STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

CONSTRUCTION PERMIT

The Missouri Department of Natural Resources hereby issues a permit to:

Mr. Josiah Cox
Hillcrest Operating Utility Company, Inc.
3636 South Geyer Road, Suite 100
St. Louis, MO 63127

for the construction of (described facilities):

See attached.

Permit Conditions:

See attached.

Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department).

As the Department does not examine structural features of design or the efficiency of mechanical equipment, the issuance of this permit does not include approval of these features.

A representative of the Department may inspect the work covered by this permit during construction. Issuance of a permit to operate by the Department will be contingent on the work substantially adhering to the approved plans and specifications.

This permit applies only to the construction of water pollution control components; it does not apply to other environmentally regulated areas.

March 26, 2015
Effective Date

Sara Parker Pauley

Sara Parker Pauley, Director, Department of Natural Resources

March 25, 2017
Expiration Date

John Madras

John Madras, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

The upgrade will be a DEMONSTRATION project for the patent pending NitrOx^{TM} Reactor System developed by Triplepoint Environmental. The upgrade will convert lagoon cell 1 to sludge holding, lagoon cells 2 and three will be converted to cell 1 and 2, a NitrOx^{TM} 2-stage covered Moving Bed Biological Reactor (MBBR) will follow cell 2, and the final lagoon cell will be for clarification. The existing tablet chlorination/tablet dechlorination system will remain in operation.

This is a DEMONSTRATION project and additional monitoring requirements are included in the operating permit in accordance with the draft Approval Process for Innovative Technology Factsheet.

II. FINDING OF AFFORDABILITY

The Finding of Affordability is not applicable. The permittee is not a combined or separate sanitary sewer system or a publicly owned treatment works.

III. CONSTRUCTION PERMIT CONDITIONS

The permittee is authorized to construct subject to the following conditions:

1. This construction permit does not authorize discharge.

2. All construction shall be in accordance with the plans and specifications submitted by 21 Design Group on December 23, 2014.

3. The Department must be contacted in writing prior to making any changes to the approved plans and specifications that would directly or indirectly have an impact on the capacity, flow, system layout, or reliability of the proposed wastewater treatment facilities or any design parameter that is addressed by 10 CSR 20-8, in accordance with 10 CSR 20-8.110(8).

4. State and Federal Law does not permit bypassing of raw wastewater, therefore steps must be taken to ensure that raw wastewater does not discharge during construction. If a sanitary sewer overflow or bypass occurs, report the appropriate information to the Department's Southeast Regional Office per 10 CSR 20-7.015(9)(E)2.

5. This Construction Permit is invalid for projects required to comply with the requirements contained in 10 CSR 20-4, "Grants and Loans"

6. Protection of drinking water supplies shall be in accordance with 10 CSR 20-8.120(10). "There shall be no physical connections between a public or private potable water supply system and a sewer, or appurtenance thereto which would permit the passage of any wastewater or polluted water into the potable supply. No water pipe shall pass through or come in contact with any part of a sewer manhole."

7. Sewers in relation to water works structures shall meet the requirements of 10 CSR 23-3.010 with respect to minimum distances from public water supply wells or other water supply sources and structures.

   A. Sewer mains shall be laid at least ten feet horizontally from any existing or proposed water main. The distances shall be measured edge-to-edge. In cases where it is not practical to maintain a ten foot separation, the Department may allow a deviation on a case-by-case basis, if supported by data from the design engineer. Such a deviation may allow installation of the sewer closer to a water main, provided that the water main is in a separate trench or on an undisturbed earth shelf located on either side of the sewer and at an elevation so the bottom of the water main is at least 18 inches above the top of the sewer. If it is impossible to obtain proper horizontal and vertical separation as described above for sewers, the sewer must be constructed of slip-on or mechanical joint pipe or continuously encased and be pressure tested to 150 pounds per square inch to assure water tightness.

   B. Manholes should be located at least ten feet horizontally from any existing or proposed water main.

   C. Manholes shall be located with the top access at or above grade level.

   D. Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade. When it is impossible to obtain proper vertical separation as stipulated above, one of the following methods must be specified:

      a. The sewer shall be designed and constructed equal to the water pipe and shall be pressure tested to assure water tightness prior to backfilling; or

      b. Either the water main or sewer line may be continuously encased or enclosed in a watertight carrier pipe which extends ten feet on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be of materials approved by the Department for use in water main construction.

8. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of one acre or more to obtain a Missouri State Operating Permit to discharge stormwater. The permit requires Best Management Practices sufficient to control runoff and sedimentation to protect waters of the state. Land disturbance permits will only be obtained by means of the Department's ePermitting system available online at www.dnr.mo.gov/env/wpp/epermit/help.htm. See www.dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm for more information.

9. A United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) issued by the Department or permit waiver may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied. If construction activity will disturb any land below the ordinary high water mark of Jurisdictional Waters of the U.S. then a 404/401 will be required. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the Department's Water Protection Program at 573-751-1300 for more information. See www.dnr.mo.gov/env/wpp/401/ for more information.

10. Upon completion of construction;

    A. The Hillcrest Operating Utility Company, Inc. will become the continuing authority for operation, maintenance, and modernization of these facilities;

    B. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(D);

    C. Submit an electronic copy of the as builts if the project was not constructed in accordance with previously submitted plans and specifications; and

    D. Submit a Form B - Application for an Operating Permit for Domestic or Municipal Wastewater (≤100,000 gallons per day) along with the modification fee.

IV. REVIEW SUMMARY

1. AMMONIA

The Water Protection Program is providing this notice to inform permittees that EPA's published ammonia criteria for aquatic life protection is lower than the current Missouri criteria. The department has initiated stakeholder discussions on this topic and at this time, there is no firm target date for starting the rulemaking to adopt new standards. More information can be found at http://dnr.mo.gov/pubs/pub2481.pdf .

The proposed project is intended to address possible future ammonia limits.

2. CONSTRUCTION PURPOSE

There is an Abatement Order on Consent with the Department signed by Bobby Brandon on February 16, 2013. The order requires improvement or replacement of the facility so it will achieve compliance with the operating permit.

The upgrade will be a DEMONSTRATION project for the patent pending NitrOxTM Reactor System developed by Triplepoint Environmental. The upgrade will convert lagoon cell 1 to sludge holding, lagoon cells 2 and three will be converted to cell 1 and 2, a NitrOxTM 2-stage covered Moving Bed Biological Reactor (MBBR) will follow cell 2, and the final lagoon cell will be for clarification. The existing tablet chlorination/tablet dechlorination system will remain in operation.

3. FACILITY DESCRIPTION

The existing facility consists of a four cell aerated lagoon. The upgrade will convert lagoon cell 1 to sludge holding, lagoon cells 2 and three will be converted to cell 1 and 2, a NitrOxTM 2-stage covered Moving Bed Biological Reactor (MBBR) will follow cell 2, and the final lagoon cell will be for clarification. The existing tablet chlorination/tablet dechlorination system will remain in operation.

4. COMPLIANCE PARAMETERS

The proposed project is intended to treat a design average flow of 60,000 gpd and meet monthly average effluent limits of 30 mg/l BOD, 30 mg/l TSS, 0.6 mg/l ammonia in the summer, and 2.1 mg/l ammonia in the winter.

5. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

Current design guides do not contain design parameters for this configuration of technology. This DEMONSTRATION project operating permit contains monitoring and reporting requirements that will be used to help develop design criteria for future projects.

The NitrOx MBBR is designed for an average daily flow of 60,000 gpd and a maximum daily flow (assuming lagoons equalize flow) of 120,000 gpd. The influent to the reactor is assumed to have 45 mg/l BOD and TSS, and 29 mg/l ammonia. There are 2 tanks 10 ft x 10 ft x 12 ft deep with a side water depth of 9 ft. The average flow hydraulic retention time is 5.4 hours and the peak flow hydraulic retention time is 2.7 hours. The media surface area proposed is 12,997 m^2. The target DO residual after the MBBR process is 6 mg/l. There will be 2 tri-lobe positive displacement blowers. The lagoon cells will not have aeration only the NitrOx MBBR. The effluent from the MBBR will flow to the polishing lagoon cell prior to disinfection and discharge.

6. OPERATING PERMIT MODIFICATION

Operating permit MO-0088072 will require a modification to reflect the construction activities. Upon construction completion submit a modification fee and Form B - Application for an Operating Permit for Domestic or Municipal Wastewater (≤100,000 gallons per day).

