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-0137642
Owner:	Ameren Missouri
Address:	1901 Chouteau Ave, P.O. Box 66149 MC-602 St. Louis MO 63166-6149
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Huster Substation
Facility Address:	3800 Huster Road, St. Charles MO 63301
Legal Description:	See page 2
UTM Coordinates:	See page 2
Receiving Stream:	See page 2
First Classified Stream and ID:	See page 2
USGS Basin & Sub-watershed No.:	See page 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 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 Sections 640.013, 621.250, and 644.051.6 of the Law.

October 1, 2019 Effective Date

Edward B. Galbraith, Director, Division of Environmental Quality

Chris Wieberg, Director, Water Protection Program

September 30, 2024 Expiration Date

FACILITY DESCRIPTION (CONTINUED)

OUTFALL #001 – Process Wastewater; SIC # 4911; NAICS # 221112 Groundwater Containment System/Air stripping to remove Chlorinated Volatile Organic Compounds (CVOCs) Legal Description: Sec.24, T47N, R4E, St. Charles County UTM Coordinates: X = 714407, Y = 4300026 **Receiving Stream:** Tributary to Sandfort Creek First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) (3960) USGS Basin & Sub-watershed No.: 07110009-0105 Design Flow: 0.089280 MGD Average Flow: 0.072 MGD

PERMITTED FEATURE # 002 – Influent; SIC # 4911; NAICS # 221112Influent sampled prior to air stripper to calculate net ironLegal Description:Sec.24, T47N, R04E, St. Charles CountyUTM Coordinates:X = 714451, Y = 4300020Receiving Stream:Tributary to Sandfort CreekFirst Classified Stream and ID:8-20-13 MUDD V1.0 (C) (3960)USGS Basin & Sub-watershed No.:07110009-0105

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL #001 main outfall	TABLE A-1 Final Effluent Limitations And Monitoring Requirements						
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 October 1, 2019 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:							
	T T =	FINAL EF	FLUENT LIM	TATIONS	MONITORING REG	QUIREMENTS	
EFFLUENT PARAMETERS	UNITS	DAILY MAXIMUM	Weekly Average	Monthly Average	Measurement Frequency	SAMPLE Type	
Limit Set: M						•	
PHYSICAL							
Flow	MGD	*		*	once/month	24 hr. total	
CONVENTIONAL							
pH ^Ω	SU	6.5		9.0	once/month	grab	
METALS							
Iron, Total Recoverable	μg/L	*		*	once/month	grab	
Iron, Total Recoverable (net)	μg/L	603		603	once/month	grab	
VOLATILE							
cis-1,2- Dichloroethylene (DCE)	μg/L	141		70	once/month	grab	
Tetrachloroethylene (PCE)	μg/L	1.6		0.8	once/month	grab	
Trichloroethylene (TCE)	μg/L	10.1		5	once/month	grab	
Vinyl Chloride (VC)	μg/L	μg/L 4.0 2.0 once/month					
MONITORING REPORTS SHALL E	BE SUBMITTEI	D MONTHLY;	THE FIRST RE	PORT IS DUE	NOVEMBER 28, 20	<u>19</u> .	
THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.							

PERMITTED FEATURE #002 Influent	TABLE A-2 Final Effluent Limitations And Monitoring Requirements							
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 <u>October 1, 2019</u> and remain in effect until expiration of the permit. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:								
	The second	FINAL EF	FLUENT LIM	ITATIONS	MONITORING REQUIREMENTS			
EFFLUENT PARAMETERS	UNITS	DAILY	WEEKLY	MONTHLY	MEASUREMENT	SAMPLE		
		MAXIMUM	AVERAGE	AVERAGE	FREQUENCY	Type		
Limit Set: IM		-	-	-				
METALS								
Iron, Total Recoverable	μg/L	* *			once/month	grab		
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE NOVEMBER 28, 2019.								
THERE SHALL BE NO DISCHARG	e Of Floatin	NG SOLIDS OR	VISIBLE FOA	M IN OTHER	THAN TRACE AMOU	NTS.		

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

- * Monitoring and reporting requirement only.
- Ω The facility will report the minimum and maximum values. pH is not to be averaged.

B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached <u>Part I</u> standard conditions dated <u>August 1, 2014</u>, and hereby incorporated as though fully set forth herein.

C. SPECIAL CONDITIONS

- 1. Electronic Discharge Monitoring Report (eDMR) Submission System
 - (a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. In regards to Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit.

Programmatic Reporting Requirements. The following reports (if required by this permit) must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data:

- Any additional report required by the permit excluding bypass reporting.
 After such a system has been made available by the Department, required data shall be directly input into the system by the next report due date.
- (b) Other actions. The following shall be submitted electronically after such a system has been made available by the Department:
 - (1) General Permit Applications/Notices of Intent to discharge (NOIs);
 - (2) Notices of Termination (NOTs);
- (c) Electronic Submission: access the eDMR system, via: <u>https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx</u>.
- (d) Waivers from Electronic Reporting. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: <u>http://dnr.mo.gov/forms/780-2692-f.pdf</u>. The Department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period the approved electronic reporting waiver is effective.
- 2. Permittee shall adhere to the following minimum Best Management Practices (BMPs):
 - (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, warehouse activities, and other areas and thereby prevent the contamination of stormwater from these substances.
 - (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.

C. SPECIAL CONDITIONS (CONTINUED

- (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so these materials are not exposed to stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
- (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
- (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property
- (f) Ensure adequate provisions are provided to prevent and to protect embankments from erosion.
- 3. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with §644.051.16, RSMo, and the CWA section 402(k); however, this permit may be reopened and modified, or alternatively revoked and reissued to 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 contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or controls any pollutant not limited in the permit.
- 4. All outfalls and permitted features must be clearly marked in the field.
- 5. Changes in Discharges of Toxic Pollutant

In addition to the reporting requirements under \$122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

- (a) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, 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 μ g/L);
 - (2) Two hundred micrograms per liter (200 μ g/L) for acrolein and acrylonitrile;
 - (3) Five hundred micrograms per liter (500 μ g/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
 - (4) One milligram per liter (1 mg/L) for antimony;
 - (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (6) The notification level established by the Department in accordance with 40 CFR 122.44(f).
- (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) Five hundred micrograms per liter (500 μ g/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with \$122.21(g)(7).
 - (4) The level established by the Director in accordance with §122.44(f).
- 6. Report as no-discharge when a discharge does not occur during the report period. It is a violation of this permit to report nodischarge when a discharge has occurred.
- 7. Reporting of Non-Detects
 - (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way 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 or the reporting limit of the laboratory. Reporting as "non-detect" without also including the detection/reporting limit will be considered failure to report, which is a violation of this permit.
 - (c) The permittee shall report the non-detect result using the less than "<" symbol and the laboratory's detection/reporting limit (e.g. <6).</p>
 - (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, then zero (0) is reported for the parameter.
 - (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
 - (f) When calculating monthly averages, one-half of the minimum detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the "<MDL" shall be reported as indicated in item (C).
- 8. Failure to pay fees associated with this permit is a violation of the Missouri Clean Water Law (644.055 RSMo).

MISSOURI DEPARTMENT OF NATURAL RESOURCES FACT SHEET FOR THE PURPOSE OF RENEWAL OF MO-0137642 HUSTER SUBSTATION

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant 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 stormwater 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 for less.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)(A)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 (MSOP or operating permit) listed below. A factsheet is not an enforceable part of an operating permit.

PART I. FACILITY INFORMATION

Facility Type:	Industrial
SIC Code(s):	4911
NAICS Code(s):	221112
Application Date:	September 28, 2018
Expiration Date:	March 31, 2019
Last Inspection:	June 17, 2015

FACILITY DESCRIPTION:

Groundwater Containment System/Air stripping to remove chlorinated Volatile Organic Compounds (CVOCs)

PERMITTED FEATURES TABLE:

OUTFALL	AVERAGE FLOW	DESIGN FLOW TREATMENT LEVE		EFFLUENT TYPE
#001	0.072 MGD	0.089280 MGD	Air Stripper	Process Wastewater

FACILITY PERFORMANCE HISTORY & COMMENTS:

The electronic discharge monitoring reports were reviewed for a period starting at issuance of the first permit in April 2014 until present. During the period reviewed the facility reported six exceedances, all of which were for Iron. This facility was last inspected on September 5, 2018. The facility was found to be in compliance at the time of inspection. During the inspection it was stated that additives to suppress iron are no longer added to the system. It should be noted that the anti-degradation analysis completed in 2014 identified phosphorus as a proposed additive to help reduce scaling in the equipment.

The applicant stated on the renewal application received September 28, 2018, "Ameren operates a groundwater containment system (GCS) with treatment by airstripping to remove chlorinated volatile organic compounds (CVOCs) detected in the groundwater underlying the substation site. This treatment is part of an overall remediation effort through U.S. Environmental Protection Agency (USEPA) Region 7 as outlined in the Administration Order of Consent (AOC) (CERCLA_07-2012-0026) entered into on December 28, 2012."

CERCLA_07-2012-0026:

https://yosemite.epa.gov/OA/RHC/EPAAdmin.nsf/Filings/3396C6D4E5BF3F4A85257AE800210A56/\$File/CERCLA-07-2012-0026.pdf

Huster Substation MO0137642 Fact Sheet Page 2

The treated discharge from the groundwater containment system is discharged to a ditch outside of the levee surrounding the substation. The effluent then travels west under Huster Road where it then travels 0.29 miles to a ditch along highway 370 where it travels another 0.46 miles to a newly classified 8-20-13 MUDD V1.0 (C) (3960) that travels north west under Highway 370 and continues on to Sandfort Creek.

A second permitted feature has been added in this renewal. This is for clarification purposes. This permit, as well as the previous permit require monitoring on the influent in order to calculate a net Iron limit. Previously the influent monitoring was listed on the effluent limit table for Outfall #001. As influent monitoring is not being sampled at outfall #001, a second permitted feature is being designated prior to any treatment process.

FACILITY MAP:



PART II. RECEIVING WATERBODY INFORMATION

RECEIVING WATERBODY'S WATER QUALITY:

The receiving waterbody has no concurrent water quality data available.

303(D) LIST:

Section 303(d) of the federal Clean Water Act requires each state identify waters 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 impaired waters not addressed by normal water pollution control programs. http://dnr.mo.gov/env/wpp/waterquality/303d/303d.htm

 \checkmark Not applicable; this facility does not discharge to an impaired segment of a 303(d) listed stream.

TOTAL MAXIMUM DAILY LOAD (TMDL):

A TMDL is a calculation of the maximum amount of a given pollutant a water body can absorb before its water quality is affected; hence, the purpose of a TMDL is to determine the pollutant loading a specific waterbody can assimilate without exceeding water quality standards. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan or TMDL may be developed. The TMDL shall include the WLA calculation. <u>http://dnr.mo.gov/env/wpp/tmdl/</u>

- Applicable; Mississippi River Watershed is associated with the 2006 EPA approved TMDL for chlordane and PCB's in fish tissue
- This facility is not considered to be a source of the above listed pollutant(s) or considered to contribute to the impairment.

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

Per Missouri's Effluent Regulations [10 CSR 20-7.015(1)(B)], waters of the state are divided into seven categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's effluent limitation table and further discussed in Part IV: Effluents Limits Determinations.

