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-0001970
Owner:	Euticals, Inc.
Address:	P.O. Box 1246, Springfield, MO 65801
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Euticals, Inc.
Facility Address:	2460 W. Bennett Street, Springfield, MO 65807
Legal Description:	See next page
UTM Coordinates:	See next page
Receiving Stream:	See next page
First Classified Stream and ID:	See next page
USGS Basin & Sub-watershed No.:	See next page

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 next page

This permit authorizes only stormwater 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.

November 1, 2016
Effective Date

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

December 31, 2020
Expiration Date

John Madras
John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (CONTINUED)

OUTFALL #001 – Stormwater; SIC #2833, 2869; NAICS #325411
Receives stormwater from the West portion of the facility. Stormwater is treated with slow sand filtration, collected in a retention basin, and released by opening a valve. Previous permits allowed discharge of non-contact cooling water at this outfall. Non-contact cooling water is now collected and discharged to Springfield POTW. Non-contact cooling water is not allowed to be discharged from this outfall; doing so is considered an unpermitted discharge and is a violation of this permit.

Legal Description:	NE¼, SW¼, Sec.27, T29N, R22W, Greene County
UTM Coordinates:	X = 470979, Y = 4115663
Receiving Stream:	Wilson's Creek (P) 2375; 303(d)
First Classified Stream and ID:	Wilson's Creek (P) 2375; 303(d)
USGS Basin & Sub-watershed No.:	Headwaters Wilson's Creek (11010002-0301)
Flow in a 10 yr. 24 hr. Storm Event:	0.83 MGD
Actual Flow:	Dependent upon precipitation

OUTFALL # 002 – Stormwater; SIC #2833, 2869; NAICS # 325411
Receives stormwater runoff from the East portion of the facility. This portion of the plant is no longer in production. Stormwater is collected in a retention basin and released by opening a valve.

Legal Description:	NE¼, SW¼, Sec.27, T29N, R22W, Greene County
UTM Coordinates:	X = 471266, Y = 4115735
Receiving Stream:	Fassnight Creek (P) 3370
First Classified Stream and ID:	Fassnight Creek (P) 3370
USGS Basin & Sub-watershed No.:	Headwaters Wilson's Creek (11010002-0301)
Flow in a 10 yr. 24 hr. Storm Event:	0.36 MGD
Actual flow:	Dependent upon precipitation

OUTFALL #003 – Stormwater; SIC #2833, 2869; NAICS # 325411
Receives stormwater from the West portion of the facility. This outfall is an overflow for outfall #001, and is a new outfall for this permit. If treatment methods are bypassed due to storm events that exceed the retention basin's designed capacity, the facility pumps excess stormwater from both the stormwater basin and overland flows directly into Wilson's Creek. Previous permits allowed discharge of non-contact cooling water at this outfall. Non-contact cooling water is now collected and discharged to Springfield POTW. Non-contact cooling water is not allowed to be discharged from this outfall; doing so is considered an unauthorized discharge and is a violation of this permit. Stormwater may be sampled at a safe location prior to entry into the pipe due to safety concerns for employees as long as the sampled water is representative of the flow from the end of pipe.

Legal Description:	NE¼, SW¼, Sec.27, T29N, R22W, Greene County
UTM Coordinates:	X = 470979, Y = 4115663
Receiving Stream:	Wilson's Creek (P) 2375; 303(d)
First Classified Stream and ID:	Wilson's Creek (P) 2375; 303(d)
USGS Basin & Sub-watershed No.:	Headwaters Wilson's Creek (11010002-0301)
Flow in a 10 yr. 24 hr. Storm Event:	0.83 MGD
Actual Flow:	Dependent upon precipitation

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL #001, #002, #003 *Stormwater Only*	**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 **November 1, 2016** and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

EFFLUENT PARAMETERS	UNITS	DAILY MAXIMUM	BENCHMARK	MONITORING REQUIREMENTS[∞]	
				MEASUREMENT FREQUENCY[◊§]	SAMPLE TYPE
PHYSICAL					
Flow	MGD	*		once/quarter	24 hr. est
Precipitation	inches	*		once/quarter	measured
CONVENTIONAL					
Chemical Oxygen Demand	mg/L	**	120	once/quarter	grab
Oil & Grease	mg/L	**	10	once/quarter	grab
pH [Ω]	SU	6.5 to 9.0	-	once/quarter	grab
Settleable Solids	mL/L/hr	**	1.5	once/quarter	grab
Total Suspended Solids	mg/L	**	70	once/quarter	grab
METALS					
Aluminum, Total Recoverable	µg/L	*	-	once/quarter	grab
Iron, Total Recoverable	µg/L	*	-	once/quarter	grab
Zinc, Total Recoverable	µg/L	*	-	once/quarter	grab
NUTRIENTS					
Ammonia as N	mg/L	*	-	once/quarter	grab
Nitrogen, Total	mg/L	*	-	once/quarter	grab
Phosphorus, Total	mg/L	*	-	once/quarter	grab
OTHER					
Chloride + sulfate	mg/L	*	-	once/quarter	grab
Methylene Chloride	µg/L	*	-	once/quarter	grab
1,2-Dichloropropane	µg/L	*	-	once/quarter	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JANUARY 28, 2017.
THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

* Monitoring requirement only.

** Monitoring requirement with associated benchmark. See Special Conditions #11 through #14

∞ All samples shall be collected from a discharge resulting from a precipitation event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event. If a discharge does not occur within the reporting period, report as no discharge. The total amount of precipitation should be noted from the event from which the samples were collected.

Ω The facility will report the minimum and maximum values. pH is not to be averaged.

§ Outfall #003 will be sampled once per quarter during use in an event which requires a bypass of outfall #001 treatment mechanisms. Results from this analysis will be submitted quarterly. If outfall #003 is not used in a quarter, report no discharge on the DMRs.

◊ Quarterly sampling

MINIMUM QUARTERLY SAMPLING REQUIREMENTS			
QUARTER	MONTHS	EFFLUENT PARAMETERS	REPORT IS DUE
First	January, February, March	Sample at least once during any month of the quarter	April 28th
Second	April, May, June	Sample at least once during any month of the quarter	July 28th
Third	July, August, September	Sample at least once during any month of the quarter	October 28th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28th

B. STANDARD CONDITIONS

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

C. SPECIAL CONDITIONS

1. This permit establishes ammonia monitoring based on Missouri's current Water Quality Standard. On August 22, 2013, the U.S. Environmental Protection Agency (EPA) published a notice in the Federal Register announcing of the final national recommended ambient water quality criteria for protection of aquatic life from the effects of ammonia in freshwater. The EPA's guidance, Final Aquatic Life Ambient Water Quality Criteria for Ammonia – Fresh Water 2013, is not a rule, nor automatically part of a state's water quality standards. States must adopt new ammonia criteria consistent with EPA's published ammonia criteria into their water quality standards that protect the designated uses of the water bodies. The Department of Natural Resources has initiated stakeholder discussions on how to best incorporate these new criteria into the State's rules. A date for when this rule change will occur has not been determined. Also, refer to Section IV of this permit's factsheet for further information including estimated future effluent limits for this facility. It is recommended the permittee view the Department's 2013 EPA criteria Factsheet located at http://dnr.mo.gov/pubs/pub2481.htm .

2. This permit may be reopened and modified, or alternatively revoked and reissued, to:
   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
      (2) controls any pollutant not limited in the permit.
   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test, or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

   The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

3. All outfalls must be clearly marked in the field.

C. SPECIAL CONDITIONS (CONTINUED)

4. Water Quality Standards
   (a) To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
   (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
      (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
      (5) There shall be no significant human health hazard from incidental contact with the water;
      (6) There shall be no acute toxicity to livestock or wildlife watering;
      (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
      (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

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 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
      (3) Five hundred micrograms per liter (500 µg/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 µg/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.

