

**STATE OF MISSOURI**  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



**CONSTRUCTION PERMIT**

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

Southeast Missouri Regional Port Authority  
10 Bill Bess Drive  
Scott City, MO 63701

for the construction of (described facilities):

See attached.

Permit Conditions:

See attached.

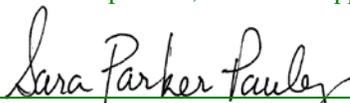
Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department).

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.

November 6, 2014  
Effective Date

  
Sara Parker Pauley, Director, Department of Natural Resources

November 5, 2016  
Expiration Date

  
John Madros, Director, Water Protection Program

## **CONSTRUCTION PERMIT**

### **I. CONSTRUCTION DESCRIPTION**

A disinfection system has been proposed for the discharge of the SEMO RPA wastewater treatment facility (WWTF). The disinfection system will consist of two (2) Norweco IT 2000 tablet feeders for chlorination and de-chlorination. A chlorine contact chamber, constructed of 12-inch PVC pipe, will be located between the two tablet feeders. The contact chamber will provide the required 15-minutes retention time at a peak flow of 36,000 gallons per day.

### **II. FINDING OF AFFORDABILITY**

An Affordability Determination and Finding was performed in accordance with RSMO §644.145 and is included with the re-issuance of the operating permit. The Department finds the project is affordable with a low economic burden to the Port Authority and no economic burden to the community.

### **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 Bowen Engineering & Surveying, Incorporated with a received on date of October 1, 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 SE 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. 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](http://www.dnr.mo.gov/env/wpp/epermit/help.htm). See [www.dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm](http://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/](http://www.dnr.mo.gov/env/wpp/401/) for more information.

10. Upon completion of construction;
  - A. The SEMO RPA 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 built” drawings if the project was not constructed in accordance with previously submitted plans and specifications; and
  - D. The facility is currently in the process of having its operating permit renewed, the updated facility description will be included in the new operating permit.

#### **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>.

Previous communications pertaining to ammonia have been provided to the permittee. One such instance was the September 26, 2014 comment letter to SEMO RPA.

##### **2. CONSTRUCTION PURPOSE**

The purpose of this project is for the facility to attain compliance with the final effluent limitation for *E. coli* as required by the Schedule of Compliance in its current operating permit.

##### **3. FACILITY DESCRIPTION**

The SEMO RPA WWTF is a three cell lagoon. The system has a design capacity of 9,000 gallons per day. Sludge is retained in the lagoon. This project will add a disinfection system at the discharge line of the current facility.

The disinfection system will consist of two (2) Norweco IT 2000 tablet feeders for chlorination and de-chlorination. A chlorine contact chamber, constructed of 12-inch PVC pipe, will be located between the two tablet feeders. The contact chamber will provide the required 15-minutes retention time at a peak flow of 36,000 gallons per day.

#### **4. COMPLIANCE PARAMETERS**

The disinfection system is intended to enable the facility to meet its *E. coli* final effluent limitation. The proposed system will also allow the facility to meet a total residual chlorine limit that will be added to its Missouri State operating permit (MO0120421), which is currently in the renewal process.

#### **5. REVIEW of MAJOR TREATMENT DESIGN CRITERIA**

The disinfection system proposed is consistent with 10 CSR 20-8.020(13)(D) *Disinfection*. “Chlorinators shall be designed to have adequate capacity to produce a total chlorine residual of one-half milligram per liter (1/2 mg/L) after 15 minutes of contact time at the peak rate of flow.” Dechlorination will also be provided in accordance with the Design Guide.

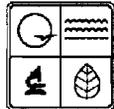
#### **6. OPERATING PERMIT MODIFICATION**

Operating permit MO-0120421 will require a modification to reflect the construction activities. The operating permit is currently in the renewal process and modification to address construction will be incorporated into the new permit. An amended facility description will be included in the next operating permit to reflect the installation of chlorination/dechlorination system.

Steve Busch, P.E.  
Engineering Section  
[Steve.busch@dnr.mo.gov](mailto:Steve.busch@dnr.mo.gov)

RECEIVED

AP 19844  
MO-0120421  
CP 5507694



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
APPLICATION FOR CONSTRUCTION PERMIT  
WASTEWATER TREATMENT FACILITY

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
SEE RECEIVED \$150.00	CHECK NO. 14088
DATE RECEIVED 10/20/14	

WATER PROTECTION PROGRAM

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: 10/13  
 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

Semo Port - WWTF MO-0120421 - Disinfection System Addition

2.2 PROJECT DESCRIPTION

Project will add disinfection by chlorination/dechlorination to an existing lagoon system. Refer to engineering report for complete design information.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

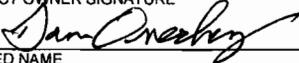
Sludge remains in lagoon.