✓ All Other Waters

RECEIVING WATERBODY TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO SEGMENT	12-DIGIT HUC
#001	Tributary to Sandfort Creek	n/a	n/a	GEN	0.0 mi	
#001	8-20-13 MUDD V1.0	С	3960	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)	0.75	07110009-0105

n/a not applicable

- Classes are hydrologic classes as defined in 10 CSR 20-7.031(1)(F). L1: Lakes with drinking water supply wastewater discharges are not permitted to occur to L1 watersheds per 10 CSR 20-7.015(3)(C); L2: major reservoirs; L3: all other public and private lakes; P: permanent streams; C: streams which may cease flow in dry periods but maintain pools supporting aquatic life; E: streams which do not maintain surface flow; and W: wetland. Losing streams are defined in 10 CSR 20-7.031(1)(O) and are designated on the Losing Stream dataset or determined by the Department to lose 30% or more of flow to the subsurface.
- WBID = Waterbody Identification: Missouri Use Designation Dataset per 10 CSR 20-7.031(1)(Q) and (S) as 8-20-13 MUDD V1.0 or newer; data can be found as an ArcGIS shapefile on MSDIS at <u>ftp://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_shp.zip;</u> New C streams described on the dataset per 10 CSR 20-7.031(2)(A)3. as 100K Extent Remaining Streams.
- Per 10 CSR 20-7.031, the Department defines the Clean Water Commission's water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and 1st classified receiving stream's beneficial water uses are to be maintained in the receiving streams in accordance with [10 CSR 20-7.031(1)(C)]. Uses which may be found in the receiving streams table, above:
- 10 CSR 20-7.031(1)(C)1.: **ALP** = Aquatic Life Protection (formerly AQL; current uses are defined to ensure the protection and propagation of fish shellfish and wildlife, further subcategorized as: WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat. This permit uses ALP effluent limitations in 10 CSR 20-7.031 Table A1-A2 for all habitat designations unless otherwise specified.

10 CSR 20-7.031(1)(C)2.: Recreation in and on the water

- WBC = Whole Body Contact recreation where the entire body is capable of being submerged;
 - WBC-A = whole body contact recreation supporting swimming uses and has public access;
 - **WBC-B** = whole body contact recreation not supported in WBC-A;
- **SCR** = Secondary Contact Recreation (like fishing, wading, and boating)
- 10 CSR 20-7.031(1)(C)3. to 7.:

HHP (formerly HHF) = Human Health Protection as it relates to the consumption of fish and drinking of water;

IRR = irrigation for use on crops utilized for human or livestock consumption

LWW = Livestock and Wildlife Watering (current narrative use is defined as LWP = Livestock and Wildlife Protection);

DWS = Drinking Water Supply

IND = industrial water supply

10 CSR 20-7.031(1)(C)8-11.: Wetlands (10 CSR 20-7.031 Tables A1-B3 currently does not have corresponding habitat use criteria for these defined uses): WSA = storm- and flood-water storage and attenuation; WHP = habitat for resident and migratory wildlife species; WRC = recreational, cultural, educational, scientific, and natural aesthetic values and uses; WHC = hydrologic cycle maintenance.

10 CSR 20-7.031(6): GRW = Groundwater

MIXING CONSIDERATIONS:

For all outfalls, mixing zone and zone of initial dilution are not allowed per 10 CSR 20-7.031(5)(A)4.B.(I)(a) and (b), as the base stream flow does not provide dilution to the effluent.

PART III. 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

ANTIBACKSLIDING:

Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(l)] require a reissued permit to be as stringent as the previous permit with some exceptions. Backsliding (a less stringent permit limitation) is only allowed under certain conditions.

- ✓ Limitations in this operating permit for the reissuance conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.
 - This permit removed the WET testing requirement. The WET test was established as pass/fail in the previous permit at once per permit cycle. The permit writer reviewed the WET test and no toxicity was exhibited. Additionally, the permit writer believes the effluent is well classified and determined all pollutants of concern have numeric limitations therefore per 40 CFR 122.44(d)(v), WET testing is no longer required.
- ✓ The Department determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
 - <u>General Criteria</u>. The previous permit contained a special condition which described a specific set of prohibitions related to general criteria found in 10 CSR 20-7.031(4). In order to comply with 40 CFR 122.44(d)(1), the permit writer has conducted reasonable potential determinations for each general criterion and established numeric effluent limitations where reasonable potential exists. While the removal of the previous permit special condition creates the appearance of backsliding, since this permit establishes numeric limitations where reasonable potential to cause or contribute to an excursion of the general criteria exists the permit maintains sufficient effluent limitations and monitoring requirements in order to protect water quality, this permit is equally protective as compared to the previous permit. Therefore, given this new information, and the fact that the previous permit special condition of the previous permit. Please see Part VI Effluent Limits Determination for more information regarding the reasonable potential determinations for each general criterion related to this facility.

ANTIDEGRADATION REVIEW:

Process water discharges with new, altered, or expanding flows, the Department is to document, by means of antidegradation review, if the use of a water body's available assimilative capacity is justified. In accordance with Missouri's water quality regulations for antidegradation [10 CSR 20-7.031(3)], degradation may be justified by documenting the socio-economic importance of a discharge after determining the necessity of the discharge. Facilities must submit the antidegradation review request to the Department prior to establishing, altering, or expanding discharges. See http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm

An antidegradation was completed on outfall #001 in 2013 for the construction of an air stripper to treat contaminated groundwater. The antidegradation review found, Dichloroethylene, Vinyl Chloride, Tetrachloroethylene, Trichloroethylene, Iron and Phosphorus requires limits Per 10 CSR 20-7.031(3), the limitations established in the antideg must remain for these parameters unless more stringent limitations are calculated for water quality, TMDL, or technology limitations.

For stormwater discharges with new, altered, or expanding discharges, the stormwater BMP chosen for the facility, through the antidegradation analysis performed by the facility, must be implemented and maintained at the facility. Failure to implement and maintain the chosen BMP alternative is a permit violation; see SWPPP.

✓ Not applicable; the facility does not have stormwater discharges or the stormwater outfalls onsite have no industrial exposure.

CHANGES IN DISCHARGES OF TOXIC POLLUTANT:

This special condition reiterates the federal rules found in 40 CFR 122.44(f) and 122.42(a)(1). In these rules, the facility is required to report changes in amounts of toxic substances discharged. Toxic substances are defined in 40 CFR 122.2 as "...any pollutant listed as toxic under section 307(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing section 405(d) of the CWA." Section 307 of the clean water act then refers to those parameters found in 40 CFR 401.15. The permittee should also consider any other toxic pollutant in the discharge as reportable under this condition.

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.

EFFLUENT LIMITATION GUIDELINE:

Effluent Limitation Guidelines, or ELGs, are found at 40 CFR 400-499. These are limitations established by the EPA based on the SIC code and the type of work a facility is conducting. Most ELGs are for process wastewater and some address stormwater. All are technology based limitations which must be met by the applicable facility at all times.

 \checkmark The facility does not have an associated ELG.

GENERAL CRITERIA CONSIDERATIONS:

In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into permits for pollutants determined to cause, have reasonable potential to cause, or to contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The rule further states pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above a narrative criterion within an applicable State water quality standard, the permit shall contain a numeric effluent limitation to protect the specified narrative criterion. The previous permit included the narrative criteria as special conditions included in the permit absent any discussion of the discharge's reasonable potential to cause or contribute to an excursion of the criterion. In order to comply with this regulation, the permit writer has completed a reasonable potential determination on whether the discharge has reasonable potential to cause, or contribute to an excursion of the general criteria listed in 10 CSR 20-7.031(4). These specific requirements are listed below followed by derivation and discussion (the lettering matches the rule itself, under 10 CSR 20-7.031(4)). In instances where reasonable potential exists, the permit includes numeric limitations to address the reasonable potential. In instances where reasonable potential does not exist, the permit may include monitoring to later determine the discharges potential to impact the receiving stream's narrative criteria. Finally, all of the previous permit narrative criteria prohibitions have been removed from the permit given they are addressed by numeric limits where reasonable potential exists. It should also be noted Section 644.076.1, RSMo as well as Section D - Administrative Requirements of Standard Conditions Part I of this permit state it shall be unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri is 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.

- (A) 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.
 - For all outfalls, there is no RP for putrescent bottom deposits preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates putrescent wastewater would be discharged from the facility.
 - For all outfalls, there is no RP for unsightly or harmful bottom deposits preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates unsightly or harmful bottom deposits would be discharged from the facility.
- (B) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses.
 - For all outfalls, there is no RP for oil in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates oil will be present in sufficient amounts to impair beneficial uses.
 - For all outfalls, there is no RP for scum and floating debris in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates scum and floating debris will be present in sufficient amounts to impair beneficial uses.
- (C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.
 - For all outfalls, there is no RP for unsightly color or turbidity in sufficient amounts preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates unsightly color or turbidity will be present in sufficient amounts to impair beneficial uses.
 - For all outfalls, there is no RP for offensive odor in sufficient amounts preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates offensive odor will be present in sufficient amounts to impair beneficial uses.
- (D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.
 - The permit writer considered specific toxic pollutants when writing this permit. Numeric effluent limitations are included for those pollutants could be discharged in toxic amounts. These effluent limitations are protective of human health, animals, and aquatic life.
- (E) There shall be no significant human health hazard from incidental contact with the water.
 - This criterion is very similar to (D) above. See Part IV, Effluent Limits Derivation below.
 - Much like the condition above, the permit writer considered specific toxic pollutants when writing this permit, including those pollutants could cause human health hazards. The discharge is limited by numeric effluent limitations for those conditions could result in human health hazards.

- (F) There shall be no acute toxicity to livestock or wildlife watering.
 - This criterion is very similar to (D) above. See Part IV, Effluent Limits Derivation below.
 - The permit writer considered specific toxic pollutants when writing this permit. Numeric effluent limitations are included for those pollutants could be discharged in toxic amounts. These effluent limitations are protective of livestock and wildlife watering.
 - It is the permit writer's opinion this criterion is the same as (D).
- (G) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.
 - For all outfalls, there is no RP for physical changes that would impair the natural biological community because nothing disclosed by the permittee indicates physical changes that would impair the natural biological community.
 - For all outfalls, it has been established any chemical changes are covered by the specific numeric effluent limitations established in the permit
 - For all outfalls, there is no RP for hydrologic changes that would impair the natural biological community because nothing disclosed by the permittee indicates physical changes would impair the natural biological community.
- (H) 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.
 - There are no solid waste disposal activities or any operation which has reasonable potential to cause or contribute to the materials listed above being discharged through any outfall.

GROUNDWATER MONITORING:

Groundwater is a water of the state according to 10 CSR 20-2.010(82), and is subject to regulations at 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6) and must be protected accordingly.

- \checkmark This facility is not required to monitor groundwater for the water protection program.
 - This system is a groundwater remediation system which pumps contaminated groundwater from three wells on site and discharge the treated groundwater to the surface. The permit specifies influent monitoring which is effectively measuring the groundwater at the site.

