MO
		ZIP 64015

5. OPERATOR

NAME Jeff Butner	TITLE Operator	TELEPHONE NUMBER WITH AREA CODE 816-935-2730
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6. FACILITY CONTACT

NAME Jeff Mock	TITLE Operations Manager
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MO 780-1805 (09-08)

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #001
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PART A – BASIC APPLICATION INFORMATION

7. ADDITIONAL FACILITY INFORMATION

7.1 BRIEF DESCRIPTION OF FACILITIES

See Attachment A

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 <u>4952</u>	DISCHARGE SIC CODE: <u>4952</u>	FACILITY NAICS CODE: _____	DISCHARGE NAICS CODE: _____
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7.5 NUMBER OF SEPARATE DISCHARGE POINTS
1

7.6 NUMBER OF PEOPLE PRESENTLY CONNECTED OR POPULATION EQUIVALENT <u>39,821</u>	DESIGN POPULATION EQUIVALENT 54,545
--	--

NUMBER OF UNITS PRESENTLY CONNECTED
 HOMES 15,528 APARTMENTS 20 TRAILERS _____ OTHER _____

TOTAL DESIGN FLOW (ALL OUTFALLS) 10.0 MGD Average and 36.0 MGD Peak	ACTUAL FLOW 4.6 MGD (January 2009 - December 2012)
--	---

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
192

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 Jan - Dec	B. HOW MANY DAYS OF THE WEEK WILL THE DISCHARGE OCCUR? 7
--	---

7.11 IS WASTEWATER LAND APPLIED? (If Yes, Attach Form I) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	7.12 DOES THIS FACILITY DISCHARGE TO A LOSING STREAM OR SINKHOLE? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
---	--

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

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

8. LABORATORY CONTROL INFORMATION

8.1 LABORATORY WORK CONDUCTED BY PLANT PERSONNEL

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

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #001
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PART A – BASIC APPLICATION INFORMATION

9. SLUDGE HANDLING, USE AND DISPOSAL

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

9.2 SLUDGE PRODUCTION, INCLUDING SLUDGE RECEIVED FROM OTHERS
 Design Dry Tons/Year ¹²⁷⁸ Actual Dry Tons/Year ⁴⁹⁸

9.3 CAPACITY OF SLUDGE HOLDING STRUCTURES

9.4 SLUDGE STORAGE PROVIDED
 Cubic Feet ^{4,400,000} Days of Storage ³⁹⁵⁰ Average Percent Solids of Sludge ^{2 and 4%} No Sludge Storage is Provided

9.5 TYPE OF STORAGE
 Holding Tank Basin Building Concrete Pad Other (Describe) Reed Beds and Sludge Lagoons

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) _____

9.8 PERSON RESPONSIBLE FOR HAULING SLUDGE TO DISPOSAL FACILITY
 NAME
 Third Party Hauler through Bid Procurement approximately every 5 years.

ADDRESS	CITY	STATE	ZIP
---------	------	-------	-----

CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO MO-
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9.9 SLUDGE USE OR DISPOSAL FACILITY
 By Applicant By Others (Complete Below)

NAME

ADDRESS	CITY	STATE	ZIP
---------	------	-------	-----

CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO MO-
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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
 See Attachment A

ADDRESS	CITY	STATE	ZIP
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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)
 Tri-County Water Authority, City of Independence, MO and City of Kansas City, MO

B. PRIVATE WELL

C. SURFACE WATER (LAKE, POND OR STREAM)

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

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

END OF PART A

MO 780-1805 (09-08)

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #001
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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 A 3-inch rain event can produce a peak flow of up to 12.0 MGD from a normal dry weather flow of 3.0 MGD.