Cindy LePage, P.E.
Engineering Section
cindy.lepage@dnr.mo.gov

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

APPLICATION FOR CONSTRUCTION PERMIT – WASTEWATER TREATMENT FACILITY

RECEIVED
OCT 2 2014
WATER PROTECTION PROGRAM

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED $150.00	CHECK NO. None
DATE RECEIVED 10/2/14	

APPLICATION OVERVIEW

The Application for Construction Permit – Wastewater Treatment Facility form has been developed in a modular format and consists of Part A and B. **All applicants must complete Part A.** Part B should be completed for applicants who currently land-apply wastewater or propose land application for wastewater treatment. **Please read the accompanying instructions before completing this form. Submittal of an incomplete application may result in the application being returned.**

PART A – BASIC INFORMATION

1.0 APPLICATION INFORMATION (Note – If any of the questions in this section are answered NO, this application may be considered incomplete and returned.)

1.1 Is this a Federal/State funded project? ☐ YES ☒ N/A Funding Agency: _____ Project #: _____

1.2 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?
☐ YES Date of Approval: _____
☒ Attached is the No Degradation Evaluation Conclusion of Antidegradation Review form

1.3 Has the department approved the proposed project's facility plan*?
☐ YES Date of Approval: _____ ☐ NO ☒ N/A (If Not Applicable, complete No. 1.4.)

1.4 [Complete only if answered Not Applicable on No. 1.3.] Is a copy of the engineering report* for wastewater treatment facilities with a design flow less than 22,500 gpd included with this application?
☒ YES ☐ NO

1.5 Is a copy of the appropriate plans* and specifications* included with this application?
☒ YES Denote which form is submitted: ☐ Hard copy ☐ Electronic copy (See instructions.) ☐ NO

1.6 Is a summary of design* included with this application? ☒ YES ☐ NO

1.7 Has the appropriate operating permit application (A, B, or B2) been submitted to the department?
☐ YES Date of submittal: _____
☒ Enclosed is the appropriate operating permit application submittal. Denote which form: ☐ A ☒ B ☐ B2
☐ N/A Please explain: _____

1.8 Is the facility currently under enforcement with the department or the Environmental Protection Agency? ☐ YES ☒ NO

1.9 Is the appropriate fee included with this application? ☒ YES ☐ NO (See instructions for appropriate fee.)

* Must be affixed with a Missouri registered professional engineer's seal, signature and date.

2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT

Wastewater Treatment Facility Serving Brandco Subdivision

2.2 PROJECT DESCRIPTION

Project will consist of construction of a new extended air WWTF to replace an existing lagoon system. Also included is a new lift station to supply wastewater to the WWTF.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

Existing lagoon cells will be converted to sludge holding basins and sludge will be stored on site.

2.4 DESIGN INFORMATION

A. Current population: 880 ; Design population: 922

B. Actual Flow: 31,122 gpd; Design Average Flow: 48,000 gpd;
Actual Peak Daily Flow: 42,620 gpd; Design Maximum Daily Flow: 48,000 gpd

No flow monitoring is available at the facility. Therefore, the data used is from water usage provided by the operator.

2.5 ADDITIONAL INFORMATION

A. Is a topographic map attached? ☒ YES ☐ NO

B. Is a process flow diagram attached? ☒ YES ☐ NO

3.0 WASTEWATER TREATMENT FACILITY

NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Brandco Investments, LLC		

ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE	COUNTY
720 Williams Street	Cape Girardeau	MO	63703	Cape Girardeau

Wastewater Treatment Facility: Mo- 0088072 (Outfall 001 Of 001)

3.1 Legal Description: _____ ¼, _____ ¼, _____ ¼, Sec. _____, T _____, R _____
(Use additional pages if construction of more than one outfall is proposed.)

3.2 UTM Coordinates Easting (X): 798478 Northing (Y): 4134337
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

3.3 Name of receiving streams: Tributary to Williams Creek (U)

4.0 PROJECT OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Central States Water Resources (CSWR)	314-283-7316	

ADDRESS	CITY	STATE	ZIP CODE
3636 South Geyer Road, Suite 100	St. Louis	MO	63127

5.0 CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the wastewater collection system.

NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Central States Water Resources (CSWR)	314-283-7316	

ADDRESS	CITY	STATE	ZIP CODE
3636 South Geyer Road, Suite 100	St. Louis	MO	63127

5.1 A letter from the continuing authority, if different than the owner, is included with this application. ☐ YES ☐ NO ☒ N/A

5.2 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A MISSOURI PUBLIC SERVICE COMMISSION REGULATED ENTITY.