MAJOR WATER USER:

Any surface or groundwater user with a water source and the equipment necessary to withdraw or divert 100,000 gallons (or 70 gallons per minute) or more per day combined from all sources from any stream, river, lake, well, spring, or other water source is considered a major water user in Missouri. All major water users are required by law to register water use annually (Missouri Revised Statues Chapter 256.400 Geology, Water Resources and Geodetic Survey Section). <u>https://dnr.mo.gov/pubs/pub2337.htm</u>

✓ Not applicable; this permittee cannot withdraw water from the state in excess of 70 gpm/0.1 MGD based on the design flow of 0.89 MGD.

NO-DISCHARGE LAND APPLICATION:

Land application of wastewater or sludge shall comply with the all applicable no-discharge requirements listed in 10 CSR 20-6.015 and all facility operations and maintenance requirements listed in 10 CSR 20-8.020(15). These requirements ensure appropriate operation of the no-discharge land application systems and prevent unauthorized and illicit discharges to waters of the state. Land applications by a contract hauler on fields the permittee has a spreading agreement on are not required to be in this permit. A spreading agreement does not constitute the field being rented or leased by the permittee as they do not have any control over management of the field.

✓ Not applicable; this permit does not authorize operation of a no-discharge land application system to treat wastewater or sludge.

REASONABLE POTENTIAL (RP):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants which are (or may be) discharged at a level causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. Per 10 CSR 20-7.031(4), general criteria shall be applicable to all waters of the state at all times; however, acute toxicity criteria may be exceeded by permit in zones of initial dilution, and chronic toxicity criteria may be exceeded by permit in mixing zones. If the permit writer determines any given pollutant has the reasonable potential to cause or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for the pollutant per 40 CFR Part 122.44(d)(1)(iii) and the most stringent limits per 10 CSR 20-7.031(9)(A).

✓ A Water Quality and Antidegradation Review was completed in January 2013. This review identified pollutants of concern in the discharge. During this review effluent limits were developed where applicable.

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, effluent limits, 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. SOCs are allowed under 40 CFR 122.47 providing certain conditions are met. A SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed. 40 CFR § 125.3.
- For a newly constructed facility in most cases. Newly constructed facilities must meet applicable effluent limitations when discharge begins, because the facility has installed the appropriate control technology as specified in a permit or antidegradation review. A SOC is allowed for a new water quality based effluent limit not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
- To develop a TMDL, UAA, or other study associated with development of a site specific criterion. A facility is not prohibited from conducting these activities, but a SOC may not be granted for conducting these activities.

In order to provide guidance in developing SOCs, and to attain a greater level of consistency, the department issued a policy on development of SOCs on October 25, 2012. The policy provides guidance to permit writers on standard time frames for schedules for common activities, and guidance on factors to modify the length of the schedule.

✓ Not applicable; this permit does not contain a SOC. Limits have not become more restrictive.

SPILL REPORTING:

Per 10 CSR 24-3.010, any emergency involving a hazardous substance must be reported to the Department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. The Department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the noncompliance reporting requirement found in Standard Conditions Part I. <u>http://dnr.mo.gov/env/esp/spillbill.htm</u>

SLUDGE - DOMESTIC BIOSOLIDS:

Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for beneficial use (i.e. fertilizer). Sewage sludge is solid, semi-solid, 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 material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information: <u>http://extension.missouri.edu/main/DisplayCategory.aspx?C=74</u> (WQ422 through WQ449). ✓ Not applicable; this condition is not applicable to the permittee for this facility.

SLUDGE – INDUSTRIAL:

Industrial sludge is solid, semi-solid, or liquid residue generated during the treatment of industrial process wastewater in a treatment works; including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment process; scum and solids filtered from water supplies and backwashed; and a material derived from industrial sludge.

 \checkmark Not applicable; sludge is not generated at this facility.

STANDARD CONDITIONS:

The standard conditions Part I attached to this permit incorporate all sections of 40 CFR 122.41(a) through (n) by reference as required by law. These conditions, in addition to the conditions enumerated within the standard conditions should be reviewed by the permittee to ascertain compliance with this permit, state regulations, state statues, federal regulations, and the Clean Water Act.

STORMWATER PERMITTING: LIMITATIONS AND BENCHMARKS:

Because of the fleeting nature of stormwater discharges, the Department, under the direction of EPA guidance, has determined monthly averages are capricious measures of stormwater discharges. The *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001; 1991) Section 3.1 indicates most procedures within the document apply only to water quality based approaches, not end-of-pipe technology-based controls. Hence, stormwater-only outfalls will generally only contain a maximum daily limit (MDL), benchmark, or monitoring requirement determined by the site specific conditions, the BMPs in place, past performance of the facility, and the receiving water's current quality.

Sufficient rainfall to cause a discharge for one hour or more from a facility would not necessarily cause significant flow in a receiving stream. Acute Water Quality Standards (WQSs) are based on one hour of exposure, and must be protected at all times. Therefore, industrial stormwater facilities with toxic contaminants present in the stormwater may have the potential to cause a violation of acute WQSs if toxic contaminants occur in sufficient amounts. In this instance, the permit writer may apply daily maximum limitations.

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Conversely, it is unlikely for rainfall to cause a discharge for four continuous days from a facility; if this does occur however, the receiving stream will also likely sustain a significant amount of flow providing dilution. Most chronic WQSs are based on a four-day exposure with some exceptions. Under this scenario, most industrial stormwater facilities have limited potential to cause a violation of chronic water quality standards in the receiving stream.

A standard mass-balance equation cannot be calculated for stormwater from this facility because the stormwater flow and flow in the receiving stream cannot be determined for conditions on any given day or storm event. The amount of stormwater discharged from the facility will vary based on current and previous rainfall, soil saturation, humidity, detention time, BMPs, surface permeability, etc. Flow in the receiving stream will vary based on climatic conditions, size of watershed, amount of surfaces with reduced permeability (houses, parking lots, and the like) in the watershed, hydrogeology, topography, etc. Decreased permeability may increase the stream flow dramatically over a short period of time (flash).

Numeric benchmark values are based on site specific requirements taking in to account a number of factors but cannot be applied to any process water discharges. First, the technology in place at the site to control pollutant discharges in stormwater is evaluated. The permit writer also evaluates other similar permits for similar activities. A review of the guidance forming the basis of Environmental Protection Agency's (EPA's) *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* (MSGP) may also occur. Because precipitation events are sudden and momentary, benchmarks based on state or federal standards or recommendations use the Criteria Maximum Concentration (CMC) value, or acute standard may also be used. The CMC is the estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed briefly without resulting in an unacceptable effect. The CMC for aquatic life is intended to be protective of the vast majority of the aquatic communities in the United States.

40 CFR 122.44(b)(1) requires the permit implement the most stringent limitations for each discharge, including industrially exposed stormwater; and 40 CFR 122.44(d)(1)(i) and (iii) requires the permit to include water-quality based effluent limitations where reasonable potential has been found; however, because of the non-continuous nature of stormwater discharges, staff are unable to perform statistical Reasonable Potential Analysis (RPA). Reasonable potential determinations (RPDs; see REASONABLE POTENTIAL above) using best professional judgment are performed.

Benchmarks require the facility to monitor, and if necessary, replace and update stormwater control measures. Benchmark concentrations are not effluent limitations. A benchmark exceedance, therefore, is not a permit violation; however, failure to take corrective action is a violation of the permit. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the permittee in knowing when additional corrective actions may be necessary to comply with the conditions of the permit.

BMP inspections typically occur more frequently than sampling. Sampling frequencies are based on the facility's ability to comply with the benchmarks and the requirements of the permit. Inspections should occur after large rain events and any other time an issue is noted; sampling after a benchmark exceedance may need to occur to show the corrective active taken was meaningful.

When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented at the discretion of the permit writer, if there is no RP for water quality excursions.

✓ Not applicable; this facility does not have any stormwater-only outfalls.

UNDERGROUND INJECTION CONTROL (UIC):

The UIC program for all classes of wells in the State of Missouri is administered by the Missouri Department of Natural Resources and approved by EPA pursuant to section 1422 and 1425 of the Safe Drinking Water Act (SDWA) and 40 CFR 147 Subpart AA. Injection wells are classified based on the liquids which are being injected. Class I wells are hazardous waste wells which are banned by RSMo 577.155; Class II wells are established for oil and natural gas production; Class III wells are used to inject fluids to extract minerals; Class IV wells are also banned by Missouri in RSMo 577.155; Class V wells are shallow injection wells; some examples are heat pump wells and groundwater remediation wells. Domestic wastewater being disposed of sub-surface is also considered a Class V well. In accordance with 40 CFR 144.82, construction, operation, maintenance, conversion, plugging, or closure of injection wells shall not cause movement of fluids containing any contaminant into Underground Sources of Drinking Water (USDW) if the presence of any contaminant may cause a violation of drinking water standards or groundwater standards under 10 CSR 20-7.031, or other health based standards, or may otherwise adversely affect human health. If the director finds the injection activity may endanger USDWs, the Department may require closure of the injection wells, or other actions listed in 40 CFR 144.12(c), (d), or (e). In accordance with 40 CFR 144.26, the permittee shall submit a Class V Well Inventory Form for each active or new underground injection well drilled, or when the status of a well changes, to the Missouri Department of Natural Resources, Geological Survey Program or can be found at the following web address: <u>http://dnr.mo.gov/forms/780-1774-f.pdf</u>

✓ Not applicable; the permittee has not submitted materials indicating the facility will be performing UI at this site.

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VARIANCE:

Per the Missouri Clean Water Law §644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

✓ Not applicable; this permit is not drafted under premise of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the WLA is the amount of pollutant each discharger is allowed to discharge into the receiving stream without endangering water quality. Two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs) are reviewed. If one limit does not provide adequate protection for the receiving water, then the other must be used per 10 CSR 20-7.015(9)(A).

Applicable; wasteload allocations were calculated where relevant using water quality criteria or water quality model results and by applying the dilution equation below:

$$C = \frac{(Cs \times Qs) + (Ce \times Qe)}{(Qe + Qs)}$$
(EPA/505/2-90-001, Section 4.5.5)

Where

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

- Acute wasteload allocations designated as daily maximum limits (MDL) 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).
- Chronic wasteload allocations designated as monthly average limits (AML) 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).
- Water quality based MDL and AML effluent limitations were calculated using methods and procedures outlined in USEPA's *Technical Support Document For Water Quality-based Toxics Control* or TSD EPA/505/2-90-001; 3/1991.
- Number of Samples "n": In accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance which should be, at a minimum, targeted to comply with the values dictated by the WLA. Therefore, it is recommended the actual planned frequency of monitoring normally be used to determine the value of "n" for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for "n" must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is "n = 4" at a minimum. For total ammonia as nitrogen, "n = 30" is used.

WLA MODELING:

Permittees may submit site specific studies to better determine the site specific wasteload allocations applied in permits.

✓ Not applicable; a WLA study was either not submitted or determined not applicable by Department staff.

PART IV. EFFLUENT LIMITS DETERMINATIONS

Effluent limitations derived and established for this permit are based on current operations of the facility and applied per 10 CSR 20-7.015(9)(A). Any flow through the outfall is considered a discharge and must be sampled and reported as provided below. Future permit action due to facility modification may contain new operating permit terms and conditions which supersede the terms and conditions, including effluent limitations, of this operating permit. Daily maximums and monthly averages are required per 40 CFR 122.45(d)(1) for continuous discharges (not from a POTW).