2.4 DESIGN INFORMATION

- A. Current population: \_\_\_\_\_; Design population: 176
- B. Actual Flow: 1,995 gpd; Design Average Flow: 9,000 gpd;  
Actual Peak Daily Flow: 8,000 gpd; Design Maximum Daily Flow: 36,000 gpd

2.5 ADDITIONAL INFORMATION

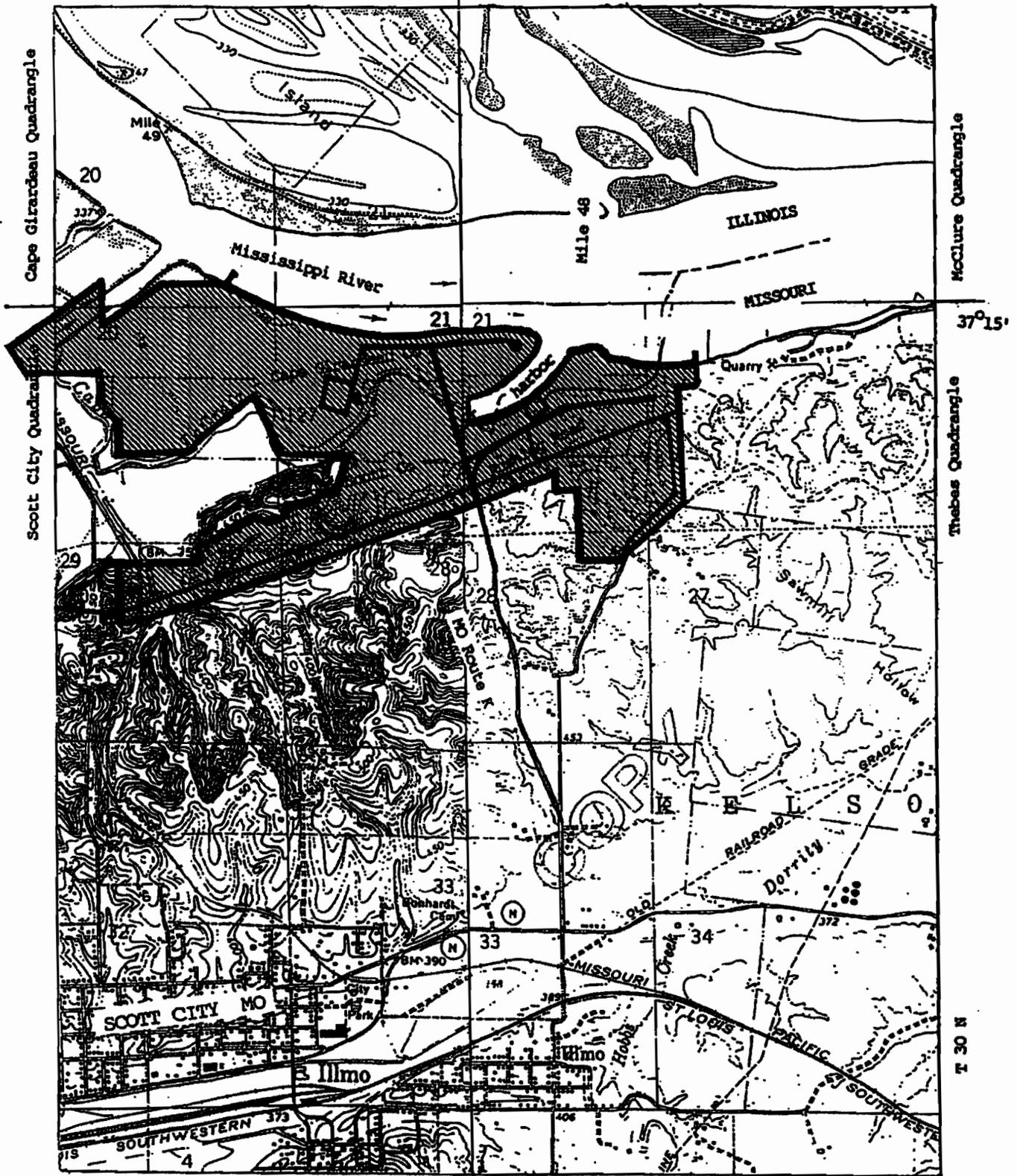
- A. Is a topographic map attached?  YES  NO
- B. Is a process flow diagram attached?  YES  NO