A. Is a copy of the certificate of convenience and necessity included with this application? ☒ YES ☐ NO

5.3 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A PROPERTY OWNERS ASSOCIATION.

A. Is a copy of the as-filed restrictions and covenants included with this application? ☐ YES ☐ NO

B. Is a copy of the as-filed warranty deed, quitclaim deed or other legal instrument which transfers ownership of the land for the wastewater treatment facility to the association included with this application? ☐ YES ☐ NO

C. Is a copy of the as-filed legal instrument (typically the plat) that provides the association with valid easements for all sewers included with this application? ☐ YES ☐ NO

D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? ☐ YES ☐ NO

6.0 ENGINEER

ENGINEER NAME / COMPANY NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Benjamin Kuenzel / 21 Design Group	636-283-0621	ben@21designgroup.net

ADDRESS	CITY	STATE	ZIP CODE
1351 Jefferson St., Suite 301	Washington	MO	63090

7.0 PROJECT OWNER: I hereby certify that I am familiar with the information contained in this application and to the best of my knowledge and belief such information is true, complete, and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders, and decisions, subject to any legitimate appeal available to applicant under Missouri Clean Water Law. I also understand the issuance of the construction permit does not guarantee the proposed wastewater treatment will meet the required effluent limitations of the issued Missouri State Operating Permit for this facility.

PROJECT OWNER SIGNATURE

PRINTED NAME	DATE
Josiah Cox	9-17-14

TITLE OR CORPORATE POSITION	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
President, CSWR	314-283-7316	jcox@cswrgroup.com

Mail completed copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
P.O. BOX 176
JEFFERSON CITY, MO 65102-0176

END OF PART A.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHETHER PART B NEEDS TO BE COMPLETE.

PART B – LAND APPLICATION ONLY
(Submit only if the proposed construction project includes land application of wastewater.)

8.0 FACILITY INFORMATION

8.1 Type of wastewater to be irrigated: ☐ Domestic ☐ State/National Park ☐ Seasonal business
☐ Municipal ☐ Municipal with a pretreatment program or significant industrial users
☐ Other (explain) _____

8.2 Months when the business or enterprise will operate or generate wastewater:
☐ 12 months per year ☐ Part of the year (list months): _____

8.3 This system is designed for:
☐ No-discharge.
☐ Partial irrigation when feasible and discharge rest of time.
☐ Irrigation during recreational season, April – October, and discharge during November – March.
☐ Other (explain) _____.

9.0 STORAGE BASINS

9.1 Number of storage basins: _____ (Use additional pages if greater than three basins.)

9.2 Type of basins: ☐ Steel ☐ Concrete ☐ Fiberglass ☐ Earthen ☐ Earthen with membrane liner

9.3 Storage basin dimensions at inside top of berm (feet). Report freeboard as feet from top of berm to emergency spillway or overflow pipe.

Basin #1:	Length _____	Width _____	Depth _____	Freeboard _____	Berm Width _____	% Slope _____
Basin #2:	Length _____	Width _____	Depth _____	Freeboard _____	Berm Width _____	% Slope _____
Basin #3:	Length _____	Width _____	Depth _____	Freeboard _____	Berm Width _____	% Slope _____

9.4 Storage Basin operating levels (report as feet below emergency overflow level).

Basin #1:	Maximum operating water level _____ ft	Minimum operating water level _____ ft
Basin #2:	Maximum operating water level _____ ft	Minimum operating water level _____ ft
Basin #3:	Maximum operating water level _____ ft	Minimum operating water level _____ ft

9.5 Design depth of sludge in storage basins.
Basin #1: _____ ft Basin #2: _____ ft Basin #3: _____ ft

9.6 Existing sludge depth, if the basins are currently in operation.
Basin #1: _____ ft Basin #2: _____ ft Basin #3: _____ ft

9.7 Total design sludge storage: _____ dry tons and _____ cubic feet

10.0 LAND APPLICATION SYSTEM

10.1 Number of irrigation sites _____ Total Acres _____ Maximum % field slopes _____
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
(Use additional pages if greater than three irrigation sites.)