OUTFALL #001 - MAIN FACILITY OUTFALL

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	Unit	Daily Max	Monthly Avg	PREVIOUS PERMIT LIMITS	Minimum Sampling Frequency	Minimum Reporting Frequency	Sample Type
Physical							
FLOW	MGD	*	*	*/*	ONCE/MONTH	MONTHLY	24 Hr. Tot
CONVENTIONAL							
PH Ω	SU	6.5 то 9.0	6.5 to 9.0	6.0-9.0	ONCE/MONTH	MONTHLY	GRAB
METALS							
IRON, TR	SU	*	*	*/*	ONCE/MONTH	MONTHLY	GRAB
IRON, TR (NET)	SU	603	603	SAME	ONCE/MONTH	MONTHLY	CALCULATED
VOLATILE							
CIS-1,2-DICHLOROETHYLENE (DCE)	µg/L	141	70	SAME	ONCE/MONTH	MONTHLY	GRAB
TETRACHLOROETHYLENE (PCE)	μg/L	1.6	0.8	SAME	ONCE/MONTH	MONTHLY	GRAB
TRICHLOROETHYLENE (TCE)	μg/L	10.1	5	SAME	ONCE/MONTH	MONTHLY	GRAB
VINYL CHLORIDE	μg/L	4.0	2	SAME	ONCE/MONTH	MONTHLY	GRAB
Other							
WET TEST - ACUTE	TUa	*		PASS/FAIL	ONCE/MONTH	MONTHLY	GRAB

PERMITTED FEATURE #002 - INFLUENT

INFLUENT MONITORING TABLE:

PARAMETERS	Unit	Daily Max	Monthly Avg	PREVIOUS PERMIT LIMITS	Minimum Sampling Frequency	Minimum Reporting Frequency	Sample Type
METALS							
IRON, TR	SU	*	*	SAME	ONCE/MONTH	MONTHLY	GRAB

DERIVATION AND DISCUSSION OF LIMITS:

Effluent limits contained in this permit were developed as a result of the Water Quality and Antidegradation Review completed January 2013. These effluent limits are continued in this permit. The Antidegradation review did establish monitoring requirements for total phosphorus which have not been incorporated in this permit (or the previous permit) as the facility does not utilize additives to remove scaling. At the time of the Antidegradation review it was proposed that phosphorus be added to aid in the prevention of scaling due to iron in the groundwater being treated. See appendix for the "Water Quality and Antidegradaton Review"

- Flow. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification.
- <u>pH</u>. 6.5-9.0 SU. pH limitations of 6.0-9.0 SU [10 CSR 20-7.015] are not protective of the in-stream Water Quality Standard, which states that water contaminants shall not cause pH to be outside the range of 6.5-9.0 SU

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cis-1,2-Dichloroethylene (DCE). According to EPA technical documents, air stripping is capable of removing at least 99 percent of DCE. The concentration of the influent is estimated to be 9.6 mg/L. Applying the 99 percent removal efficiency yields a minimum technology-based effluent limit of 96 µg/L. There is no Human Health Protection-Fish Consumption criteria (HHF) for PCE, nor is there an aquatic life criteria. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 1.5, thus the MDL is 144 µg/L.

Although Antidegradation applies solely to surface waters, operating permits consider may also consider groundwater impacts. The effluent is assumed to impact groundwater. The chronic criteria for the protection of groundwater is 70 μ g/L for DCE. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 2.01, thus the MDL = 141 μ g/L.

The most stringent limit will apply (groundwater criteria), and is reflected in Table 3 of the antidegradation review.

Vinyl Chloride. According to EPA technical documents, air stripping is capable of removing at least 99 percent of Vinyl Chloride. The concentration of the influent is estimated to be 0.28 mg/L. Applying the 99 percent removal efficiency yields a minimum technology-based effluent limit of $2.8 \ \mu g/L$. The HHF for PCE is $525 \ \mu g/L$, however consumption of fish from the unnamed waterbody is not expected, therefore, an HHF limit will not be developed. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 1.5, thus the MDL is $4.2 \ \mu g/L$.

Although Antidegradation applies solely to surface waters, operating permits consider groundwater impacts. The effluent is assumed to impact groundwater. The chronic criteria for the protection of groundwater is $2 \mu g/L$ for Vinyl Chloride. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 2.01, thus the MDL = $4.0 \mu g/l$.

The most stringent limit will apply (groundwater criteria), and is reflected in Table 3 of the antidegradation review.

• **Tetrachloroethylene (PCE).** According to EPA technical documents, air stripping is capable of removing at least 99 percent of PCE. The concentration of the influent is estimated to be 0.121 mg/L. Applying the 99 percent removal efficiency yields a minimum technology-based effluent limit of $1.21 \,\mu$ g/L. The HHF for PCE is 8.85 μ g/L, however consumption of fish from the unnamed waterbody is not expected, therefore, an HHF limit will not be developed. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 1.5, thus the MDL is $1.82 \,\mu$ g/L.

Although Antidegradation applies solely to surface waters, operating permits consider groundwater impacts. The effluent is assumed to impact groundwater. The chronic criteria for the protection of groundwater is $0.8 \ \mu g/L$ for PCE. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 2.01, thus the MDL = $1.61 \ \mu g/l$.

The most stringent limit will apply (groundwater criteria), and is reflected in Table 3 of the antidegradation review.

Trichloroethylene (TCE). According to EPA technical documents, air stripping is capable of removing at least 99 percent of TCE. The concentration of the influent is estimated to be 0.96 mg/L. Applying the 99 percent removal efficiency yields a minimum technology-based effluent limit of 9.6 µg/L. The HHF for TCE is 80 µg/L, however consumption of fish from the unnamed waterbody is not expected, therefore, an HHF limit will not be developed. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 1.5, thus the MDL is 14.4 µg/L.

Although Antidegradation applies solely to surface waters, operating permits consider groundwater impacts The effluent is assumed to impact groundwater. The chronic criteria for the protection of groundwater is 5 μ g/L for TCE. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 2.01, thus the MDL = 10.1 μ g/l.

The most stringent limit will apply (groundwater criteria), and is reflected in Table 3 of the antidegradation review.

• Iron, Total Recoverable. Iron is naturally occurring in the groundwater underlying the site and will be present in the influent and in the discharge from the air stripper treatment unit. As mentioned previously, the air stripper unit is not intended or designed to remove iron from the groundwater. This effluent limitation is designed to limit the discharge of iron from the air stripper to the iron that is naturally occurring and contained in the groundwater that air stripper unit will be treating.

The net Iron effluent limitation is to be determined by subtracting the total iron concentration in the influent to the air stripper from the total iron concentration in the effluent. This effluent limitation is to be a net effluent limitation in a manner outlined in federal regulations (40 CFR 122.45(g)). In accordance with 40 CFR 122.45(g)(4) net limits will be allowed. While the receiving stream is listed as Tributary to Sandfort Creek it was identified in the Water Quality and Antidegredation Review that this facility has impact to groundwater.

Whole Effluent Toxicity (WET), Acute

- The permit writer has removed the WET testing requirement; please see fact sheet Part III: ANTIBACKSLIDING.
- This permit contains numeric effluent limits for all pollutants of concern that are treated at this facility. In addition the previously required Acute WET test was passed indicating no aggregate toxicity of the effluent. The facility has not disclosed any other information indicating any other pollutants aside from those identified in this permit with numeric effluent limits are discharged from this outfall. Acute WET testing is being removed in accordance with 40 CFR 122.44 (d)(v).

PART V. SAMPLING AND REPORTING REQUIREMENTS

Refer to each outfall's derivation and discussion of limits section to review individual sampling and reporting frequencies and sampling type. Additionally, see Standard Conditions Part I attached at the end of this permit and fully incorporated within.

ELECTRONIC DISCHARGE MONITORING REPORT (EDMR) SUBMISSION SYSTEM:

The U.S. Environmental Protection Agency (EPA) promulgated a final rule on October 22, 2015, to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. The final rule requires regulated entities and state and federal regulators to use information technology to electronically report data required by the National Pollutant Discharge Elimination System (NPDES) permit program instead of filing paper reports. To comply with the federal rule, the Department is requiring all permittees to begin submitting discharge monitoring data and reports online.

Per 40 CFR 127.15 and 127.24, permitted facilities may request a temporary waiver for up to 5 years or a permanent waiver from electronic reporting from the Department. To obtain an electronic reporting waiver, a permittee must first submit an eDMR Waiver Request Form: <u>http://dnr.mo.gov/forms/780-2692-f.pdf</u>. A request must be made for each facility. If more than one facility is owned or operated by a single entity, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is not transferable.

The Department must review and notify the facility within 120 calendar days of receipt if the waiver request has been approved or rejected [40 CFR 124.27(a)]. During the Department review period as well as after a waiver is granted, the facility must continue submitting a hard-copy of any reports required by their permit. The Department will enter data submitted in hard-copy from those facilities allowed to do so and electronically submit the data to the EPA on behalf of the facility.

 \checkmark The permittee/facility is currently using the eDMR data reporting system.

SAMPLING FREQUENCY JUSTIFICATION:

Sampling and reporting frequency was generally retained from previous permit. 40 CFR 122.45(d)(1) indicates all continuous discharges shall be permitted with daily maximum and monthly average limits. Minimum sampling frequency for all parameters is annually per 40 CFR 122.44(i)(2).

SAMPLING TYPE JUSTIFICATION:

Sampling type was continued from the previous permit. The sampling types are representative of the discharges, and are protective of water quality. Discharges with altering effluent should have composite sampling; discharges with uniform effluent can have grab samples. Parameters which must have grab sampling are: pH volatile organic compounds, and others.

SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:

Please review Standard Conditions Part 1, section A, number 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 and/or 40 CFR 136 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 the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations 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 quantifies the pollutant below the level of the applicable water quality criterion 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 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 and or 40 CFR 136. These methods are also required for parameters listed as monitoring only, as the data collected may be used to determine if numeric limitations need to be established. A permittee is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive. 40 CFR 136 lists the approved methods accepted by the Department. Tables A1-B3 at 10 CSR 20-7.031 shows water quality standards.

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.

PERMIT SYNCHRONIZATION:

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

✓ If the Department issues the permit at this time, the effective period of the permit would be less than one year in length. To ensure efficient use of Department staff time, reduce the Department's permitting back log, and to provide better service to the permittee by avoiding another renewal application to be submitted in such a short time period, this operating permit will be issued for the maximum timeframe of five years and synced with other permits in the watershed at a later date.

PUBLIC NOTICE:

The Department shall give public notice a draft permit has been prepared and its issuance is pending.

<u>http://dnr.mo.gov/env/wpp/permits/pn/index.html</u> Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in or with water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

✓ The Public Notice period for this operating permit was from January 25, 2019 to February 25, 2019. No comments were received during this time period.