7. Electronic Discharge Monitoring Reports
   (a) All reports and results required to be submitted by the permit, excluding 24-hour bypass reporting, must be submitted to the department via the electronic Discharge Monitoring Report submission system (eDMR). In regards to Standard Conditions Part I, Section B, #7, the eDMR data reporting system is the only Department approved reporting method for this permit.
   (b) To access the eDMR data reporting system, use the following link in your web browser: https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx.

8. Reporting of Non-Detects
   (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
   (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non-Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
   (c) The permittee shall report the "Non-Detect" result using the less than sign and the minimum detection limit (e.g. <10).

C. SPECIAL CONDITIONS (CONTINUED)

(d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
(e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
(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).

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

10. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 ET. SEQ.) and the use of such pesticides shall be in a manner consistent with its label.

11. The purpose of the Stormwater Pollution Prevention Plan (SWPPP) and the Best Management Practices (BMPs) listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.

12. Facility SIC codes found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2) shall implement a SWPPP and must be prepared and implemented upon permit issuance. The SWPPP must be kept on-site and should not be sent to the department unless specifically requested. The SWPPP must be reviewed and updated every five (5) years or as site conditions change (see Rationale and Derivation: antidegradation analysis and SWPPP in the fact sheet). The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in: *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators,* (EPA 833-B-09-002) published by the EPA in February 2009 (www.epa.gov/npdes/pubs/industrial_swppp_guide.pdf). The SWPPP must include:
(a) A listing of specific contaminants and their control measures (or BMPs) and a narrative explaining how BMPs are implemented to control and minimize the amount of contaminants potentially entering stormwater. The BMPs should be designed to treat the stormwater up to the 10 year, 24 hour rain event.
(b) For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. Failure to implement and maintain the chosen BMP is a permit violation. For further guidance, consult the antidegradation implementation procedure at http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf .
(c) The SWPPP must include a schedule for once per month site inspections and brief written reports. The inspection report must include precipitation information for the entire period since last inspection, as well as observations and evaluations of BMP effectiveness. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
  i. Operational deficiencies must be corrected within seven (7) calendar days.
  ii. Minor structural deficiencies must be corrected within fourteen (14) calendar days.
  iii. Major structural deficiencies must be reported to the regional office within seven (7) days of discovery. The initial report shall consist of the deficiency noted, the proposed remedies, the interim or temporary remedies (including the general timing of the placement of the interim measures), and an estimate of the timeframe needed to wholly complete the repairs or construction. The permittee will work with the regional office to determine the best course of action, including but not limited to temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
  iv. All actions taken to correct the deficiencies shall be included with the written report, including photographs.
  v. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to department and EPA personnel upon request.
(d) A provision for designating an individual to be responsible for environmental matters.
A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of the department.

13. This permit stipulates pollutant benchmarks applicable to your discharge. The benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Benchmark monitoring and visual inspections shall be used to determine the overall effectiveness of SWPPP and to assist you in knowing when additional corrective action may be necessary to protect water quality. If a sample exceeds a benchmark concentration you must review your SWPPP and your BMPs to determine what improvements or additional controls are needed to reduce that pollutant in your stormwater discharge(s).

C. SPECIAL CONDITIONS (CONTINUED)

Any time a benchmark exceedance occurs a Corrective Action Report (CAR) must be completed. A CAR is a document that records the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and available to the department upon request. If the efforts taken by the facility are not sufficient and subsequent exceedances of a benchmark occur, the facility must contact the department if a benchmark value cannot be achieved. Failure to take corrective action to address a benchmark exceedance and failure to make measureable progress towards achieving the benchmarks is a permit violation.

14. 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, or warehouse activities 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) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that 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. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits or benchmarks.
    (f) Ensure that adequate provisions are provided to prevent surface water intrusion into the storage basin, to divert stormwater runoff around the storage basin, and to protect embankments from erosion.

15. To protect the general criteria found at 10 CSR 20-7.031(4), before releasing water accumulated in secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen. If the presence of odor or sheen is indicated, the water shall be treated using an appropriate method or disposed of in accordance with legally approved methods, such as being sent to a wastewater treatment facility. Following treatment, the water shall be tested for oil and grease, benzene, toluene, ethylbenzene, and xylene using 40 CFR part 136 methods. All pollutant levels must be below the most protective, applicable standards for the receiving stream, found in 10 CSR 20-7.031 Table A. Records of all testing and treatment of water accumulated in secondary containment shall be stored in the SWPPP to be available on demand to MDNR and EPA personnel.

16. Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the department upon request.

17. Substances regulated by federal law under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that are transported, stored, or used for maintenance, cleaning, or repair shall be managed according to the provisions of RCRA and CERCLA.

18. Cooling water is not authorized for discharge under this permit. Any discharge of cooling water to waters of the state or US is considered a spill, and shall be reported to the Missouri Department of Natural Resources Southwest Regional Office (SWRO) within 24 hours by phone and within five days in writing. The spill report shall include an estimated amount of spill, and any anti-fouling agents, oil dispersants, and/or biocides used in the facility's cooling water. SWRO may request additional relevant information as needed at the time of report.

19. Any analytical results for chemicals, compounds of the chemicals, products containing the chemicals, or wastes of the chemicals listed on 40 CFR 122 Appendix D, Table II-V (found in Part D below) which are sampled for in the permit cycle, whether under terms of the permit or voluntarily, shall be submitted to the Southwest Regional Office with quarterly discharge monitoring reports. If testing is performed, failure to submit analytical test results for these pollutants constitutes a violation of this permit. A copy of the analytical results shall also be stored with the facility SWPPP.

D. 40 CFR 122 Appendix D, Table II-V Chemicals

Table II—Organic Toxic Pollutants

Volatiles

1V. acrolein
2V. acrylonitrile
3V. benzene
5V. bromoform
6V. carbon tetrachloride
7V. chlorobenzene
8V. chlorodibromomethane
9V. chloroethane
10V. 2-chloroethylvinyl ether
11V. chloroform
12V. dichlorobromomethane
14V. 1,1-dichloroethane
15V. 1,2-dichloroethane
16V. 1,1-dichloroethylene
17V. 1,2-dichloropropane

Volatiles, Continued

18V. 1,3-dichloropropylene
19V. ethylbenzene
20V. methyl bromide
21V. methyl chloride
22V. methylene chloride
23V. 1,1,2,2-tetrachloroethane
24V. tetrachloroethylene
25V. toluene
26V. 1,2-trans-dichloroethylene
27V. 1,1,1-trichloroethane
28V. 1,1,2-trichloroethane
29V. trichloroethylene
31V. vinyl chloride

Acid Compounds

1A. 2-chlorophenol
2A. 2,4-dichlorophenol
3A. 2,4-dimethylphenol
4A. 4,6-dinitro-o-cresol
5A. 2,4-dinitrophenol
6A. 2-nitrophenol
7A. 4-nitrophenol
8A. p-chloro-m-cresol
9A. pentachlorophenol
10A. phenol
11A. 2,4,6-trichlorophenol