10.2 Type of vegetation: ☐ Grass hay ☐ Pasture ☐ Timber ☐ Row crops
☐ Other (describe) _____

10.3 Wastewater flow (dry weather) gallons per day: Average annual _____ Seasonal _____ Off-season _____

10.4 Land application rate (design flow including 1-in-10 year storm water flows):

Design:	_____ inches/year	_____ inches/hour	_____ inches/day	_____ inches/week
Actual:	_____ inches/year	_____ inches/hour	_____ inches/day	_____ inches/week

10.5 Total irrigation per year (gallons): Design: _____ gal Actual: _____ gal

10.6 Actual months used for irrigation (check all that apply):
☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec

10.7 Land application rate is based on:
☐ Hydraulic Loading ☐ Other (describe) _____
☐ Nutrient Management Plan (N&P) If N&P is selected, is the plan included? ☐ YES ☐ NO

RECEIVED

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OCT 2 2014
FORM B: APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW LESS THAN OR EQUAL TO 100,000 GALLONS PER DAY
WATER PROTECTION PROGRAM

FOR AGENCY USE ONLY		
CHECK NUMBER	None	
DATE RECEIVED	FEE SUBMITTED	
10/2/14	$750.00	RB

PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

1. THIS APPLICATION IS FOR:

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

(Please include completed antidegradation review or request for antidegradation review, see instructions)

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

☒ An operating permit modification: Permit #MO- 0088072 Reason: Upgrade existing treatment process

1.1 Is the appropriate fee included with the application (see instructions for appropriate fee)? ☒ YES ☐ NO

2. FACILITY

NAME		TELEPHONE NUMBER WITH AREA CODE	
Brandco Investments, LLC			
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
720 Williams Street	Cape Girardeau	MO	63703

2.1 Legal description: ¼, ¼, ¼, Sec. , T , R County Cape Girardeau

2.2 UTM Coordinates Easting (X): 798478 Northing (Y): 4134337

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

2.3 Name of receiving stream: Tributary to Williams Creek (U)

2.4 Number of outfalls: wastewater outfalls 001 stormwater outfalls instream monitoring sites

3. OWNER

NAME	EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE	
Central States Water Resources		314-283-7316	
ADDRESS	CITY	STATE	ZIP CODE
3636 South Geyer Road, Suite 100	St. Louis	MO	63127

3.1 Request review of draft permit prior to public notice? x YES NO

3.2 Are you a publicly owned treatment works? YES x NO

3.3 Are you a privately owned treatment works? x YES NO

3.4 Are you a privately owned treatment facility regulated by the Public Service Commission? x YES NO

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

NAME	EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE	
Central States Water Resources		314-283-7316	
ADDRESS	CITY	STATE	ZIP CODE
3636 South Geyer Road, Suite 100	St. Louis	MO	63127

If the continuing authority is different than the owner, please include a copy of the contract agreement between the two parties and a description of the responsibilities of both parties within the agreement.

5. OPERATOR

NAME	TITLE	CERTIFICATE NUMBER
Randy Flowers	Operator	12995
EMAIL ADDRESS		TELEPHONE NUMBER WITH AREA CODE
randykaren@hughes.net		573-837-3861

6. FACILITY CONTACT

NAME		TITLE	
Josiah Cox		President	
EMAIL ADDRESS		TELEPHONE NUMBER WITH AREA CODE	
JMC jcox@cswrgroup.com		314-283-7316	
ADDRESS	CITY	STATE	ZIP CODE
3636 South Geyer Road, Suite 100	St. Louis	MO	63127

7. DESCRIPTION OF FACILITY

7.1 Process Glow Diagram or Schematic: Provide a diagram showing the processes of the treatment plant. Show all of the treatment units, including disinfection (e.g. – chlorination and dechlorination), influents and outfalls. Indicate any treatment process changes in the routing of wastewater during dry weather and peak wet weather. Include a brief narrative description of the diagram. Attach sheets as necessary.

7.2 Attach an aerial photograph or USGS topographic map showing the location of the facility and outfall.

8. ADDITIONAL FACILITY INFORMATION

8.1 Facility SIC code: 4952 ; Discharge SIC code: _____.

8.2 Number of people presently connected or population equivalent (P.E.) Design P.E. 922

8.3 Connections to the facility:

Number of units presently connected:

Homes 226 Trailers _____ Apartments _____ Other (including industrial) _____

Number of commercial establishments: _____

8.4 Design flow: 48,000 gpd | Actual flow: 41,680 gpd

8.5 Will discharge be continuous through the year? [x] Yes [ ] No (If yes, explain.)

Discharge will occur during the following months:

How many days of the week will discharge occur?