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

See Attachment A

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

MAILING ADDRESS

TELEPHONE NUMBER WITH AREA CODE

RESPONSIBILITIES OF CONTRACTOR

20.2 SCHEDULED IMPROVEMENTS AND SCHEDULES OF IMPLEMENTATION. PROVIDE INFORMATION ABOUT ANY UNCOMPLETED IMPLEMENTATION SCHEDULE OR UNCOMPLETED PLANS FOR IMPROVEMENTS THAT WILL AFFECT THE WASTEWATER TREATMENT, EFFLUENT QUALITY OR DESIGN CAPACITY OF THE TREATMENT WORKS. IF THE TREATMENT WORKS HAS SEVERAL DIFFERENT IMPLEMENTATION SCHEDULES OR IS PLANNING SEVERAL IMPROVEMENTS, SUBMIT SEPARATE RESPONSES FOR EACH. (IF NONE, GO TO QUESTION B-20.3.)

A. List the outfall number that is covered by this implementation schedule Outfall No. 001	B. Indicate whether the planned improvements or implementation schedule are required by local, state or federal agencies. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	--

20.3 WASTEWATER DISCHARGES: COMPLETE QUESTIONS 20.4 THROUGH 20.7 ONCE FOR EACH OUTFALL (INCLUDING BYPASS POINTS) THROUGH WHICH EFFLUENT IS DISCHARGED. DO NOT INCLUDE INFORMATION ON COMBINED SEWER OVERFLOWS IN THIS SECTION.

20.4 DESCRIPTION OF OUTFALL

OUTFALL NUMBER **#001**

A. LOCATION
 $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW Section 25 Township 49N Range 30 E W

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

B. Distance from Shore (If Applicable) <u>NA</u> ft.	C. Depth Below Surface (If Applicable) <u>NA</u> ft.	D. Average Daily Flow Rate <u>4.0</u> 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: 7	Average Duration of Each Discharge: 24 hr	Average Flow Per Discharge: 4.0 mgd	Months in Which Discharge Occurs: Jan - Dec
--	--	--	--

Is Outfall Equipped with a Diffuser? Yes No

20.5 DESCRIPTION OF RECEIVING WATER

B. Name of Receiving Water
Sni-A-Bar Creek

B. Name of Watershed (If Known) Sni-A-Bar Creek	U.S. Soil Conservation Service 14-Digit Watershed Code (If Known)
--	---

B. Name of State Management/River Basin (If Known)	U.S. Geological Survey 8-Digit Hydrologic Cataloging Unit Code (If Known) 10300101 (Lower Missouri-Crooked)
--	--

B. Critical Flow of Receiving Stream (If Applicable) Acute <u>NA</u> cfs Chronic <u>NA</u> cfs	B. Total Hardness of Receiving Stream at Critical Low Flow (If Applicable) mg/L of CaCO ₃ NA
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FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #001
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PART B – ADDITIONAL APPLICATION INFORMATION (CONTINUED)

20.6 DESCRIPTION OF TREATMENT

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

B. INDICATE THE FOLLOWING REMOVAL RATES (AS APPLICABLE)
Design BOD₅ Removal Or Design CBOD₅ Removal 93 % Design SS Removal 93 %
Design P Removal NA % Design N Removal N/A % Other Ammonia 95 %

C. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe:
UV

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.

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	VALUE	UNITS	VALUE	UNITS	NO. OF SAMPLES
pH (Minimum)		S.U.		S.U.	
pH (Maximum)		S.U.	7.2	S.U.	
FLOW RATE		MGD		MGD	
TEMPERATURE (Winter)		°C		°C	
TEMPERATURE (Summer)		°C	23.5	°C	

*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	mg/L		mg/L			
	CBOD ₅	mg/L	4.28	mg/L	1		
FECAL COLIFORM		#/100 mL	3400	#/100 mL	1		
TOTAL SUSPENDED SOLIDS (TSS)		mg/L	8	mg/L	1		
AMMONIA (AS N)		mg/L	.24	mg/L	1		
CHLORINE (TOTAL RESIDUAL, TRC)		mg/L	N/A	mg/L			
DISSOLVED OXYGEN		mg/L	7.2	mg/L	1		
TOTAL KJELDAHL NITROGEN (TKN)		mg/L	2	mg/L	1		
NITRATE PLUS NITRITE NITROGEN		mg/L	26.6	mg/L	1		
OIL AND GREASE		mg/L	<5	mg/L	1		
PHOSPHORUS (TOTAL)		mg/L	4.5	mg/L	1		
TOTAL DISSOLVE SOLIDS (TDS)		mg/L	526	mg/L	1		
OTHER		mg/L		mg/L			