3.0 WASTEWATER TREATMENT FACILITY				
NAME Southeast Missouri Regional Port Authority		TELEPHONE NUMBER WITH AREA CODE 573-264-4045		E-MAIL ADDRESS semoport@semoport.com
ADDRESS (PHYSICAL) 10 Bill Bess Drive	CITY Scott City	STATE MO	ZIP CODE 63780	COUNTY Cape Girardeau
Wastewater Treatment Facility: Mo- 0120421 (Outfall 1 Of 1 )				
3.1 Legal Description: NW $\frac{1}{4}$ , NW $\frac{1}{4}$ , _____ $\frac{1}{4}$ , Sec. 28, T 30, R 14 (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): 809927 Northing (Y): 4127969 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: _____				
4.0 PROJECT OWNER				
NAME Southeast Missouri Regional Port Authority		TELEPHONE NUMBER WITH AREA CODE (573) 264-4045		E-MAIL ADDRESS semoport@semoport.com
ADDRESS 10 Bill Bess Drive	CITY Scott City	STATE MO	ZIP CODE 63780	
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 Southeast Missouri Regional Port Authority		TELEPHONE NUMBER WITH AREA CODE (573) 264-4045		E-MAIL ADDRESS semoport@semoport.com
ADDRESS 10 Bill Bess Drive	CITY Scott City	STATE MO	ZIP CODE 63780	
5.1 A letter from the continuing authority, if different than the owner, is included with this application. <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> NO				
D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO				
6.0 ENGINEER				
ENGINEER NAME / COMPANY NAME Cary Harbison / Bowen Engineering & Surveying		TELEPHONE NUMBER WITH AREA CODE (573) 339-5900		E-MAIL ADDRESS caryharbison@bowenengsurv.com
ADDRESS 2121 Megan Drive	CITY Cape Girardeau	STATE MO	ZIP CODE 63701	
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 Daniel Overbey			DATE 10/15/2014	
TITLE OR CORPORATE POSITION Executive Director		TELEPHONE NUMBER WITH AREA CODE (573) 264-4045		E-MAIL ADDRESS semoport@semoport.com
Mail completed copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM P.O. BOX 176 JEFFERSON CITY, MO 65102-0176				
<b>END OF PART A.</b>				
<b>REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHETHER PART B NEEDS TO BE COMPLETE.</b>				

Vicinity Map

89°30' R 14 E

SOUTHEAST MISSOURI REGIONAL PORT AUTHORITY



Cape Girardeau Quadrangle

McClure Quadrangle

Scott City Quadrangle

Thebes Quadrangle

T 30 N

SCALE 1:24000



CONTOUR INTERVAL 20 FEET  
DOTTED LINES REPRESENT 5-FOOT CONTOURS  
NATIONAL GEODETIC VERTICAL DATUM OF 1929

UTM GRID AND 1970 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH  
**NO DEGRADATION EVALUATION**  
**CONCLUSION OF ANTIDegradation REVIEW**  
 (Submit this form with the appropriate Permit Application)

**1. FACILITY**

NAME Southeast Missouri Regional Port Authority WWTF MO-0120421		COUNTY Cape Girardeau	
ADDRESS (PHYSICAL) 10 Bill Bess Drive	CITY Scott City	STATE MO	ZIP CODE 63780
FACILITY CONTACT: Dan Overbey		TELEPHONE NUMBER WITH AREA CODE 573-264-4045	

**2. NO DEGRADATION OPTIONS**

Renewal without changes  
 Sewer extensions  
 CSO elimination projects  
 No-discharge with land application  
 No-discharge with subsurface irrigation  
 Recycle or reuse of effluent  
 Discharge to a regional wastewater collection and treatment system.  
 Addition or replacement of disinfection system for an existing wastewater facility: Ultraviolet or Ozone  
     The facility will be required to meet regulatory effluent limits for bacteria.  
 Addition or replacement for chlorination or dechlorination disinfection system of existing facility.  
     The chlorination or dechlorination disinfection treatment system design must be for total removal of Total Residual Chlorine. Therefore, the facility will be required to meet the water quality-bases effluent limits determined by the permit writer or the following water quality-bases effluent limits:

Beneficial Use of Classified Water	MDL (µg/l)	AML (µg/l)
Warm-water fishery	17	8.2
Cold-water fishery	3.3	1.6

Note: These compliance limits for Total Residual Chlorine are much less than minimum quantification level, or ML, of 0.13. The facility will be required to meet regulatory effluent limits for bacteria.

Other, please describe: \_\_\_\_\_

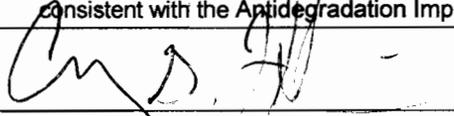
Consulted with Water Protection Staff:

NAME Steve Busch	DATE 10/09/2014
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**3. NO DEGRADATION PROPOSED PROJECT SUMMARY**

Project will add disinfection by chlorination / dechlorination to an existing lagoon system. Refer to engineering report for complete design information.

**CONSULTANT:** I have prepared or reviewed this form and all attached reports and documentation. The conclusion proposed is consistent with the Antidegradation Implementation Procedure and current state and federal regulations.

SIGNATURE 	DATE 10/15/2014
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PRINT NAME  
Cary G. Harbison - Bowen Engineering & Surveying, 2121 Megan Drive, Cape Girardeau, MO 63701

TELEPHONE NUMBER WITH AREA CODE 573-339-5900	E-MAIL ADDRESS caryharbison@bowenengsurv.com
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**Owner:** I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE 	DATE 10/15/2014
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TELEPHONE NUMBER WITH AREA CODE 573-264-4045	E-MAIL ADDRESS semoport@semoport.com
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**Continuing Authority:** Continuing Authority is the permanent organization that will be responsible 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](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 10/15/2014
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TELEPHONE NUMBER WITH AREA CODE 573-264-4045	E-MAIL ADDRESS semoport@semoport.com
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**Return completed form with the appropriate Permit Application to:**  
Missouri Department of Natural Resources  
Water Protection Program  
Water Pollution Control Branch  
P.O. Box 176  
Jefferson City, MO 65102