Base/Neutral

1B. acenaphthene
2B. acenaphthylene
3B. anthracene
4B. benzidine
5B. benzo(a)anthracene
6B. benzo(a)pyrene
7B. 3,4-benzofluoranthene
8B. benzo(ghi)perylene
9B. benzo(k)fluoranthene
10B. bis(2-chloroethoxy)methane
11B. bis(2-chloroethyl)ether
12B. bis(2-chloroisopropyl)ether
13B. bis (2-ethylhexyl)phthalate
14B. 4-bromophenyl phenyl ether
15B. butylbenzyl phthalate
16B. 2-chloronaphthalene
17B. 4-chlorophenyl phenyl ether
18B. chrysene
19B. dibenzo(a,h)anthracene
20B. 1,2-dichlorobenzene
21B. 1,3-dichlorobenzene
22B. 1,4-dichlorobenzene
23B. 3,3′-dichlorobenzidine
24B. diethyl phthalate
25B. dimethyl phthalate
26B. di-n-butyl phthalate
27B. 2,4-dinitrotoluene
28B. 2,6-dinitrotoluene
29B. di-n-octyl phthalate
30B. 1,2-diphenylhydrazine (as azobenzene)
31B. fluroranthene
32B. fluorene
33B. hexachlorobenzene
34B. hexachlorobutadiene
35B. hexachlorocyclopentadiene
36B. hexachloroethane
37B. indeno(1,2,3-cd)pyrene
38B. isophorone
39B. napthalene
40B. nitrobenzene
41B. N-nitrosodimethylamine
42B. N-nitrosodi-n-propylamine
43B. N-nitrosodiphenylamine
44B. phenanthrene
45B. pyrene
46B. 1,2,4-trichlorobenzene

Pesticides

1P. aldrin
2P. alpha-BHC
3P. beta-BHC
4P. gamma-BHC
5P. delta-BHC
6P. chlordane
7P. 4,4′-DDT
8P. 4,4′-DDE
9P. 4,4′-DDD
10P. dieldrin
11P. alpha-endosulfan
12P. beta-endosulfan
13P. endosulfan sulfate
14P. endrin
15P. endrin aldehyde
16P. heptachlor
17P. heptachlor epoxide
18P. PCB-1242
19P. PCB-1254
20P. PCB-1221
21P. PCB-1232
22P. PCB-1248
23P. PCB-1260
24P. PCB-1016
25P. toxaphene

Table III—Other Toxic Pollutants (Metals and Cyanide) and Total Phenols

Antimony, Total
Arsenic, Total
Beryllium, Total
Cadmium, Total
Chromium, Total
Copper, Total
Lead, Total
Mercury, Total
Nickel, Total
Selenium, Total
Silver, Total
Thallium, Total
Zinc, Total
Cyanide, Total
Phenols, Total

Table IV—Conventional and Nonconventional Pollutants

Bromide
Chlorine, Total Residual
Color
Fecal Coliform
Fluoride
Nitrate-Nitrite
Nitrogen, Total Organic
Oil and Grease
Phosphorus, Total
Radioactivity
Sulfate
Sulfide
Sulfite
Surfactants
Aluminum, Total
Barium, Total
Boron, Total
Cobalt, Total
Iron, Total
Magnesium, Total

Molybdenum, Total
Manganese, Total
Tin, Total
Titanium, Total

Table V—Toxic Pollutants and Hazardous Substances

Toxic Pollutants
Asbestos

Hazardous Substances
Acetaldehyde
Allyl alcohol
Allyl chloride
Amyl acetate
Aniline
Benzonitrile
Benzyl chloride
Butyl acetate
Butylamine
Captan
Carbaryl
Carbofuran
Carbon disulfide
Chlorpyrifos
Coumaphos
Cresol
Crotonaldehyde
Cyclohexane
2,4-D (2,4-Dichlorophenoxy acetic acid)
Diazinon
Dicamba
Dichlobenil
Dichlone

Table V –Toxic Pollutants and Hazardous Substances, Continued

2,2-Dichloropropionic acid
Dichlorvos
Diethyl amine
Dimethyl amine
Dintrobenzene
Diquat
Disulfoton
Diuron
Epichlorohydrin
Ethion
Ethylene diamine
Ethylene dibromide
Formaldehyde
Furfural
Guthion
Isoprene
Isopropanolamine
Dodecylbenzenesulfonate

Kelthane
Kepone
Malathion
Mercaptodimethur
Methoxychlor
Methyl mercaptan
Methyl methacrylate
Methyl parathion
Mevinphos
Mexacarbate
Monoethyl amine
Monomethyl amine

Naled
Napthenic acid
Nitrotoluene
Parathion
Phenolsulfanate
Phosgene
Propargite

Propylene oxide
Pyrethrins
Quinoline
Resorcinol
Strontium
Strychnine
Styrene
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)
TDE (Tetrachlorodiphenylethane)
2,4,5-TP [2-(2,4,5-Trichlorophenoxy) propanoic acid]
Trichlorofan
Triethanolamine dodecylbenzenesulfonate
Triethylamine
Trimethylamine
Uranium
Vanadium
Vinyl acetate
Xylene
Xylenol
Zirconium

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0001970
EUTICALS, INC.

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of 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)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:	Categorical Industrial	
Facility SIC Code(s):	2833, 2869	
Facility NAICS Code:	325411	
Application Date:	08/12/2013	
Modification Date:	06/19/2012	
Expiration Date:	02/05/2014	
Last Inspection:	05/23/2013	Found to be Not in Compliance at time of inspection

FACILITY DESCRIPTION:
Euticals, Inc. manufactures bulk intermediate and finished pharmaceuticals and organic chemicals. It is normally in operation 24 hours a day, seven days a week. The facility has operated as a chemical manufacturing facility since 1949 under various names and ownership. The facility currently occupies approximately 63 acres. The relevant and active portion of the facility is approximately 33 acres. In the past, the facility has produced food additives, alcohol denaturants, disinfectants, and herbicides. Volatile organic compounds were used as raw materials at the facility, including methylene chloride, toluene, xylene, 1,2-dichloroethane, methanol, benzene, and chloroform. Before 1960, waste from the facility was discharged through underground pipes that began at the production buildings and emptied into a ditch along the western side of the property. From 1960 to 1965, the wastewater was pumped to an unlined hazardous waste surface impoundment. After 1965 an aeration basin was built and wastes were pumped from the surface impoundment to the aeration basin before discharging to the City of Springfield sewer and POTW. Euticals currently stores the hazardous wastes produced as part of the facility operations in containers before being disposed of off-site. The containers are managed under the generator storage requirements of the federal and state hazardous waste laws, 10 CSR 25-5.

In 1975, the southern half of the surface impoundment was closed by filling it with native soil, rock, and concrete, and then capping it with clay fill. The northern half of the surface impoundment was used until 1982 and then closed. During closure of the northern portion of the surface impoundment, approximately 250,000 gallons of contaminated water and sediment were removed. The impoundment was then backfilled with uncontaminated soil and clay fill and capped with concrete. The impoundment was under the care of Solid Waste for closure and post-closure. The settling pit and aeration basin were decommissioned and decontaminated in 1984. In 1985, soil and groundwater sampling indicated contamination of both soil and groundwater at the facility. Monitoring wells were placed at this time. In 1989 a groundwater recovery and treatment system was implemented. After a 1989 consent order with the EPA, the site was given a RCRA facility investigation to determine the horizontal and vertical extent of contamination at the site. This assessment showed the contamination was contained on-site and posed no immediate threat to human health or the environment. Four solid waste units on the site were determined to require cleanup or corrective action. Those units were the former settling pit, former surface impoundment, former underground pipe system, and contaminated sewer pipes at Building 14. The “Final Remedy” for this consent order was approved in 2011. Euticals acquired the site from Archimica in April 2012 and assumed the responsibilities of implementing the final remedy. The approved final remedy for on-site groundwater and soil contamination included enhanced institutional controls, dense non-aqueous phase liquid recovery, surface water monitoring and groundwater containment and monitoring. Euticals is also required to continue monitoring and maintenance of the closed, capped former surface impoundment. On

June 14, 2013, the department approved Euticals' Class 2 Permit Modification request, allowing Euticals to add two points of compliance wells and modify hydraulic performance standards to their Missouri Hazardous Waste Management Facility Part I Permit. This permit requires Euticals to implement the approved final remedy for on-site groundwater and soil contamination and perform long-term monitoring and maintenance of the former surface impoundment. This permit also requires corrective action in the event there is a newly identified release of hazardous waste or hazardous constituents to the environment or if the contaminated soil and groundwater poses a threat due to further migration. All withdrawn groundwater is sent to the local wastewater treatment plant and is not discharged to surface waters of the state.