END OF PART B

PART C - CERTIFICATION

30. CERTIFICATION

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

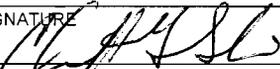
ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

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

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

Chris Sandie - Public Works Director

SIGNATURE



TELEPHONE NUMBER WITH AREA CODE

816-228-0121

DATE SIGNED

9-15-13

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

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

Appropriate Regional Office

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

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

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

END OF PART C.

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

Do not complete the remainder of this application, unless:

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

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

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #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												
ARSENIC												
BERYLLIUM												
CADMIUM												
CHROMIUM												
COPPER												
LEAD												
MERCURY												
NICKEL												
SELENIUM												
SILVER												
THALLIUM												
ZINC												
CYANIDE												
TOTAL PHENOLIC COMPOUNDS												
HARDNESS (as CaCO ₃)												

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

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #001
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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			
VOLATILE ORGANIC COMPOUNDS												
ACROLEIN												
ACRYLONITRILE												
BENZENE												
BROMOFORM												
CARBON TETRACHLORIDE												
CHLOROBENZENE												
CHLORODIBROMO-METHANE												
CHLOROETHANE												
2-CHLORO-ETHYLVINYL ETHER												
CHLOROFORM												
DICHLOROBROMO-METHANE												
1,1-DICHLORO-ETHANE												
1,2-DICHLORO-ETHANE												
TRANS-1,2-DICHLOROETHYLENE												
1,1-DICHLORO-ETHYLENE												
1,2-DICHLORO-PROPANE												
1,3-DICHLORO-PROPYLENE												
ETHYLBENZENE												
METHYL BROMIDE												
METHYL CHLORIDE												
METHYLENE CHLORIDE												
1,1,2,2-TETRACHLOROETHANE												
TETRACHLORO-ETHANE												
TOLUENE												
3,4-BENZO-FLUORANTHENE												
BENZO(GH) PHERYLENE												
BENZO(K) FLUORANTHENE												

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #001
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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												
BIS (2-CHLOROETHYL) – ETHER												
BIS (2-ETHYLHEXYL) PHTHALATE												
4-BROMOPHENYL PHENYL ETHER												
BUTYL BENZYL PHTHALATE												
2-CHLORONAPHTHALENE												
4-CHLORPHENYL PHENYL ETHER												
CHRYSENE												
DI-N-BUTYL PHTHALATE												
DEBENZO (A,H) ANTHRACENE												
1,2-DICHLORO-BENZENE												
1,3-DICHLORO-BENZENE												
1,4-DICHLORO-BENZENE												
3,3-DICHLORO-BENZIDINE												
DIETHYL PHTHALATE												
DIMETHYL PHTHALATE												
2,4-DINITRO-TOLUENE												
2,6-DINITRO-TOLUENE												
1,2-DIPHENYL-HYDRAZINE												
1,1,1-TRICHLORO-ETHANE												
1,1,2-TRICHLORO-ETHANE												
TRICHLORETHYLENE												
VINYL CHLORIDE												
USE THIS SPACE (OR A SEPARATE SHEET) TO PROVIDE INFORMATION ON OTHER VOLATILE ORGANIC COMPOUNDS REQUESTED BY THE PERMIT WRITER												

MO 780-1805 (09-08)

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #001
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PART D – EXPANDED EFFLUENT TESTING DATA (CONTINUED)