DATE OF FACT SHEET: OCTOBER 11, 2018

COMPLETED BY:

SHAWN MASSEY, ENVIRONMENTAL SPECIALIST MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM OPERATING PERMITS SECTION - INDUSTRIAL UNIT (573) 751-1399 Shawn.massey@dnr.mo.gov Huster Substation MO0137642 Fact Sheet Page 14

Appendix: Antidegradation

Water Quality and Antidegradation Review

For the Protection of Water Quality and Determination of Effluent Limits for Discharge by Ameren – Huster Substation Groundwater Treatment System



January 2013

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1. FACILITY INFORMATION

FACILITY NAME: Ameren – Huster Substation Groundwater Treatment System NPDES #: NEW FACILITY

FACILITY TYPE/DESCRIPTION: As a result of the submitted alternative analysis, the applicant's preferred alternative is a 62 gallon per minute air stripper designed to remove greater than 99.9 percent of the dissolved chlorinated volatile organic compounds (CVOCs). The design flow of this new facility will be 0.089 MGD.

COUNTY:	St. Charles	UTM COORDINATES:	X= 714407/ Y= 4300026
12- DIGIT HUC:	07110009-0105	LEGAL DESCRIPTION:	NW ¹ / ₄ , NW ¹ / ₄ , Section 24, T47N, R4E
EDU^* :	Central Plains/Cuivre/Salt	ECOREGION:	Big River Floodplain
* Ecological Drainaga I	Init	-	

Ecological Drainage Unit

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 Implementation Procedure (AIP) for new and expanded wastewater discharges.

2.1. WATER QUALITY HISTORY:

No history for this facility. Although located in the Dardenne Creek watershed, the discharge from this facility is not expected to have a direct surface connection with Dardenne Creek as there are several levees in the area that have altered the flow lines of the water courses. This was confirmed by a "ground truthing" visit conducted by Ameren's contractor Barr Engineering, which summarized their findings on a map supplied with the Antidegradation application.

U.S. EPA Region 7 (USEPA) and Ameren Missouri (Ameren) entered into a Settlement Agreement and Administrative Order on Consent for the Ameren Huster Road electrical substation property, which requires Ameren to design, install, and operate a groundwater containment system (GCS) to capture and treat on-site groundwater affected by chlorinated volatile organic compounds (CVOCs) at concentrations exceeding Missouri

Risk-Based Corrective Action (MRBCA) default target levels (DTLs), corresponding to federal Maximum Contaminant Levels (MCLs). This project is in response to these shallow groundwater treatment requirements.

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	RECEIVING WATERBODY	DISTANCE TO CLASSIFIED SEGMENT (MI)	
001	0.14	Air Stripper	Unnamed Waterbody	N/A	

3. RECEIVING WATERBODY INFORMATION

WATERBODY NAME	CLASS WBID		LOW-FLOW VALUES (CFS)			Designated Uses**
WATERBODT NAME			1Q10	7Q10	30Q10	DESIGNATED USES
Unnamed Waterbody	U	-	0.0	0.0	0.0	General Criteria

** Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cold Water Fishery (CDF), Cool Water Fishery (CLF), Drinking Water Supply (DWS), Industrial (IND), Irrigation (IRR), Livestock & Wildlife Watering (LWW), Secondary Contact Recreation (SCR), Whole Body Contact Recreation (WBC).

RECEIVING WATER BODY SEGMENT #1: Unnamed Waterbody

Upper end segment* UTM coordinates:	X = 714407/Y = 4300026 (Outfall)
Lower end segment* UTM coordinates:	X=711720/ Y=4300784 (levee at Dardenne Creek)

*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.

Once the treated water is discharged to the Unnamed Waterbody, the water is expected to spread, disperse, and percolate into the groundwater of the area. It is therefore, appropriate to consider the impact of this discharge on groundwater, and permit limits may be developed for the protection of groundwater.

4. GENERAL COMMENTS

Barr Engineering prepared, on behalf of Ameren Services, the *Antidegradation Review for Huster Substation* dated October 2013. Geohydrological Evaluation request was not submitted as Barr Engineering had an in-house geologist verify that the receiving stream is gaining for discharge purposes (Appendix A: Map). Applicant elected to assume that all pollutants of concern (POC) are significantly degrading the receiving stream in the absence of existing water quality. An alternative analysis was conducted to fulfill the requirements of the AIP. Information that was provided by the applicant in the submitted report and summary forms in Appendix B was used to develop this review document. A Missouri Department of Conservation Natural Heritage Review was obtained by the applicant; and no records of endangered species were found for the project area. This project has minimal construction and disturbance of land in the immediate vicinity of Huster Substation and primarily involves the permitting of a discharge of treated groundwater to surface water. No known sensitive habitats or threatened and endangered species are known to exist that will be negatively impacted by the minor construction activities or discharge associated with this project.

5. ANTIDEGRADATION REVIEW INFORMATION

The following is a review of the Antidegradation Review for Huster Substation dated October 2013.

5.1. TIER DETERMINATION

Below is a list of pollutants of concern reasonably expected to be in the discharge (see Appendix B: 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). Tier 2 was assumed for all POCs (see Appendix B).

POLLUTANTS OF CONCERN	TIER*	DEGRADATION	COMMENT
рН	2	Significant	***
CIS-1,2 – DICHLOROETHYLENE (DCE)	2	Significant	**
VINYL CHLORIDE (VC)	2	Significant	**
TETRACHLOROETHYLENE (PCE)	2	Significant	**
TRICHLOROETHYLENE (TCE)	2	Significant	**
PHOSPHORUS	2	Significant	**
IRON	1	Nondegrading	Groundwater standard

Table 1. Pollutants of Concern and Tier Determination

* Tier assumed. Tier determination not possible: ** No in-stream standards for these parameters. *** Standard for this parameter is a range.

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

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

5.2. EXISTING WATER QUALITY

No existing water quality data was submitted. All POCs were assumed to be Tier 2 and significantly degraded in the absence of existing water quality.

5.3. Alternative Analysis

This antidegradation review assumed significant degradation for all Pollutants of Concern, so there is a demonstration of necessity (i.e., alternatives analysis) and a determination of social and economic importance included in the report. Non-degrading alternatives such as land application, water reuse, and groundwater reinjection were considered not practicable due to lack of available land, industrial users, storage, and/or negative public perception of each alternative. The report also stated regionalization was not practicable due to City of St. Charles having an ordinance, which does not allowing discharge of groundwater into City sewers. The report did not include a detailed analysis of less degrading alternatives as the base case is proposed to remove greater 99.9% of the Chlorinated Volatile Organic Compounds (CVOCs). Based on an EPA's "Cost-Effective Design of Pump and Treat Systems" [EPA542-R-05-008, April 2005], air stripping is the appropriate treatment technology for addressing the pollutants of concern. The document cites air stripping's high removal efficiency, its relatively low capital and operating costs, and the fact that system manufacturers provide standard "off-the-shelf" designs that often provide performance safety factors because additional capacity adds little to the cost.

The only practicable option presented in the application is a low-profile sieve tray air stripper. The low-profile air stripping unit is the preferred alternative, because of the proven and reliable performance and ease of maintenance. A low-profile sieve tray air stripper will be used to remove dissolved CVOCs from the influent groundwater stream. The air stripper will operate at an air flow rate of 600 cubic feet per minute, which results in an air-to-water ratio of 72:1 at the design flow of 62 gallons per minute. At this air-to-water ratio, the air stripper is predicted to remove greater 99.9% of CVOCs. Prior to the air stripping unit, the groundwater will be dosed with an anti-scalant to address elevated iron and hardness and reduce the likely scale buildup on the air stripper trays. The anti-scalant proposed is phosphorus based. Bag filters will also be used to remove any precipitated particulates before and after the air stripper. The Groundwater Treatment System will be provided by National Environmental Systems (NES) as a pre-packaged turnkey system installed inside a 40 foot long by 8 feet wide cargo box enclosure.

5.4. DEMONSTRATION OF SOCIAL AND ECONOMIC IMPORTANCE

This antidegradation review assumed significant degradation for all Pollutants of Concern, so there is a demonstration of necessity (i.e., alternatives analysis) and a determination of social and economic importance that was included in the report.

The applicant first identified the community that will be affected by the proposed degradation of water quality. The affected community is likely within the City of St. Charles. The City is dependent on radial, public drinking water wells located near the substation site. Protection of the groundwater from which the City's wells draw is a primary socio economic consideration. The area in immediate proximity to the site is currently used primarily for agricultural, industrial, and recreational purposes. Row crops and commercial facilities are to the west. Fountain Lakes Park borders the site on the north, east, and south and has two fishing lakes, a skate park, and a walking trail. The uses adjacent to this site should not be negatively impacted by the groundwater treatment system.

6. GENERAL ASSUMPTIONS OF THE WATER QUALITY AND ANTIDEGRADATION REVIEW

- A Water Quality and Antidegradation Review (WQAR) assumes that [10 CSR 20-6.010(3) Continuing Authorities and 10 CSR 20-6.010(4) (D)] consideration for no discharge has been or will be addressed in a Missouri State Operating Permit or Construction Permit Application.
- 2. A WQAR 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 after the drafting of this WQAR 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 supersede ELG only when they are more stringent. Mass limits derived from technology based limits are still appropriate.
- 6. A WQAR 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 WQAR 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.

7. MIXING CONSIDERATIONS

Mixing Zone (MZ): Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(a)].

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

8. PERMIT LIMITS AND MONITORING INFORMATION

WASTELOAD ALLOCATION STUDY CONDUCTED (Y OR N):	N USE ATT. Analysis	AINABILITY CONDUCTED (Y or N):	Ν	WHOLE E Use Reta	BODY CONTAC INED (Y OR N):	T N
		OU	TFALL	#001		
WET TEST (Y OR N): Y	FREQUENCY:	ONCE/YEAR	AEC:	100%	METHOD:	MULTIPLE

* Based upon industrial process wastewater requirements and best professional judgment of the pollutant types.

TABLE 3. ANTIDEGRADATION EFFLUENT LIMITS OUTFALL	001
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Parameter	Units	Daily Maximum	Weekly Average	Monthly Average	BASIS FOR LIMIT (NOTE 1)	Monitoring Frequency
FLOW	MGD	*		*		ONCE/MONTH
РН	SU	6–9		6-9	<u>FSR</u>	ONCE/MONTH
CIS-1,2 – DICHLOROETHYLENE (DCE)	µg/L	141		70	PEL	ONCE/MONTH
VINYL CHLORIDE (VC)	μg/L	4		2	PEL	ONCE/MONTH
TETRACHLOROETHYLENE (PCE)	μg/L	1.6		0.8	PEL	ONCE/MONTH
TRICHLOROETHYLENE (TCE)	μg/L	10.1		5	PEL	ONCE/MONTH
IRON (INFLUENT)	μg/L	*		*	<u>N/A</u>	ONCE/MONTH
IRON (EFFLUENT)	μg/L	*		*	<u>N/A</u>	ONCE/MONTH
IRON (NET)	μg/L	603		603	WQBEL	ONCE/MONTH
PHOSPHORUS	MG/L	*		*	<u>N/A</u>	ONCE/MONTH

NOTE 1– WATER QUALITY-BASED EFFLUENT LIMITATION --WQBEL; OR MINIMALLY DEGRADING EFFLUENT LIMIT--MDEL; OR PREFERRED ALTERNATIVE EFFLUENT LIMIT-PEL; TECHNOLOGY-BASED EFFLUENT LIMIT-TBEL; OR NO DEGRADATION EFFLUENT LIMIT--NDEL; OR FSR --FEDERAL/STATE REGULATION; OR N/A--NOT APPLICABLE. ALSO, PLEASE SEE THE GENERAL ASSUMPTIONS OF THE WQAR #4 & #5.