A portion of the facility is located within the 100-year floodplain according to the Federal Emergency Management Agency's (FEMA) Flood Boundary and Floodway map for Springfield, MO. Euticals has constructed a floodwall around the facility to a height of approximately 1223.6 feet. This is about five feet higher than the 1218.6 feet expected in a 100-year flood event.

This permit historically allowed the discharge of non-contact cooling water. The facility wishes to convert to a stormwater only permit. This permit does not authorize the release of non-contact cooling water. Releases due to accidents, maintenance, or emergency will be considered spills and must be reported to the Southwest Regional Office. The facility reports non-contact cooling water is a combination of water from process vessel jackets and cooling towers. It is currently discharged to a process waste water collection tank onsite, then discharges to the Springfield Publically Owned Treatment Works. The non-contact cooling tower treatment chemicals include anti-fouling agents, oil dispersants, and a biocide. In case of accidental or emergency release of this water, the Southwest Regional Office must be notified of any agents found in the cooling water discharge to allow for proper remediation action, if needed.

Sources of information:

- Application materials supplied by permittee
- Missouri Department of Natural Resources DEQ Hazardous Waste Program fact sheet (http://dnr.mo.gov/env/hwp/permits/mod095038329/information.htm, last accessed 03/08/2016)

PERMITTED FEATURES TABLE:

OUTFALL	AVERAGE FLOW (MGD)	FLOW IN A 10YR 24 HR RAIN EVENT (MGD)	TREATMENT LEVEL	EFFLUENT TYPE
#001	Dependent on Precipitation	0.83	Primary, Retention; Secondary, Sand Filter	Industrial Stormwater
#002	Dependent on Precipitation	0.36	Primary, Retention	Industrial Stormwater
#003	Dependent on Precipitation	0.83	BMPs	Industrial Stormwater

FACILITY PERFORMANCE HISTORY & COMMENTS:

The electronic discharge monitoring reports were reviewed for the last five years. No exceedances of limits were noted in the last five years. The facility was found to be not in compliance during the last inspection, which took place in May 2013. They had failed to report monthly averages for flow in previous quarters. This issue was resolved and the facility returned to compliance.

FACILITY MAP:

Part II. RECEIVING STREAM INFORMATION

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

✓ As per Missouri's Effluent Regulations [10 CSR 20-7.015(1)(B)], the waters of the state are divided into the following seven categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

Missouri or Mississippi River:	☐
Lake or Reservoir:	☐
Losing:	☐
Metropolitan No-Discharge:	☐
Special Stream:	☐
Subsurface Water:	☐
All Other Waters:	☒

- ✓ As per Missouri's stormwater regulations [10 CSR 20.6.200(6)(B)2.] and federal regulations [40 CFR 122.26(b)(14)], the department shall establish limits necessary to protect waters of the state. Effluent limitations or benchmarks for stormwater are established using best professional judgment based on the category, impairments, technology available, and designated uses of the receiving stream.

RECEIVING WATER BODY'S WATER QUALITY:
The receiving streams Wilson's Creek and Fassnight Creek have no concurrent water quality data available. Fassnight creek is not on the 303(d) list and has no associated TMDL. Wilson's Creek is on the 2014 303(d) list for polycyclic aromatic hydrocarbon (PAH) contamination, and the 2006 303(d) list for E. coli contamination. Wilson's Creek had a TMDL established in 2011 for parameter by the EPA. This TMDL was vacated and remanded to the EPA in 2013. The watershed for James River is under a TMDL promulgated in 2001 for nutrients. The segments of Fassnight, Jordan, and Wilson's creeks around the facility are considered gaining streams. Approximately 2 miles west/northwest (downstream) of the facility, Wilson's Creek becomes a losing stream.

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

- ✓ Applicable; Wilson's Creek is listed on the 2006 Missouri 303(d) List for E. coli.
- ✓ This facility is not considered to be a source of the above listed pollutant or considered to contribute to the impairment of Wilson's Creek.
- ✓ Applicable; Wilson's Creek is listed on the 2014 Missouri 303(d) List for PAH contamination.
- ✓ It is unknown at this time if the facility is a source of the above listed pollutant(s) or considered to contribute to the impairment of Wilson's Creek. Once a TMDL is developed, the permit may be modified to include WLAs from the TMDL.

TOTAL MAXIMUM DAILY LOAD (TMDL):
A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected; 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. http://dnr.mo.gov/env/wpp/tmdl/

- ✓ Not applicable; this facility is not associated with a TMDL. The 2011 TMDL for Wilson's Creek was vacated and remanded to the EPA. This facility was not specifically mentioned in the TMDL for James River and is not believed to be contributing to this pollutant load.

RECEIVING STREAMS TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	DISTANCE TO SEGMENT	12-DIGIT HUC
#001	Wilson's Creek	P	2375	AQL, IRR, LWW, SCR, WBC-B, HHP	45 ft	Headwaters Wilson's Creek 11010002-0301
#002	Fassnight Creek	P	3370	AQL, IRR, LWW, SCR, WBC-B, HHP	60 ft	
#003	Wilson's Creek	P	2375	AQL, IRR, LWW, SCR, WBC-B, HHP	45 ft	

n/a = not applicable
WBID = Waterbody ID: Missouri Use Designation Dataset 8-20-13 MUDD V1.0 data can be found as an ArcGIS shapefile on MSDIS at ftp://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_shp.zip
* As per 10 CSR 20-7.031 Missouri Water Quality Standards, 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 to be maintained are in the receiving stream table 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.:
AQL = Protection of aquatic life (Current narrative use(s) are defined to ensure the protection and propagation of fish shellfish and wildlife, which is 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 AQL effluent limitations in 10 CSR 20-7.031 Table A 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 that supports swimming uses and has public access;
WBC-B = Whole body contact recreation that supports swimming;
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;
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 Table A 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

RECEIVING STREAM LOW-FLOW VALUES:

OUTFALL	RECEIVING STREAM	LOW-FLOW VALUES (CFS)		
		1Q10	7Q10	30Q10
#001, #003	Wilson's Creek (P)	0.1	0.1	1.0
#002	Fassnight Creek (P)	0.1	0.1	1.0

MIXING CONSIDERATIONS TABLE: DEFAULTS FOR CLASS P

MIXING ZONE (CFS) (CHRONIC) [10 CSR 20-7.031(5)(A)4.B.(II)(a)]			ZONE OF INITIAL DILUTION (CFS) (ACUTE) [10 CSR 20-7.031(5)(A)4.B.(II)(b)]		
1Q10	7Q10	30Q10	1Q10	7Q10	30Q10
0.025	0.025	0.25	0.0025	0.0025	0.025

RECEIVING STREAM MONITORING REQUIREMENTS:
No receiving water monitoring requirements are recommended at this time.

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 is an existing facility.

ANTI-BACKSLIDING:
Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] 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.
✓ Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) which would have justified the application of a less stringent effluent limitation.
- Five years of DMR data were supplied by the permittee. Effluent limitations on certain conventional pollutants were replaced with benchmarks.

✓ The Department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
- The previous permit limits for outfall #001-002 were established in error, based on limits for process wastewater, however, this is a stormwater outfall. This renewal establishes limits and benchmarks appropriate for stormwater discharges. There will be no changes to industrial activities onsite or the composition of the stormwater discharge as a result of this renewal. The benchmark concentrations and required corrective actions within this permit are protective of the receiving stream's uses to be maintained.

ANTIDEGRADATION REVIEW:
For process water discharge with new, altered, or expanding discharges, 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
✓ Not applicable; the facility has not submitted information proposing expanded or altered process water discharge; no further degradation proposed therefore no further review necessary.