40.1 EXPANDED EFFLUENT TESTING DATA (CONTINUED)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	CONC	UNITS	MASS	UNITS	CONC	UNITS	MASS	UNITS	NO. OF SAMPLES		
BASE-NEUTRAL COMPOUNDS											
ACENAPHTHENE											
ACENAPHTHYLENE											
ANTHRACENE											
BENZIDINE											
BENZO(A)ANTHRACENE											
BENZO(A)PYRENE											
FLUORANTHENE											
FLUORENE											
HEXACHLOROBENZENE											
HEXACHLOROCYCLO-PENTADIENE											
HEXACHLOROETHANE											
INDENO (1,2,3-CD) PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-PROPYLAMINE											
N-NITROSODI-METHYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLOROBENZENE											

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

END OF PART D

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

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #001
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PART E – TOXICITY TESTING DATA

50. TOXICITY TESTING DATA

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

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

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

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

CHRONIC	ACUTE	9
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INDIVIDUAL TEST DATA. Complete the following chart for the last three whole effluent toxicity tests. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

	MOST RECENT	2 ND MOST RECENT	3 RD MOST RECENT
A. TEST INFORMATION			
TEST NUMBER	13-062	12-226	12-097
TEST SPECIES AND TEST METHOD NUMBER	(LC50) EPA-821-R-02-012	(LC50) EPA-821-R-02-012	(LC50) EPA-821-R-02-012
AGE AT INITIATION OF TEST	24 hrs	24 hrs	24 hrs
OUTFALL NUMBER	1	1	1
DATES SAMPLE COLLECTED	04-16-13	09-10-12	04-17-12
DATE TEST STARTED	04-17-13	09-11-12	04-18-12
DURATION	24 hrs	24 hrs	24 hrs
B. GIVE TOXICITY TEST METHODS FOLLOWED			
MANUAL TITLE	See Attachment A		
EDITION NUMBER AND YEAR OF PUBLICATION	5th Addition	5th Addition	5th Addition
PAGE NUMBER(S)	EPA-821-R-02-012	EPA-821-R-02-012	EPA-821-R-02-012
C. GIVE THE SAMPLE COLLECTION METHOD(S) USED. FOR MULTIPLE GRAB SAMPLES, INDICATE THE NUMBER OF GRAB SAMPLES USED.			
24-HOUR COMPOSITE	X	X	X
GRAB			
D. INDICATE WHERE THE SAMPLE WAS TAKEN IN RELATION TO DISINFECTION. (CHECK ALL THAT APPLY FOR EACH)			
BEFORE DISINFECTION	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A
AFTER DISINFECTION	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A
AFTER DECHLORINATION	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A
E. DESCRIBE THE POINT IN THE TREATMENT PROCESS AT WHICH THE SAMPLE WAS COLLECTED			
SAMPLE WAS COLLECTED	Effluent Sampler	Effluent Sampler	Effluent Sampler
F. FOR EACH TEST, INCLUDE WHETHER THE TEST WAS INTENDED TO ASSESS CHRONIC TOXICITY, ACUTE TOXICITY OR BOTH.			
CHRONIC TOXICITY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ACUTE TOXICITY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. PROVIDE THE TYPE OF TEST PERFORMED			
STATIC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STATIC STATIC-RENEWAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FLOW-THROUGH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. SOURCE OF DILUTION WATER. IF LABORATORY WATER, SPECIFY TYPE; IF RECEIVING WATER, SPECIFY SOURCE			
LABORATORY WATER			
RECEIVING WATER	Sni-A-Bar Creek	Sni-A-Bar Creek	Sni-A-Bar Creek

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #001
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PART E – TOXICITY TESTING DATA (CONTINUED)

50.1 WHOLE EFFLUENT TOXICITY TESTS DATA (CONTINUED)

	MOST RECENT	2 ND MOST RECENT	3 RD MOST RECENT
I. TYPE OF DILUTION WATER, IF SALT WATER, SPECIFY "NATURAL" OR TYPE OF ARTIFICIAL SEA SALTS OR BRINE USED.			
FRESH WATER	X	X	X
SALT WATER			