* - Monitoring requirements only.

9. RECEIVING WATER MONITORING REQUIREMENTS

No receiving water monitoring requirements recommended at this time.

DERIVATION AND DISCUSSION OF LIMITS

Wasteload allocations and limits were calculated using two methods:

1) Water quality-based – Using water quality criteria or water quality model results and the dilution equation below:

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

Where C = downstream concentration

 C_s = upstream concentration

 $Q_s = upstream$ flow

 $C_e = effluent \ concentration$

 $Q_e = effluent flow$

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).

2) Alternative Analysis-based – Using the preferred alternative's treatment capacity for conventional pollutants such as BOD5 and TSS that are provided by the consultant as the WLA, the significantly-degrading effluent average monthly and average weekly limits are determined by applying the WLA as the average monthly (AML) and multiplying the AML by 1.5 to derive the average weekly limit (AWL). For toxic and nonconventional pollutant such as ammonia, the treatment capacity is applied as the significantly-degrading effluent monthly average (AML). A maximum daily can be derived by dividing the AML by 1.19 to determine the long-term average (LTA). The LTA is then multiplied by 3.11 to obtain the maximum daily limitation. This is an accepted procedure that is defined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Note: Significantly-degrading effluent limits have been based on the authority included in Section III. Permit Consideration of the AIP. Also under 40 CFR 133.105, permitting authorities shall require more stringent limitations than equivalent to secondary treatment limitations for 1) existing facilities if the permitting authority determines that the 30-day average and 7-day average BOD5

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and TSS effluent values that could be achievable through proper operation and maintenance of the treatment works, and 2) new facilities if the permitting authority determines that the 30-day average and 7-day average BOD5 and TSS effluent values that could be achievable through proper operation and maintenance of the treatment works, considering the design capability of the treatment process.

Since the facility is not expected to affect Dardenne Creek as there does not appear to be a direct surface connection between the treatment system and Dardenne Creek as there are several levees in the area that have altered the flow lines of the water courses, the facility has Preferred Alternative Effluent Limits for most of the pollutants of concern as these pollutants only have chronic criteria. The treatment technology selected is more than capable of meeting the proposed Preferred Alternative Effluent Limits in this section.

9.1. OUTFALL #001 – MAIN FACILITY OUTFALL

9.2. LIMIT DERIVATION

- <u>Flow</u>. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification.
- **<u>pH.</u>** pH shall be maintained in the range from six to nine (6–9) standard units [10 CSR 20-7.015(8)(A)2.].
- <u>cis-1,2-Dichloroethylene (DCE)</u>. According to EPA technical documents, air stripping is capable of removing at least 99 percent of DCE. The concentration of the influent is estimated to be 9.6 mg/L. Applying the 99 percent removal efficiency yields a minimum technology-based effluent limit of 96 µg/L. There is no Human Health Protection-Fish Consumption criteria (HHF) for PCE, nor is there an aquatic life criteria. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 1.5, thus the MDL is 144µg/L.

Although Antidegradation applies solely to surface waters, operating permits consider groundwater impacts. Since there does not appear to be a direct surface water connection with Dardenne Creek due to the intricate levee system of this area, the effluent is assumed to impact groundwater. The chronic criteria for the protection of groundwater is 70 μ g/L for DCE. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 2.01, thus the MDL = 141 μ g/l.

The most stringent limit will apply (groundwater criteria), and is reflected in Table 3.

• <u>Vinyl Chloride</u>. According to EPA technical documents, air stripping is capable of removing at least 99 percent of Vinyl Chloride. The concentration of the influent is estimated to be 0.28 mg/L. Applying the 99 percent removal efficiency yields a minimum technology-based effluent limit of 2.8 μ g/L. The HHF for PCE is 525 μ g/L, however consumption of fish from the unnamed waterbody is not expected, therefore, an HHF limit will not be developed. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 1.5, thus the MDL is 4.2 μ g/L.

Although Antidegradation applies solely to surface waters, operating permits consider groundwater impacts. Since there does not appear to be a direct surface water connection with Dardenne Creek due to the intricate levee system of this area, the effluent is assumed to impact groundwater. The chronic criteria for the protection of groundwater is $2 \mu g/L$ for Vinyl Chloride. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 2.01, thus the MDL = $4.0 \mu g/L$.

The most stringent limit will apply (groundwater criteria), and is reflected in Table 3.

• <u>Tetrachloroethylene (PCE)</u>. According to EPA technical documents, air stripping is capable of removing at least 99 percent of PCE. The concentration of the influent is estimated to be 0.121 mg/L. Applying the 99 percent removal efficiency yields a minimum technology-based effluent limit of 1.21 μ g/L. The HHF for PCE is 8.85 μ g/L, however consumption of fish from the unnamed waterbody is not expected, therefore, an HHF limit will not be developed. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 1.5, thus the MDL is 1.82 μ g/L.

Although Antidegradation applies solely to surface waters, operating permits consider groundwater impacts. Since there does not appear to be a direct surface water connection with Dardenne Creek due to the intricate levee system of this area, the effluent is assumed to impact groundwater. The chronic criteria for the protection of groundwater is $0.8 \ \mu g/L$ for PCE. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 2.01, thus the MDL = 1.61 $\mu g/L$.

The most stringent limit will apply (groundwater criteria), and is reflected in Table 3.

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• <u>Trichloroethylene (TCE)</u>. According to EPA technical documents, air stripping is capable of removing at least 99 percent of TCE. The concentration of the influent is estimated to be 0.96 mg/L. Applying the 99 percent removal efficiency yields a minimum technology-based effluent limit of $9.6 \ \mu g/L$. The HHF for TCE is 80 $\mu g/L$, however consumption of fish from the unnamed waterbody is not expected, therefore, an HHF limit will not be developed. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 1.5, thus the MDL is $14.4 \ \mu g/L$.

Although Antidegradation applies solely to surface waters, operating permits consider groundwater impacts. Since there does not appear to be a direct surface water connection with Dardenne Creek due to the intricate levee system of this area, the effluent is assumed to impact groundwater. The chronic criteria for the protection of groundwater is 5 μ g/L for TCE. To derive the Monthly Daily Maximum (MDL), the average monthly limit was multiplied by 2.01, thus the MDL = 10.1 μ g/l.

The most stringent limit will apply (groundwater criteria), and is reflected in Table 3.

• <u>Iron, Total Recoverable</u>. Iron is naturally occurring in the groundwater underlying the site and will be present in the influent and in the discharge from the air stripper treatment unit. As mentioned previously, the air stripper unit is not intended or designed to remove iron from the groundwater. This effluent limitation is designed to limit the discharge of iron from the air stripper to the iron that is naturally occurring and contained in the groundwater that air stripper unit will be treating.

The net Iron effluent limitation is to be determined by subtracting the total iron concentration in the influent to the air stripper from the total iron concentration in the effluent. This effluent limitation is to be a net effluent limitation in a manner outlined in federal regulations (40 CFR 122.45(g)).

• <u>Total Phosphorus.</u> Monitoring requirement only. The department does not have an implementation plan for nutrients, but the facility is proposing to use a phosphorus compound for control of iron fouling in the air stripper trays, therefore the department is proposing that the facility collect monitoring data. The antidegradation report mentions an effluent concentration of 1.5 mg/L.

Antidegradation does not apply to subsurface discharges, however, limits in an operating permit will be developed to protect groundwater. This arises from the fact that there does not appear to be a direct surface water connection with Dardenne Creek due to the intricate levee system of this area.

11. ANTIDEGRADATION REVIEW PRELIMINARY DETERMINATION

The proposed new facility discharge, Ameren – Huster Substation Groundwater Treatment System, 0.089 MGD is assumed to result in significant degradation of the segment identified. A low-profile sieve tray air stripper unit was determined to be the base case technology (lowest cost alternative that meets technology and water quality based effluent limitations. The cost effectiveness of the other technologies were evaluated, and the air stripper was found to be cost effective and was determined to be the preferred alternative. The chlorinated volatile organic compounds (CVOCs), which are the pollutants of concern, are proposed to have effluent limits based on the capabilities of the preferred alternative capabilities.

Per the requirements of the AIP, the effluent limits in this review were developed to be protective of beneficial uses and to attain the highest statutory and regulatory requirements. MDNR has determined that the submitted review is sufficient and meets the requirements of the AIP. No further analysis is needed for this discharge.

Reviewers: Keith Forck, P.E. & John Rustige, P.E. Date: 11//2013 Section Chief: Refaat Mefrakis, P.E.



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.
- Test Procedures. The analytical and sampling methods used shall conform 4. 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 (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.

- 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;
 - 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.



- 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.
 - 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 28^{th} day of the month following the end of the reporting period.

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.

- 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
 - 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 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



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.
- It is unlawful for any person to cause or permit any discharge of water d. 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 permittees 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.



- 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:
 - 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 noncompliance 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.

AP36796

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	RECEIVED					
	SEP 28 2018	FOR AG	ENCY USE ONLY			
	ESOURCES	CHECK NUMBER				
FORM A – APPLICATION FOR NO UNDER MISSOURI CLEAN WATER	NDOMESTIC PERMIT ^{N Program} R LAW	DATE RECEIVED	8 FEE SUBMITTED			
NOTE: PLEASE READ THE ACCOMPA	NYING INSTRUCTIONS BEFORE CO	MPLETING TH	HIS FORM.			
 This application is for: (Select only one.) An operating permit for a new or unpermitted facil Renewal of an operating permit. Permit number Modification of an operating permit. Permit number 	ity. Number of original construction per er: MO_0137642 E er: MOModification re	mit: MO xpiration date: eason:	March 31, 2019			
1.1 Is the appropriate fee included with the applicat	ion? (See instructions for appropriate fe	ee.) 🗌 Yes	□ No			
NAME	TELEPHONE NUMBER WITH AREA CODE	民族的情况				
Huster Substation	314-554-2194					
	bjmiller@ameren.com					
PHYSICAL ADDRESS (PHYSICAL) 3800 Huster Road	St. Charles	MO	CODE 63301			
3. OWNER						
NAME	TELEPHONE NUMBER WITH AREA CODE					
Ameren Missouri	EMAIL bjmiller@ameren.com					
MAILING ADDRESS	CITY St Louis	STATE MO	ZIP CODE 63166-6149			
3.1 Do you want to review draft permit prior to public	c notice? Ves		00100 0110			
4. CONTINUING AUTHORITY						
NAME	TELEPHONE NUMBER WITH AREA CODE					
Same as Above	EMAIL					
MAILING ADDRESS	CITY	STATE	ZIP CODE			
5. OPERATOR						
NAME	CERTIFICATE NUMBER	TELEPHONE	NUMBER WITH AREA CODE			
Same as Above	EMAIL					
MAILING ADDRESS	CITY	STATE	ZIP CODE			
6. FACILITY CONTACT		TELEDUCT				
NAME	Consulting Environmental Scie	Consulting Environmental Scienti 314-554-2194				
Barbara J Miller	EMAIL himiller@ameren.com	EMAIL bimiller@ameren.com				
7. ADDITIONAL FACILITY INFORMATION	bjinner@anteren.com	and the second				
7.1 Legal description of outfalls (Attach additional s	heets, if necessary.)					
001 <u>NW ¼</u> <u>NW ¼</u> Se UTM Coordinates Easting (X): <u>714407</u>	ec <u>24</u> T <u>47N</u> R <u>41</u> Northing (Y): <u>4300026</u>	<u> </u>	County			
For Universal Transverse Mercator (UTM), Zone 15 N 0021/41/4 Se	lorth referenced to North American Datum 1 ec T R Northing (Y):	983 (NAD83)	County			
003 <u>1/4</u> Se UTM Coordinates Easting (X):	ec T R		County			
004 1/4 Se	ec T R		County			
 7.2 Primary standard industrial classification (SIC) a 001 – SIC <u>4911</u> and NAICS <u>22112</u> 	nd North American Industrial Classifica	ation System (N and NAIC	NAICS) codes S			