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.
✓ Applicable; the facility must review and maintain stormwater BMPs as appropriate.

BENCHMARKS:
When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented at the discretion of the permit writer. 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 limitations of the permit.

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 including the receiving water's current quality. While inspections of the stormwater BMPs occur monthly, facilities with no compliance issues are usually expected to sample stormwater quarterly.

Numeric benchmark values are based on water quality standards or other stormwater permits including the Environmental Protection Agency's (EPA's) *Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity* (MSGP). 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. 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.

✓ Applicable; this facility has stormwater-only outfalls with benchmark constraints. The benchmarks listed are consistently achieved in stormwater discharges by a variety of other industries with SWPPPs and is deemed protective of instream water quality and aquatic life.

BIOSOLIDS & SEWAGE SLUDGE:
Biosolids are solid materials resulting from domestic wastewater treatment that meet 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: http://extension.missouri.edu/main/DisplayCategory.aspx?C=74 (WQ422 through WQ449).

✓ Not applicable; this condition is not applicable to the permittee for this facility.

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.

GROUNDWATER MONITORING:
Groundwater is a water of the state according to 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6) and must be protected accordingly.

✓ This facility is not required to monitor groundwater for the water protection program; however, groundwater monitoring is performed under the supervision of Missouri Department of Natural Resources Hazardous Waste Program. Data from this monitoring is not required to be submitted to the water protection program at this time.

INDUSTRIAL SLUDGE:
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.

✓ Not applicable; sludge is not generated at this facility.

REASONABLE POTENTIAL ANALYSIS (RPA):
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are (or may be) discharged at a level causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. If the permit writer determines any give pollutant has the reasonable potential to cause or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant [40 CFR Part 122.44(d)(1)(iii)].

- ✓ Not applicable; a RPA was not conducted for this facility. This permit establishes permit limits and benchmarks for stormwater. The department has determined stormwater is not a continuous discharge and is therefore not subject to statistical RPAs. However, the permit writer completed an RPD, a reasonable potential determination, using best professional judgment for all of the appropriate parameters in this permit. A RPD consists of reviewing application data and/or the discharge monitoring data for the last five years and comparing those data to the water quality standard.

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.

- ✓ Not applicable; this permit does not contain a SOC.

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. http://dnr.mo.gov/env/esp/spillbill.htm

STORMWATER PERMITTING:
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. The amount of stormwater discharged from the facility will vary based on 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 increases the flash of the stream.

It is likely that sufficient rainfall to cause a discharge for four continuous days from a facility will also cause some significant amount of flow in the receiving stream. Chronic WQSs are based on a four-day exposure (except ammonia, which is based on a thirty day exposure). In the event that discharge does occur from this facility for four continuous days, some amount of flow will occur in the receiving stream. This flow will dilute stormwater discharges from a facility. For these reasons, most industrial stormwater facilities have limited potential to cause a violation of chronic water quality standards in the receiving stream.

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 WQSs are based on a one hour of exposure, and must be protected at all times in unclassified streams, and within mixing zones of class P streams [10 CSR 20-7.031(4) and (5)(4)4.B.]. Therefore, industrial stormwater facilities with toxic contaminants do have the potential to cause a violation of acute WQSs if those toxic contaminants occur in sufficient amounts.

It is due to the items stated above that staff drafting this fact sheet are unable to perform statistical Reasonable Potential Analysis (RPA) and calculate Wasteload Allocations (WLA) via a site-specific mass-balance equation for effluent limit determination. However, staff will use their best professional judgment in determining if a facility has a potential to violate Missouri's Water Quality Standards.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):
In accordance with 40 CFR 122.44(k), Best Management Practices (BMPs) must be used to control or abate the discharge of pollutants when: 1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; 3) Numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to 1) identify sources of pollution or contamination, and 2) select and carry out actions which prevent or control the pollution of storm water discharges.

A SWPPP must be prepared by the permittee if the SIC code is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP may be required of other facilities where stormwater has been identified as necessitating better management. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. Failure to implement and maintain the chosen BMP is a permit violation. For further guidance, consult the antidegradation implementation procedure (http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf).

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs that are reasonable and cost effective. The AA evaluation should include practices that are designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of AIP defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The AA evaluation must demonstrate why "no discharge" or "no exposure" is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and *Antidegradation Implementation Procedure* (AIP), Section II.B.

If parameter-specific numeric exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification; the application is found at: http://dnr.mo.gov/forms/index.html.

✓ Applicable; a SWPPP shall be developed and implemented for this facility.

VARIANCE:

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

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the WLA is the amount of pollutant each discharger is allowed to release into a given stream after the department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality. There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

✓ Not applicable; wasteload allocations were not calculated.

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.

WATER QUALITY STANDARDS:
Per 10 CSR 20-7.031(4), general criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, 40 CFR 122.44(d)(1) directs the department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including state narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:
A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with, or through synergistic responses when mixed with receiving stream water.
✓ Not applicable; at this time, the permittee is not required to conduct WET test for this facility. This facility discharges only stormwater. WET tests on stormwater samples often have variable results and can lack repeatability.

Part IV. 2013 WATER QUALITY CRITERIA FOR AMMONIA

On August 22, 2013, the U.S. Environmental Protection Agency (EPA) finalized new water quality criteria for ammonia, based on toxicity studies of mussels and gill breathing snails. Missouri's current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels or gill breathing snails. Missouri is home to 69 of North America's mussel species, which are spread across the state. According to the Missouri Department of Conservation nearly two-thirds of the mussel species in Missouri are considered to be "of conservation concern". Nine species are listed as federally endangered, with an additional species currently proposed as endangered and another species proposed as threatened.

The adult forms of mussels that are seen in rivers, lakes, and streams are sensitive to pollutants because they are sedentary filter feeders. They vacuum up many pollutants with the food they bring in and cannot escape to new habitats, so they can accumulate toxins in their bodies and die. But very young mussels, called glochidia, are exceptionally sensitive to ammonia in water. As a result of a citizen suit, the EPA was compelled to conduct toxicity testing and develop ammonia water quality criteria that would be protective if young mussels may be present in a waterbody. These new criteria will apply to any discharge with ammonia levels that may pose a reasonable potential to violate the standards. Nearly all discharging domestic wastewater treatment facilities (cities, subdivisions, mobile home parks, etc.), as well as certain industrial and stormwater dischargers with ammonia in their effluent, will be affected by this change in the regulations.

When new water quality criteria are established by the EPA, states must adopt them into their regulations in order to keep their authorization to issue permits under the National Pollutant Discharge Elimination System (NPDES). States are required to review their water quality standards every three years, and if new criteria have been developed they must be adopted. States may be more protective than the Federal requirements, but not less protective. Missouri does not have the resources to conduct the studies necessary for developing new water quality standards, and therefore our standards mirror those developed by the EPA; however, we will utilize any available flexibility based on actual species of mussels that are native to Missouri and their sensitivity to ammonia.

Many treatment facilities in Missouri are currently scheduled to be upgraded to comply with the current water quality standards. But these new ammonia standards may require a different treatment technology than the one being considered by the permittee. It is important that permittees discuss any new and upcoming requirements with their consulting engineers to ensure that their treatment systems are capable of complying with the new requirements. The Department encourages permittees to construct treatment technologies that can attain effluent quality that supports the EPA ammonia criteria.

Ammonia toxicity varies by temperature and by pH of the water. Assuming a stable pH value, but taking into account winter and summer temperatures, Missouri includes two seasons of ammonia effluent limitations. Current effluent limitations in this permit are:

Year-round -- Monitoring only

Under the new EPA criteria, where mussels of the family Unionidae are present or expected to be present, the estimated effluent limitations for a facility in a location such as this that discharges to a receiving stream with the mixing consideration listed in Part II of the Fact Sheet will be:

Summer – 2.2 mg/L daily maximum, 0.8 mg/L monthly average. Winter – 7.1 mg/L daily maximum, 2.5 mg/L monthly average.