J. GIVE THE PERCENTAGE EFFLUENT USED FOR ALL CONCENTRATIONS IN THE TEST SERIES.			
	0,12.5,25,50,75,100	0,12.5,25,50,75,100	0,12.5,25,50,75,100

K. PARAMETERS MEASURED DURING THE TEST. (STATE WHETHER PARAMETER MEETS TEST METHOD SPECIFICATIONS)

pH			
SALINITY	N/A	N/A	N/A
TEMPERATURE	Yes	Yes	Yes
AMMONIA	Yes	Yes	Yes
DISSOLVED OXYGEN	Yes	Yes	Yes

L. TEST RESULTS

ACUTE:			
PERCENT IN SURVIVAL IN 100% EFFLUENT	100%	100%	100%
LC ₅₀	100%	100%	100%
95% C.I.			
CONTROL PERCENT SURVIVAL			
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)?	03-12-13	08-17-12	04-13-12
OTHER (DESCRIBE)			

50.2 TOXICITY REDUCTION EVALUATION

Is the treatment works involved in a toxicity reduction evaluation?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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)

END OF PART E

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

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #001
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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
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60.3 SIGNIFICANT INDUSTRIAL USER INFORMATION

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, provide the information requested for each. Submit additional pages as necessary.

NAME			
MAILING ADDRESS	CITY	STATE	ZIP

60.4 INDUSTRIAL PROCESSES

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

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)
RAW MATERIAL(S)

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

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #001
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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

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

REMEDIAL WASTE. Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

Yes No Provide a list of sites and the requested information for each current and future site.

60.11 WASTE ORIGIN

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

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)

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):

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

Continuous Intermittent

If intermittent, describe the discharge schedule:

END OF PART F

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

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.

FACILITY NAME Sni-A-Bar Wastewater Treatment Facility	PERMIT NO. MO- 0028886	OUTFALL NO. #001
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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.

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

PART A – BASIC APPLICATION INFORMATION

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

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

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

CONSTRUCTION PERMIT FEES (Include fee with application.)

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

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

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

Annual fee/Design flow

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

Annual fee/Design flow

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

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

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

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

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

a. Municipals - \$200 each.

b. All others – 25 percent of annual fee.

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

2. Name of Facility – Include the name by which this facility is locally known. Example: Southwest Sewage Treatment Plant, Country Club Mobile Home Park, etc. Provide the street address or location of the facility. If the facility lacks a street name or route number, provide the names of the closest intersection, highway, country road, etc.
 - 2.1 Self – explanatory.
 - 2.2 Global Positioning System, or GPS, is a satellite-based navigation system. The department prefers that a GPS receiver is used and the displayed coordinates submitted. If access to a GPS receiver is not available, use a mapping system to approximate the coordinates; the department's mapping system is available at www.dnr.mo.gov/internetmapviewer/.
3. Owner – Provide the legal name and address of the owner.
 - 3.1 Prior to submitting a permit to public notice, the Department of Natural Resources shall provide the permit applicant 10 days to review the draft permit for nonsubstantive drafting errors. In the interest of expediting permit issuance, permit applicants may waive the opportunity to review draft permits prior to public notice. Check Yes to review the draft permit prior to public notice. Check No to waive the process and expedite the permit.
4. Continuing Authority – Provide the permanent organization, which will serve as the continuing authority for the operation, maintenance and modernization of the facility. The regulatory requirement regarding continuing authority is available at www.sos.mo.gov/adrules/csr/current/10csr/10c20-6a.pdf or contact the appropriate Department of Natural Resources Regional Office.
5. Operator – Provide the name, certificate number and telephone number of the operator of the facility.
6. Provide the name, title and work telephone number of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and who can be contacted by the department, if necessary.
 - 7.1 Provide a brief description of the wastewater treatment facilities.
 - 7.2 A topographic map is available on the Web at www.dnr.mo.gov/internetmapviewer/ or from the Department of Natural Resources' Division of Geology and Land Survey in Rolla, Missouri at 573-368-2125.
- 7.3 Self – explanatory.
- 7.4 For Standard Industrial Codes, visit www.osha.gov/pls/imis/sicsearch.html and for the North American Industry Classification System, visit www.census.gov/naics or contact the appropriate Department of Natural Resources Regional Office.
- 7.5 – 8.1 Self – explanatory.
- 9.1 A copy of 10 CSR 25 is available at www.sos.mo.gov/adrules/csr/current/10csr/10csr.asp#10-25.
- 9.2 – 9.9 Self – explanatory.