8.	ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE APPLICATION (CO	omplete all a	pplicabl	le forms.)
Α.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facil If yes, complete Form C or 2F. (2F is EPA's Application for Storm Water Discharges Associated with Industrial Activity	ity? `` .)	Yes 🔽	No 🗌
В.	Is application for stormwater discharges only? If yes, complete Form C or 2F.		Yes 🗌	No 🔽
C.	Is your facility considered a "primary industry" under EPA guidelines: If yes, complete Forms C or 2F and D.		Yes 🗌	No 🔽
D.	Is wastewater land-applied? If yes, complete Form I.		Yes 🗌	No 🔽
Е.	Are biosolids, sludge, ash or residuals generated, treated, stored or land-applied? If yes, complete Form R.	,	Yes 🗌	No 🗹
F.	If you are a Class IA CAFO, disregard Parts D and E, above, but attach any revisions to	o the nutrient	manage	ement plan.
G.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.			
9.	ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM	A		Section Area
effluent Check of To acce Vou Vou 9.	limits and monitoring via an electronic system to ensure timely, complete, accurate and one of the following for this application to be considered complete. (Check only or iss the facility participation package, visit <u>dnr.mo.gov/env/wpp/edmr.htm</u> . completed and submitted with this permit application the required documentation to part previously submitted required documentation to participate in the eDMR system and/or y submitted a written request for a waiver from electronic reporting. See instructions for im DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instruct PLEASE SHOW LOCATION ON MAP. SEE 8(D) ABOVE.	nationally conne.) icipate in the operation of the operat	eDMR s use the c arding w	data. ystem. eDMR system. raivers.
1) Besse	elman, Thomas Ray 2) Boerding, John, T; Boerding, Janet; Boerding, Samuel G.:	Boerding, Rita	a	
ADDRESS	ackson St 2) 2366 Highway V 1) St Charles 2) St. Charles	s N	MO	63301
11. NAME AND	I certify that I am familiar with the information contained in this application. To the best information is true, complete and accurate. If granted this permit, I agree to abide by th rules, regulations, orders and decisions subject to any legitimate appeal to the Missour to the applicant under the Missouri Clean Water Law.	of my knowled e Missouri Cle i Clean Water	dge and ean Wat r Commi	belief, such er Law and all ssion available
Craig Gi	esmann Manager, Environmental Services	314-554-2955		
SIGNATURI		DATE SIGNED		
	have Ausmann	9/26/2018		
MO 780-147	BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE ALSO INCLUDE APPLICABLE ADDITIONAL FORM Submitting an incomplete application may result in the application HAVE YOU INCLUDED THE FOLLOWING?	COMPLETE IS. being return	E. ned.	
	□ Appropriate fees □ Form I (Irrig ☑ Map at 1" = 2000' scale □ Form R (Slu ☑ Signature □ Revised nut ☑ Form C or 2F, if applicable □ applicable □ Form D, if applicable □ applicable	ation), if app idge), if appl rient manag	blicable licable ement p	plan, if





Attachment A Map







MISSOURI DEPARTMENT OF NATURAL RES	OURCES	FOR AGENCY	USE ONLY
C WATER PROTECTION PROGRAM, WATER P C FORM C – APPLICATION FOR DISC	POLLUTION BRANCH	CHECK NO.	
MANUFACTURING, COMMERCIAL, SILVICULTURE OPERATIONS, PRO	MINING, CESS AND STORMWATER	DATE RECEIVED	FEE SUBMITTED
IOTE: DO NOT ATTEMPT TO COMPLETE THIS FORM I	BEFORE READING THE ACCOM	PANYING INSTRU	CTIONS
00 NAME OF FACILITY			
10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMI	TNUMBER		
MO-0137642			
.20 THIS IS A NEW FACILITY AND WAS CONSTRUCTED UNDER MISSOURI CONST (ERMIT).	RUCTION PERMIT NUMBER (COMPLETE ONLY	IF THIS FACILITY DOES NO	OT HAVE AN OPERATING
00 LIST THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES APPLICABL	E TO YOUR FACILITY (FOUR DIGIT CODE)		
4911	B SECOND		
A. FIR31	9.0200ND		
C. THIRD	D. FOURTH		
. 10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.			
NE NE	2347N4E St.	Charles	00110
OUTFALL NUMBER (LIST)1/41/4 SI	EC T R		COUN
20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER			
OUTFALL NUMBER (LIST)	RECEIVING WATER	1	
001	Unnamed Ephemera	al Stream	
2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS			
Ameren operates a groundwater containment system (GC3 compounds (CVOCs) detected in the groundwater underly through U.S. Environmental Protection Agency (USEPA) R (CERCLA-07-2012-0026) entered into on December 28, 20 ephemeral stream originating from the northwest corner of 370 and enters a marshy area and drainage network assoc flow appears to ultimately enter a forested wetland, as iden downstream of the site.	S) with treatment by air stripping to ing the substation site. This treatme Region 7 as outlined in the Administ 012. The treated groundwater from the substation property. Ultimately ciated with agricultural fields to the ntified in NWI maps, that is adjacen	remove chlorinated ent is part of an over tration Order on Co the GCS is discha , this stream crosse north west of Huste t to Dardenne Cree	d volatile organic erall remediation ef nsent (AOC) rged to the unnam- es under Highway er Substation. This ek, 1.5 miles
			4
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A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent and treatment units labeled to correspond to the more detailed descriptions in item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, public sewers and outfalls. If a water balance cannot by determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of 1. All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water and storm water runoff. 2. The average flow contributed by each operation. 3. The treatment received by the wastewater. Continue on additional sheets if necessary.

(LIST) A. OPERATION (LIST) B. AVERAGE FLOW (INCLUDE UNITS) (MAXIMUM FLOW) A. DESCRIPTION B. LIST CO FROM TAB 001 Groundwater Containment 62 GPM Air Stripping/Filtration 1-K 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <		MENT	3. TREAT	CONTRIBUTING FLOW	2. OPERATION(S	1. OUTFALL NO.
001 Groundwater Containment 62 GPM Air Stripping/Filtration 1-K Image: Containment Image: Containment <th>CODES</th> <th>B. LIST FROM T</th> <th>A. DESCRIPTION</th> <th>B. AVERAGE FLOW (INCLUDE UNITS) (MAXIMUM FLOW)</th> <th>A. OPERATION (LIST)</th> <th>(LIST)</th>	CODES	B. LIST FROM T	A. DESCRIPTION	B. AVERAGE FLOW (INCLUDE UNITS) (MAXIMUM FLOW)	A. OPERATION (LIST)	(LIST)
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						1.1.1.1.1
	1200					

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PAGE 2

2.40 CONTINUED

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C.	EXCEPT FOR STORM RUNOFF.	EAKS OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL	?
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	YES (CO	OMPLETE THE FOLLO	WING T	ABLE)	NO (GO	TO SECTION 2	2.50)				
					3. FRE	QUENCY		4. F		IME (specify with	-
1. OUTFALL NUMBER (list)	2.	OPERATION(S) CONTRI	BUTING F	ELOW (list)	A. DAYS PER WEEK (specify average)	B. MONTHS PER YEAR (specify average)	A. FLOW R/ 1. LONG TERM AVERAGE	ATE (in mgd) 2. MAXIMUM DAILY	4. LONG TERM DAILY	3. MAXIMUM AVERAGE	C. DURATION (in days)
				4							
2.50 MAXIMUM F	RODUCT	ION			÷						
	N EFFLUE		N PROM	ULGATED BY EP	A UNDER SECT	ION 304 OF THE	CLEAN WATER A	CT APPLY TO YO	UR FACILITY?		
B. ARE THE	E LIMITATI	IONS IN THE APPLICABLE	EEFFLUE	NT GUIDELINES	EXPRESSED IN)	TERMS OF PRO	DUCTION (OF OT	HER MEASURE (OF OPERATION)?		
C. IF YOU A AND UNITS	USED IN	D "YES" TO B. LIST THE (THE APPLICABLE EFFLU	QUANTITY	Y THAT REPRES	ENTS AN ACTUA CATE THE AFFE	AL MEASUREME ECTED OUTFALL	NT OF YOUR MAX S.	IMUM LEVEL OF	PRODUCTION, E	(PRESSED IN TH	E TERMS
				1. MAX		Y				2. AF	FECTED
A. QUANTITY PE	ER DAY	B. UNITS OF MEASUR	E		C. 0	PERATION, PRO	DUCT, MATERIAL	, ETC.		OUT (list outfa	FALLS all numbers)
2.60 IMPROVEM	ENTS										
A. ARE YOU OPERATION APPLICATION STIPULATION YES (C	U NOW RI N OF WAS ON? THIS ONS, COU	EQUIRED BY ANY FEDER STEWATER TREATMENT INCLUDES, BUT IS NOT IRT ORDERS AND GRANT E THE FOLLOWING TABL	AL, STAT EQUIPME LIMITED 1 OR LOA E)	E OR LOCAL AU INT OR PRACTIC TO, PERMIT CON N CONDITIONS.	THORITY TO ME ES OR ANY OTH IDITIONS, ADMII GO TO 3.00)	ET, ANY IMPLEM HER ENVIRONME NISTRATIVE OR	MENTATION SCHE ENTAL PROGRAMS ENFORCEMENT C	DULE FOR THE (S THAT MAY AFF ORDERS, ENFOR	CONSTRUCTION, ECT THE DISCHA CEMENT COMPLI	UPGRADING OR RGES DESCRIBE ANCE SCHEDULI	ED IN THIS E LETTERS,
1. IDENT	TIFICATIO	N OF CONDITION	2	AFFECTED OU	TFALLS	3	BRIEF DESCRIP	TION OF PROJE	ст	4. FINAL COM	PLIANCE DATE
,	AGREEME	INT, ETC.	-							A. REQUIRED	B. PROJECTED
Settlement Agreement and Administrative Order on Consent for Groundwater Containment System and Integrated Site Evaluation, U.S. EPA Region 7, CERCLA-07-2012-0026			001			Must conta AOC speci operations	in and treat g fies a "goal o of this system	groundwater If beginning m."	on-site. continuous	3/31/2014	
B. OPTION MAY AFFEC YOUR ACTI	IAL: YOU CT YOUR UAL OR P	MAY ATTACH ADDITIONA DISCHARGES) YOU NOW LANNED SCHEDULES FO	L SHEET HAVE UI R CONST	DESCRIBING A NDER WAY OR W TRUCTION.	ANY ADDITIONA HICH YOU PLA	L WATER POLLU N. INDICATE WH	ITION CONTROL P HETHER EACH PR	ROGRAMS (OR OGRAM IS NOW	OTHER ENVIRON UNDER WAY OR RAMS IS ATTACH	MENTAL PROJEC PLANNED, AND II ED.	CTS WHICH NDICATE
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3.00 INTAKE AND EFFLUENT CHARACTERISTICS