Actual effluent limits will depend in part on the actual performance of the facility.

Operating permits for facilities in Missouri must be written based on current statutes and regulations. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. To aid permittees in decision making, an advisory will be added to permit Fact Sheets notifying permittees of the expected effluent limitations for ammonia. When setting schedules of compliance for ammonia effluent limitations, consideration will be given to facilities that have recently constructed upgraded facilities to meet the current ammonia limitations. For more information on this topic feel free to contact the Missouri Department of Natural Resources, Water Protection Program, Water Pollution Control Branch, Operating Permits Section at (573) 751-1300.

Part V. EFFLUENT LIMITS DETERMINATION

OUTFALL #001, #002, #003 – STORMWATER OUTFALL AND STORMWATER BYPASS OUTFALL

Effluent limitations derived and established in the below effluent limitations table are based on current operations of the facility. Effluent means both process water and stormwater. 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 that supersede the terms and conditions, including effluent limitations, of this operating permit.

EFFLUENT LIMITATIONS TABLE:

PARAMETERS Outfalls #001,#002, #003	UNIT	BASIS	DAILY MAXIMUM LIMIT	BENCH-MARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL								
FLOW	MGD	1	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	24 HR. EST
PRECIPITATION	INCHES	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	24 HR. TOT
CONVENTIONAL								
COD	MG/L	6, 8	**	120	120/90	ONCE/QUARTER	ONCE/QUARTER	GRAB
OIL & GREASE	MG/L	9	**	10	15/10	ONCE/QUARTER	ONCE/QUARTER	GRAB
pH ǂ	SU	1, 3	6.5 TO 9.0	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
SETTLEABLE SOLIDS	ML/L/HR	6	**	1.5	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
TSS	MG/L	6, 8	**	70	70/35	ONCE/QUARTER	ONCE/QUARTER	GRAB
METALS								
ALUMINUM, TOTAL RECOV.	µg/L	6, 8	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
IRON, TOTAL RECOVERABLE	µg/L	6, 8	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
ZINC, TOTAL RECOVERABLE	µg/L	6, 9	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
NUTRIENTS								
AMMONIA AS N	MG/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
NITROGEN, TOTAL	MG/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
PHOSPHORUS, TOTAL	MG/L	6	*	-	*/0.5	ONCE/QUARTER	ONCE/QUARTER	GRAB
OTHER								
METHYLENE CHLORIDE	µg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
1,2-DICHLOROPROPANE	µg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB

* - Monitoring requirement only ** - Monitoring with associated benchmark
ǂ The facility will report the minimum and maximum pH values; pH is not to be averaged
NEW = Parameter not established in previous operating permit

Basis for Limitations Codes:

1. State or Federal Regulation/Law
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Antidegradation Review/Policy
5. Water Quality Model
6. Best Professional Judgment
7. TMDL or Permit in lieu of TMDL
8. Benchmark based on MSGP
9. Benchmark based on Missouri Water Quality

DERIVATION AND DISCUSSION OF LIMITS FOR OUTFALLS #001, #002, #003:

PHYSICAL:

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. The facility will report the total flow in millions of gallons per day (MGD).

Precipitation
Monitoring only requirement; measuring the amount of precipitation [(10 CSR 20-6.200(2)(C)1.E(VI)] during an event is necessary to ensure adequate stormwater management exists at the site. Knowing the amount of potential stormwater runoff can provide the permittee a better understanding of specific control measure that should be employed to ensure protection of water quality. The facility will provide the 24 hour accumulation value of precipitation from the day of sampling the other parameters. It is not necessary to report all days of precipitation during the quarter because of the readily available on-line data.

Temperature
This parameter is removed for this permit. Temperature sampling is not required for stormwater permits. Cooling water is no longer discharged from this facility.

CONVENTIONAL:

Chemical Oxygen Demand (COD)
Monitoring, with a daily maximum benchmark of 120 mg/L. The previous permit required a daily maximum limit of 120 mg/L and a monthly average limit of 90 mg/L. There were no exceedances of these limits in the previous permit cycle. There is no water quality standard for COD; however, increased oxygen demand may impact instream water quality. COD is also a valuable indicator parameter. COD monitoring allows the permittee to identify increases in COD that may indicate materials/chemicals coming into contact with stormwater that cause an increase in oxygen demand. Increases in COD may indicate a need for maintenance or improvement of BMPs. 120 mg/L will be set as a benchmark to allow the facility to evaluate the effectiveness of BMP measures.

Oil & Grease
Monitoring with a daily maximum benchmark of 10 mg/L. The previous permit required a daily maximum limit of 15 mg/L and a 10 mg/L average monthly limit. There were no exceedances of this limit in the previous permit. Oil and grease is a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or toluene, but these constituents are often lost during testing due to their boiling points. It is recommended to perform separate testing for these constituents if they are a known pollutant of concern at the site, i.e. aquatic life toxicity or human health is a concern. Results do not allow for separation of specific pollutants within the test, they are reported, totaled, as "Oil and grease". Per 10 CSR 20-7.031 Table A: *Criteria for Designated Uses*; 10 mg/L is the chronic standard for this parameter. 10 mg/L is the level at which sheen is estimated to form on receiving waters. Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the permittee to visually observe the discharge and receiving waters for sheen or bottom deposits.

pH
6.5 to 9.0 SU. The Water Quality Standard at 10 CSR 20-7.031(5)(E) states water contaminants shall not cause pH to be outside the range of 6.5 to 9.0 standard pH units.

Settleable Solids (SS)
Monitoring, with a daily maximum benchmark of 1.5 mL/L/hr. This is a new parameter for this permit. Settleable solids are an important parameter to consider in stormwater monitoring. Settleable solids monitoring detects solids that may not be sampled for in total suspended solids monitoring. Settleable solids discharges can negatively impact aquatic life by clogging the crevasses used for habitat by benthic organisms and, in some cases, being directly toxic to aquatic organisms. There is no water quality standard for Settleable solids; however, settleable solids are a valuable indicator parameter. Solids monitoring allows the permittee to identify increases in sediment and solids that may indicate uncontrolled materials leaving the site.

Total Suspended Solids (TSS)
Monitoring, with a daily maximum benchmark of 70 mg/L. The previous permit required a daily maximum limit of 70 mg/L and a monthly average limit of 35 mg/L. There were no exceedances of these limits in the previous permit cycle. It is in the best professional judgment to require monitoring only on this parameter, with a benchmark to assess BMP effectiveness. There is no water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the permittee to identify increases in TSS that may indicate uncontrolled materials leaving the site

METALS:

Aluminum, Total Recoverable
Monitoring only. This is a new parameter for this permit. Application materials indicated aluminum is in the effluent at this facility; <0.18 mg/L was reported at outfall #001 (most likely a non-detect), and outfall #002 reported 0.49 mg/L. Per 10 CSR 20-7.031 table A, 0.75 mg/L is the chronic value for aquatic life protection. It is in the professional judgment of the permit writer to monitor for this pollutant in the effluent to determine reasonable potential to exceed water quality standards. The permittee indicated they believed the source could be attributed to runoff from the roofs of the buildings on-site. 10 CSR 6.200(B)(2) indicates the following are exempt from permitting requirements: "Areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots, **as long as the drainage from the excluded areas is not mixed with stormwater drained from permitted areas.**" (Emphasis added.) To be considered exempt from the influence of the roof drainage or parking lots, the permittee must ensure drainage from these areas is segregated from that of the industrial stormwater.