8.6 Is industrial waste discharged to the facility? _Yes [x] No

8.7 Does the facility accept or process leachate from landfills? _Yes [x] No

8.8 Is wastewater land applied? Yes [x] No

If yes, is Form I attached? _Yes No

8.9 Does the facility discharge to a losing stream or sinkhole? _Yes [x] No

8.10 Has a wasteload allocation study been completed for this facility? _Yes [x] No

9. LABORATORY CONTROL INFOMRATION

LABORATORY WORK CONDUCTED BY PLANT PERSONNEL

Lab work conducted outside of plant. [x] Yes [ ] No

Push-button or visual methods for simple test such as pH, settlable solids. [ ] Yes [ ] No

Additional procedures such as dissolved oxygen, chemical oxygen demand, biological oxygen demand, titrations, solids, volatile content. [ ] Yes [ ] No

More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc. _Yes _ No

Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph. _Yes _ No

10. COLLECTION SYSTEM

10.1 Length of pipe in the sewer collection system? 6,411 Feet, or _____ Miles (either unit is appropriate)

10.2 Does significant infiltration occur in the collection system? Yes [x] No

If yes, briefly explain any steps underway or planned to minimize inflow and infiltration:

11. BYPASSING

Does any bypassing occur in the collection system or at the treatment facility? No

If yes, explain:

12. SLUDGE HANDLING, USE AND DISPOSAL

12.1 Is the sludge a hazardous waste as defined by 10 CSR 25? ☐ Yes ☒ No

12.2 Sludge production, including sludge received from others: 13.8 Design dry tons/year 6.0 Actual dry tons/year

12.3 Capacity of sludge holding structures:
Sludge storage provided: _____ cubic feet; _____ days of storage; _____ average percent solids of sludge;
☐ No sludge storage is provided. ☐ Sludge is stored in lagoon.

12.4 Type of Storage:
☐ Holding tank ☐ Building
☐ Basin ☒ Lagoon
☐ Concrete Pad ☐ Other (Please describe) _____

12.5 Sludge Treatment:
☐ Anaerobic Digester ☐ Lagoon ☐ Composting
☐ Storage Tank ☐ Aerobic Digester ☐ Other (Attach description)
☐ Lime Stabilization ☐ Air or Heat Drying

12.6 Sludge Use or Disposal:
☐ Land Application ☒ Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years)
☐ Contract Hauler ☐ Hauled to Another treatment facility
☐ Incineration ☐ Sludge Retained in Wastewater treatment lagoon
☐ Solid waste landfill

12.7 Person responsible for hauling sludge to disposal facility:
☒ By applicant ☐ By others (complete below)

NAME	EMAIL ADDRESS		
ADDRESS	CITY	STATE	ZIP CODE
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO.	
		MO-	

12.8 Sludge use or disposal facility
☒ By applicant ☐ By others (Please complete below.)

NAME	EMAIL ADDRESS		
ADDRESS	CITY	STATE	ZIP CODE
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO.	
		MO-	

12.9 Does the sludge or biosolids disposal comply with federal sludge regulations under 40 CFR 503?
☒ Yes ☐ No (Please explain)

13. CERTIFICATION

I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law.

NAME (TYPE OR PRINT)	OFFICIAL TITLE	TELEPHONE NUMBER WITH AREA CODE
Josiah Cox	President	314-283-7316
SIGNATURE		DATE SIGNED
		9-29-14

Letter of Transmittal

21 DESIGN GROUP
ENGINEERING AND CONSULTING

Date: 09/26/24
Job No.- 0083S-14
Project: Brandco Subdivision WWTF

To:	From:
Missouri Department of Natural Resources Water Protection Program Water Pollution Control Branch P.O. Box 176 Jefferson City, MO 65102	Ben Kuenzel 21 Design Group 1351 S. Jefferson, Suite 301 Washington, MO 63090

INCLUDED

RECEIVED
OCT 2 2014
WATER PROTECTION PROGRAM

Three (3)-	Permit Applications
Three (3)-	Engineering Reports
Three (3)-	Construction Application
Three (3)-	Improvement Plans
Three (3)-	Technical Specifications
One (1)-	Enterprise Bank & Trust Check for $750

NOTE: The owner has elected to decrease the design flow of the wastewater facility because the service area is very near being fully built out. Please call myself with any questions.

CSWR is taking over ownership later this year. The permits on hand will be under a different owner. Please call the engineer for any clarification needed. (636-283-0621)

Signed: _____
Benjamin Kuenzel, Principal