A. & B. SEE INSTRUCTIONS BEFORE PROCEEDING - COMPLETE ONE TABLE FOR EACH OUTFALL - ANNOTATE THE OUTFALL NUMBER IN THE SPACE PROVIDED. NOTE: TABLE 1 IS INCLUDED ON SEPARATE SHEETS NUMBERED FROM PAGE 6 TO PAGE 7. C. USE THE SPACE BELOW TO LIST ANY OF THE POLLUTANTS LISTED IN PART B OF THE INSTRUCTIONS, WHICH YOU KNOW OR HAVE REASON TO BELIEVE IS DISCHARGED OR MAY BE DISCHARGED FROM ANY OUTFALL. FOR EVERY POLLUTANT YOU LIST, BRIEFLY DESCRIBE THE REASONS YOU BELIEVE IT TO BE PRESENT AND REPORT ANY ANALYTICAL DATA IN YOUR POSSESSION. 1. POLLUTANT 2. SOURCE 1. POLLUTANT 2. SOURCE The source of the chlorinated volatile organic compounds (CVOCs) is historic contamination in the groundwater. The groundwater containment system with air stripping is designed to be over 99.99% efficient at removing this CVOCs. cis-1,2-dichloroethene (DCE) Tetrachloroethene (PCE) Trichloroethene (TCE) Vinyl Chloride (VC) Naturally occuring iron .

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YES (IDENTIFY THE TEST(S) AND	DESCRIBE THEIR PURPOSES BELOW.)	NO (GO TO 3.20)	
0 CONTRACT ANALYSIS INFORMATION		BY OR CONSULTING FIRM?	
	AND TELEPHONE NUMBER OF AND POLILITANTS		
YES (LIST THE NAME, ADDRESS A	B ADDRESS	C TELEPHONE (area code and put	nbert D. POLLUTANTS ANALYZED (
A. NAME	B. ADDRESS	C. TELEPHONE (area code and hun	
ekLab, Inc	5445 Horseshoe Lake Road, Collinsville, IL 62234	618-344-1004	Nitrogen, Ammonia (as N) Nitrogen, Nitrate (as N) Sulfate Chemical Oxygen Demand Total Suspended Solids Biochemical Oxygen Deman Total Organic Carbon Iron Magnesium cis-1,2-Dichloroethene Tetrachloroethene Trichloroethene Vinyl Chloride
0 CERTIFICATION CERTIFY UNDER PENALTY OF HIS APPLICATION AND ALL AT OR OBTAINING THE INFORMA RE SIGNIFICANT PENALTIES F	LAW THAT I HAVE PERSONALLY EX TACHMENTS AND THAT, BASED ON TION, I BELIEVE THAT THE INFORMA FOR SUBMITTING FALSE INFORMATION	AMINED AND AM FAMILIAR WITH MY INQUIRY OF THOSE INDIVIDU TION IS TRUE, ACCURATE AND O DN, INCLUDING THE POSSIBILITY	THE INFORMATION SUBMITTED IN JALS IMMEDIATELY RESPONSIBLE COMPLETE. I AM AWARE THAT THI Y OF FINE AND IMPRISONMENT.
ME AND OFFICIAL TITLE (TYPE OR PRI	NT)	TELEF	PHONE NUMBER WITH AREA CODE
	invironmental Services	(314	4) 554-2955
raig Giesmann - Manager, E		2	
raig Giesmann - Manager, E		DATE	SIGNED

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PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages. SEE INSTRUCTIONS

FORM C TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUEN	IT CHARAC	TERISTICS									0	DO1	
PART A - You must provide the	results of at lea	ast one analysi	s for every pollutant i	in this table. Co	mplete one table	for each outfall.	See instructio	ons for addition	onal details.				
				2. EFFLUEN	F				3. UNITS (spec	ify if blank)	4. IN	TAKE (optional)	
4 DOLLITANT	A. MAXIMUM	DAILY VALUE	B. MAXIMUM 30 (if availe	DAY VALUE	C. LONG TEF	tm AVRG. VALUE vailable)	01	OF A	CONCEN-		A. LONG TERM AV	/RG. VALUE	B. NO. OF
	(1) CONCENTRATIC	ON (2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATIC	IN (2) MASS	ANALY	rses T	RATION	B. MASS	(1) CONCENTRATION	(2) MASS	ANALYSES
A. Biochemical Oxygen Demand (BOD)	6 mg/L	4.50 lb/c	7		6 mg/L	1.50 lb/	d 1				<5 mg/L	<1.3 lb/d	۲
B. Chemical Oxygen Demand (COD)	<50 mg/L	<37.5			14 mg/L	3.50 lb/	d 1				<50 mg/L	<12.5	1
C. Total organic Carbon (TOC)	1.7 mg/L	1.28 lb/c			1.7 mg/L	0.43 lb/	p				1.6 mg/L	0.40 lb/d	-
D. Total Suspended Solids (TSS)	8 mg/L	6.00 lb/(T		8 mg/L	2.00 lb/	d b				22 mg/L	5.50 lb/d	-
E. Ammonia (as N)	0.60 mg/L	- 0.45 lb/(T		0.60 mg/L	0.15 lb/	r b'				0.57 mg/L	0.14 lb/d	-
F. Flow	VALUE 0.09 MGD	-	VALUE 2.7 MGD		VALUE 0.03 MGD						VALUE 0.03 MGD		
G. Temperature (winter)	VALUE * no temper	rature taken	VALUE		VALUE				ů		VALUE * no temperat	ure taken	
H. Temperature (summer)	VALUE * no temper	rature taken	VALUE		VALUE				S		value * no temperat	ure taken	
H, pH	MINIMUM 7.83	MAXIMUM 8.17	MINIMUM	MAXIMUM			1.8		STANDARD	UNITS			「「「「「「」」
PART B – Mark "X" in column 2A for pollutant. Complete one table for ea	each pollutant you the outfall. See the	u know or have re instructions for a	ason to believe is prese	ent. Mark "X" in co quirements.	umn 2B for each po	llutant you believe t	to be absent. If y	/ou mark colum	in 2A for any pol	utant, you must	provide the results for	at least one anal	ysis for that
	2. MARK "X	E.			3. EFFLUENT				4	UNITS	ů.	INTAKE (option	al)
1. POLLUTANT AND CAS NUMBER	×	a. MAXII	MUM DAILY VALUE	B. MAXIMUM 3 (if ava	0 DAY VALUE	C. LONG TERM A	VRG. VALUE	D. NO. OF	A. CONCEN	4	A. LONG TER	M AVRG. VALU	E B. NO. OF
(if available)	PRESENT ABS	SENT CONCEN	1) TRATION (2) MASS	(1) CONCENTRATIC	N (2) MASS	(1) CONCENTRATION	(2) MASS	ANALYSES	TRATION	0.00	CONCENTRA	TION (2) MAS	SANALYSES
CONVENTIONAL AND NONC	ONVENTIONAL	POLLUTANT	S									-	
A. Bromide (24959-67-9)		×											
B. Chlorine, Total Residual		×											
C. Color		×											
D. Fecal Coliform		×								_			
E. Fluoride (16984-48-8)		×											
F. Nitrate - Nitrate (as N)	×	0.116	i mg/L 0.87			0.116 mg/L	0.03	1			0.056 m	g/L 0.012	4
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	2. MAF	"X" XP			3. E	FFLUENT				4. UNITS		5. INTA	KE (optional)	
1. POLLUTANT AND CAS NUMBER	۲	8	A. MAXIMUM DAIL'	Y VALUE	B. MAXIMUM 30 D. (if available	AY VALUE	C. LONG TERM AV (if availabl	RG. VALUE (e)	D. NO. OF	A. CONCEN-	R MASS	A. LONG TERM AVI	RG. VALUE	B. NO. OF
(if available)	PRESENT	BELIEVED	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	ANALYSES	TRATION		CONCENTRATION	(2) MASS	ANALYSES
G. Nitrogen, Total Organic (as N)		×												
H. Oil and Grease		×												
I. Phosphorus (as P), Total (7723-14-0)		×												
J. Sulfate (as SO ⁴) (14808-79-8)	×		53 mg/L	39.8			53 mg/L	13.3	-			49.4 mg/L	12.4	4
K. Sulfide (as S)		×												
L. Sulfite (as SO ³) (14265-45-3)		×												
M. Surfactants		×												
N. Aluminum, Total (7429-90-5)		×												
O. Barium, Total (7440-39-3)		×												
P. Boron, Total (7440-42-8)		×												
Q. Cobalt, Total (7440-48-4)		×												
R. Iron, Total (7439-89-6)	×		6.26 mg/L	4.7			4.83 mg/L	1.2	48			5.563 mg/L	1.39	48
S. Magnesium, Total (7439-95-4)		×												
T. Molybdenum, Total (7439-98-7)		×												
U. Manganese, Total (7439-96-5)	×		38.0 mg/L	28.5			38.0 mg/L	9.5	-			39.1 mg/L	9.8	4
V. Tin, Total (7440-31-5)		×												
W. Titanium, Total (7440-32-6)		×												0406.7
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	2. MAI	RK "X"			3. E	FFLUENT				4. UNI	TS	5. INTA	KE (optional)	
1. POLLUTANT AND CAS NUMBER	Y	8.	A. MAXIMUM DAIL	Y VALUE	B. MAXIMUM 30 D. (if available	AY VALUE	C. LONG TERM AV (if availabl	RG. VALUE	D. NO. OF	A. CONCEN-	B MASS	A. LONG TERM AV	RG. VALUE	B. NO. OF
(algeneration)	PRESENT	ABSENT	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	ANALYSES	TRATION	0.000	(1) CONCENTRATION	(2) MASS	ANALYSES
METALS, AND TOTAL PHE	NOLS													
1M. Antimony, Total (7440-36-9)	_	×												
2M. Arsenic, Total (7440-38-2)		×												
3M. Beryllium, Total (7440-41-7)		×												
4M. Cadmium, Total (7440-43-9)		×												
5M. Chromium III (16065-83-1)		×												
6M. Chromium VI (18540-29-9)		×												
7M. Copper, Total (7440-50-8)		×												
8M. Lead, Total (7439-92-1)		×												
9M. Mercury, Total (7439-97-6)		×												
10M. Nickel, Total (7440-02-0)		×												
11M. Selenium, Total (7782-49-2)		×												
12M. Silver, Total (7440-22-4)		×												
13M. Thallium, Total (7440-28-0)		×												
14M. Zinc, Total (7440-66-6)		×												
15M. Cyanide, Amenable to Chlorination		×												
16M. Phenols, Total		×												
RADIOACTIVITY														
(1) Alpha Total		×												
(2) Beta Total		×												
(3) Radium Total		×												
(4) Radium 226 Total		×												
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