Iron, Total Recoverable
Monitoring only. This is a new parameter for this permit. Application materials indicated iron is in the effluent at this facility; 0.60 mg/L was reported on outfall #001, and 0.14 was reported on outfall #002. Per 10 CSR 20-7.031 table A, 1.0 mg/L is the chronic value for aquatic life protection. It is in the professional judgment of the permit writer to monitor for this pollutant in the effluent to determine reasonable potential to exceed water quality standards. The permittee indicated they believed the source could be attributed to runoff from the roofs of the buildings on-site. 10 CSR 6.200(B)(2) indicates the following are exempt from permitting requirements: "Areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots, **as long as the drainage from the excluded areas is not mixed with stormwater drained from permitted areas.**" (Emphasis added.) To be considered exempt from the influence of the roof drainage or parking lots, the permittee must ensure drainage from these areas is segregated from that of the industrial stormwater.

Zinc, Total Recoverable
Monitoring only. This is a new parameter for this permit. Application materials indicated zinc is in the effluent at this facility. Application materials indicated iron is in the effluent at this facility; 0.10 mg/L was reported on outfall #001, and 0.035 was reported on outfall #002. Per 10 CSR 20-7.031 table A, 0.209 mg/L is the chronic value for aquatic life protection. It is in the professional judgment of the permit writer to monitor for this pollutant in the effluent to determine reasonable potential to exceed water quality standards. The permittee indicated they believed the source could be attributed to runoff from the roofs of the buildings on-site. 10 CSR 6.200(B)(2) indicates the following are exempt from permitting requirements: "Areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots, **as long as the drainage from the excluded areas is not mixed with stormwater drained from permitted areas.**" (Emphasis added.) To be considered exempt from the influence of the roof drainage or parking lots, the permittee must ensure drainage from these areas is segregated from that of the industrial stormwater.

NUTRIENTS:

Ammonia, Total as Nitrogen
Monitoring only, continued from the previous permit. It is in the best professional judgment of the permit writer to continue monitoring for ammonia. Due to the nature of the industry at this site, ammonia is a possible constituent of their stormwater.

Nitrogen, Total N (TN)
Monitoring only. This is a new parameter for this permit. It is in the best professional judgment of the permit writer to apply 10 CSR 20-7.015(9)(D)7 to the stormwater effluent at this facility, which states nutrient monitoring shall be instituted on a quarterly basis for facilities with a design flow greater than 0.1 MGD.

Phosphorous, Total P (TN)
Monitoring only. The previous permit had monitoring with a monthly average limit of 0.5 mg/L for this parameter due to 10 CSR 20-7.015 (3) requirements limiting wastewater phosphorus discharge to Table Rock Lake and Lake Taneycomo. This permit is a stormwater permit, and these limitations do not apply to stormwater; however, it is in the best professional judgment of the permit writer to continue monitoring for this parameter due to the sensitivity of the James River and Table Rock Lake watershed.

OTHER:

Chloride + Sulfate
Monitoring only. Sulfate was reported as "believed present" on the application materials, with a value of 3.2 mg/L at outfall #001 and a value of 2.1 mg/L at outfall #002. There are currently no water quality standards associated with sulfates as a single pollutant in the state of Missouri; however, it is in the professional judgment of the permit writer to monitor for chloride +sulfate in the effluent. Chloride + sulfate is limited to a total of 1.0 mg/L per 10 CSR 20-7.031 table A. Monitoring will allow the permittee to adjust their BMPs if values exceeding 1.0 mg/L are found to be in the effluent, and will allow the permit writer to evaluate reasonable potential in future renewals.

Methylene Chloride
Monitoring only. This is a new parameter for this permit. This pollutant is also known as dichloromethane. This is a pollutant of concern at this site as it is used extensively in the industrial process. Monitoring this parameter will allow for adjustment of process and/or BMP measures should it be detected in the effluent.

1,2-dichloropropane
Monitoring only. This is a new parameter for this permit. 1,2-dichloropropane is used as an intermediate in the manufacture of chlorinated chemicals. It is in the best professional judgment of the permit writer to include monitoring for this parameter due to the groundwater remediation occurring onsite. This facility sits low in the water table, and discharges to a stream which becomes a losing stream. A previous inspector noted seeing pools of discolored water around the site, and believed contaminated groundwater seepage may have been the source. It is in the best professional judgment of the permit writer to use 1,2-dichloropropane as an indicator for possible groundwater seepage. Due to the chemical complexities of the site, it is difficult to choose indicator pollutants that may be found in surface water at this site; however, this pollutant was mentioned in a 2013 correspondence between MDNR Hazardous Waste and Euticals, Inc. as a pollutant of concern at this site. 1,2-dichloropropane does not occur naturally in the environment and is moderately soluble in water. Its presence in the effluent of this facility would indicate, with reasonable certainty, the seepage of groundwater at this site. The Groundwater Water Quality Standards at 10 CSR 20-7.031 Table A; GRW are low for this pollutant, indicating high toxicity, and thus it is important to monitor for its presence.

Bacteria

E. coli
Not included in this permit. Fecal coliform was reported "believed present" in the application materials. The value reported at outfall #001 was a non-detect, the value reported at outfall #002 was 1190 #/100mL. The value at outfall #002 indicates there is a source of fecal coliform contributing to outfall #002. E. coli is not a pollutant of concern associated with the permitted facility's industrial process. According to the permittee, outfall #002 is affected by a large amount of wildlife. It is in the best professional judgment of the permit writer to not require monitoring for this parameter.

Chemicals listed in 40 CFR 122 Appendix D, Table II-V and Other Soluble Bulk Materials
Removed from this permit. To test in totality all of chemicals used or stored at this facility is beyond the scope of this permit. Concerns for spills and leaks are addressed through the special conditions #5 and #18. It is in the professional judgment of the permit writer this parameter does not provide any added environmental protections, and little useful data is obtained by the MDNR from analytical results.

Part VI. SAMPLING AND REPORTING REQUIREMENTS:

ELECTRONIC DISCHARGE MONITORING REPORTING:
Due to upcoming federal regulations, all facilities will need to begin submitting their discharge monitoring reports electronically, called the eDMR system. To begin the process, please visit http://dnr.mo.gov/env/wpp/edmr.htm. This process is expected to save time, lessen paperwork, and reduce operating costs for both the facilities and the water protection program. Additional information may also be found at http://dnr.mo.gov/pubs/pub2474.pdf.

SAMPLING FREQUENCY JUSTIFICATION:
Sampling and reporting frequency was generally retained from previous permit. Sampling for bulk chemicals stored has increased to annually over biennially, to allow for more data for the next permit cycle. Sampling frequency for stormwater-only outfalls is typically quarterly even though BMP inspection occurs monthly. The facility may sample more frequently if they need additional data to determine if their best management technology is performing as expected.

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. Grab samples are usually appropriate for stormwater. Parameters which must have grab sampling are: pH, ammonia, *E. coli*, total residual chlorine, free available chlorine, hexavalent chromium, dissolved oxygen, total phosphorus, and volatile organic samples.

Part VII. ADMINISTRATIVE REQUIREMENTS

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

PERMIT SYNCHRONIZATION:
The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. http://dnr.mo.gov/env/wpp/cpp/docs/watershed-based-management.pdf. 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 three years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit. *This permit will become synchronized by expiring the end of the 4th quarter, 2020.*

PUBLIC NOTICE:
The Department shall give public notice that a draft permit has been prepared and its issuance is pending. http://dnr.mo.gov/env/wpp/permits/pn/index.html Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

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

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 06/24/2016 to 07/25/2016. No responses were received.

A modification was made to the permit after the public notice period. The outfall location data for outfall #002 was corrected. The change does not change any limits or use designations of the receiving streams, and is therefore a minor modification not requiring public notice.

DATE OF FACT SHEET: (05/25/2016)

COMPLETED BY:

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

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

Part I – General Conditions
Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
   a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
   b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.