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

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

PART B – ADDITIONAL APPLICATION INFORMATION

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

PART C – CERTIFICATION

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

PART D – EXPANDED EFFLUENT TESTING DATA

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

PART E – TOXICITY TESTING DATA

- 50.1 – 50.3 Self – explanatory.

PART F – INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES

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

PART G – COMBINED SEWER SYSTEMS

70. – 70.10 Self – explanatory.

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

Form B2 – Attachment A

Item 7.1

1. Influent Pump Stations (quantity 2), Excess Flow Holding Basin, Headworks with fine screening and grit removal, Aeration Basins (quantity 3), Secondary Clarifiers (quantity 4), RAS/WAS Pump Stations (quantity 2), Tertiary Filtration, UV Disinfection, Effluent Reaeration, Wet Weather Effluent Pump Station, Sludge Digestion Basins (quantity 2), Sludge Reed Beds (quantity 4), Sludge Storage/Digestion Lagoons (quantity 2).

Item 7.7

1. 03/29/10 SSO - Blockage due to debris in manhole D05-019.
2. 04/30/10 SSO - Blockage due to vandalism in manhole D13-080.

Item 7.14

1. 06/30/10 - Effluent pH

Item 10

1. Swallowtail LLC, 24820 Miller Road, Harrisonville, MO 64075
2. Tompkins Norman Road, 4404 S Howell Road, Oak Grove, MO 64075
3. Ledgerwood Denzel R JR & Nancy, 4602 S Howell Road, Oak Grove, MO 64075

Item 20

1. 769,811 lf of chemical root treatment
2. 491,604 lf of sewer line flushing
3. 56 sewer line point repairs
4. 93,059 vertical lf of manhole lining
5. 153 manholes adjusted to grade
6. 298 manholes rehab/lined
7. 297,881 lf of sewer line televised

Item 20.2

1. Improvements associated with Construction Permit #CP 0000462 are complete with the exception of effluent UV disinfection. It is anticipated these improvements will be operation by November 2013.

Part D

1. Not believed to be in discharge.

Item 50.1

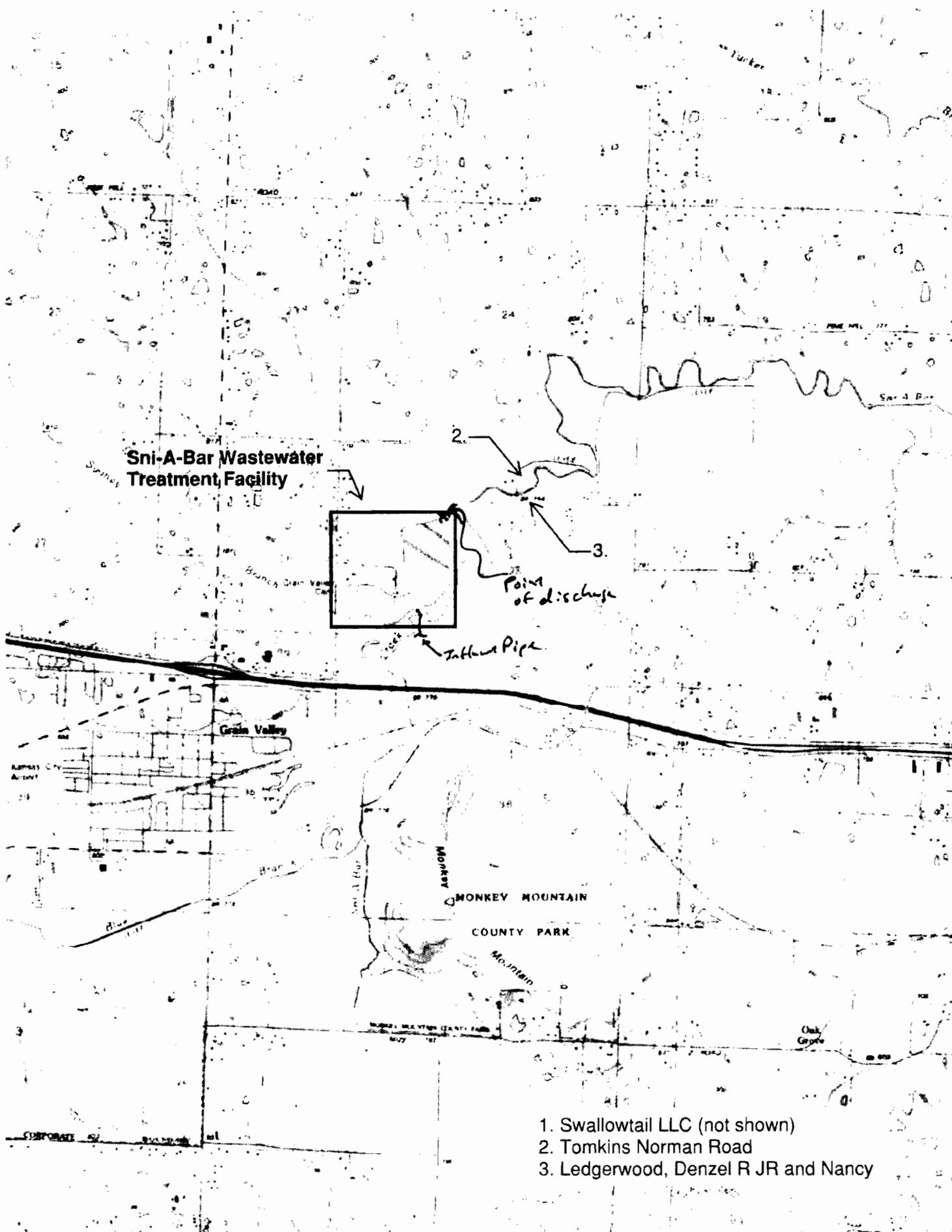
1. Manual Title – Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Fresh Water and Marine Organisms, 5th Addition.

Part F

1. Not required.

Part G

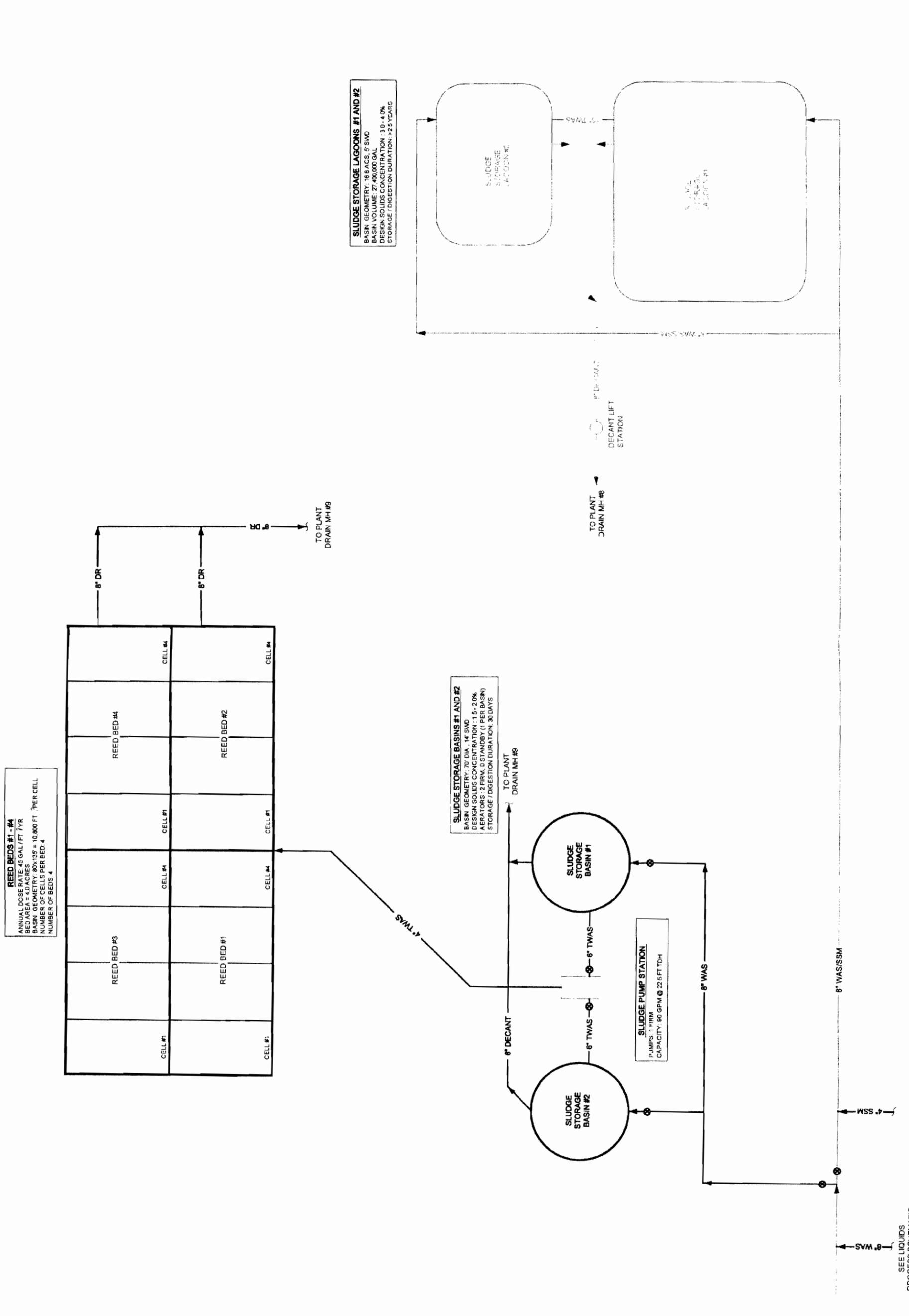
1. Not required.



1. Swallowtail LLC (not shown)
2. Tomkins Norman Road
3. Ledgerwood, Denzel R JR and Nancy



DATE	DESCRIPTION	BY
10/23/09	B/C ISSUED FOR BID	
06/29/09	B/C ISSUED FOR MDR REVIEW	
01/06/09	B/C ISSUED FOR CLIENT REVIEW - 80% COMPLETE	



REED BEDS #1 - #4
ANNUAL DOSE RATE: 45 GAL/FT² FYR
BED AREA: 10,800 FT² PER BED
SLOPE: 1%
SOLIDITY: 1.5-2.0%
NUMBER OF CELLS PER BED: 4
NUMBER OF BEDS: 4

SLUDGE STORAGE BASINS #1 AND #2
BASIN GEOMETRY: 70' DIA., 14' SMD
DESIGN SOLIDS CONCENTRATION: 1.5-2.0%
AERATORS: 2 FIRM, 0 STANDBY (1 PER BASIN)
STORAGE / DIGESTION DURATION: 30 DAYS

SLUDGE STORAGE LAGOONS #1 AND #2
BASIN GEOMETRY: 168 ACS, 5' SMD
DESIGN VOLUME: 27,400,000 GAL
DESIGN SOLIDS CONCENTRATION: 3.0-4.0%
STORAGE / DIGESTION DURATION: >2.5 YEARS