2. **Monitoring Requirements**.
   a. Records of monitoring information shall include:
      i. The date, exact place, and time of sampling or measurements;
      ii. The individual(s) who performed the sampling or measurements;
      iii. The date(s) analyses were performed;
      iv. The individual(s) who performed the analyses;
      v. The analytical techniques or methods used; and
      vi. The results of such analyses.
   b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.

3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

4. **Test Procedures**. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is "sufficiently sensitive" when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.

5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

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

Section B – Reporting Requirements

1. **Planned Changes.**
   a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42;
      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.
   iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.

c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.

3. **Anticipated Noncompliance**. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.

4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.

5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.

6. **Other Information**. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

7. **Discharge Monitoring Reports.**
   a. Monitoring results shall be reported at the intervals specified in the permit.
   b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
   c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.

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 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.

d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed $10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

2. **Duty to Reapply.**
   a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
   b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
   c. A 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:
    a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
    d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.

12. **Closure of Treatment Facilities.**
    a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
    b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.

13. **Signatory Requirement.**
    a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
    b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
    c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.

14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

OPERATING PERMIT APPLICATION
REISSUE FOR NPDES MO-0001970

EUTICALS INC.
2460 WEST BENNETT STREET
SPRINGFIELD, MISSOURI 65807

August 7, 2013

OPERATING PERMIT APPLICATION
REISSUE FOR NPDES MO-0001970

TABLE OF CONTENTS

1.0 FACILITY DESCRIPTION

1.1 General Description

The Euticals Inc. ("Euticals") facility is located at 2460 West Bennett Street in Springfield, Missouri. It is situated approximately one half mile west of the intersection of Bennett Street and Kansas Expressway (US Highway 13) in southwest Springfield. The facility is owned by Euticals Inc. The facility mailing address is PO Box 1246, Springfield, Missouri 65801.

The primary plant site is situated within the floodplain formed by Jordan, Fassnight and Wilson's Creeks in an area zoned for industrial use (Figure A-l). The total acreage for the site is 63 acres. The active portion of the facility occupies approximately 32.5 acres, and contains a number of buildings which house: 1) manufacturing; 2) product and raw material storage facilities; 3) quality control and process development laboratories; 4) maintenance; and 5) administrative buildings. The remaining 31.5 acres are undeveloped. A small portion of the site is leased from the Union Pacific Railroad. Most of the buildings are of metal construction with others combining metal and masonry.

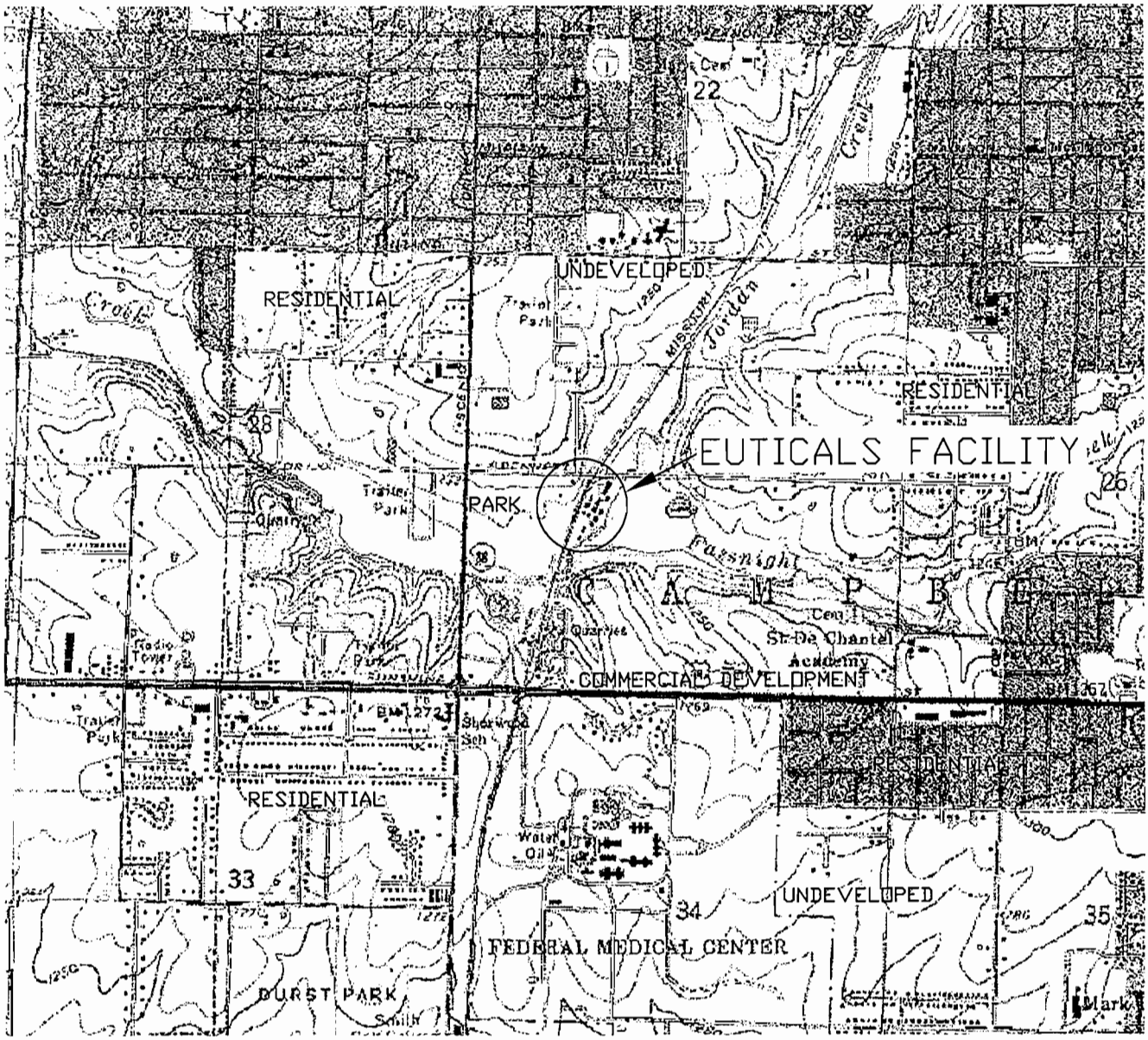
The facility location is illustrated in Figure A-l. The Union Pacific Railroad and the associated easement form the western boundary for the northern half of the property. A public park (Ewing Park) with sports fields is located immediately west of the Union Pacific Railroad right of way. Prestressed Casting, Inc. and small property owners form the southwest boundary of the property. The southernmost boundary of the facility that extends to Sunshine Street is owned by Euticals. Bennett Street forms the northern property line, with undeveloped land and small commercial businesses north of Bennett Street. Waste Corporation of Missouri, a municipal waste transfer station, bounds the northern one-third of the property on the east, and undeveloped land and multi-family housing bounds the remaining two-thirds of the property to the east. Land use in the vicinity of the facility is zoned primarily for industrial use.

Euticals is a manufacturer of pharmaceutical intermediates, finished pharmaceuticals, veterinary compounds and organic chemicals. There are approximately 75 employees. The plant normally operates 24 hours per day seven days a week.

1.2 Topography

The main plant area is situated at an elevation of approximately 1220 feet above mean sea level (MSL) within the 100-year flood area of Jordan Creek. Historic site build-up of clay and construction fill material to heights 10 to 15 feet above the normal level for Jordan Creek and installation of floodwalls have been utilized to protect the plant from 100-year flood events. Regionally, topography slopes southward toward a sharply defined east-west trending line of bluffs forming the southern alluvial valley wall of Fassnight and Wilson's Creeks. Euticals property south of these bluffs is elevated 20 to 50 feet above the primary manufacturing area. The Jordan Creek floodplain bisecting the northern half of the Euticals property is 80 to 400 feet wide at an elevation of 1210 to 1215 feet above MSL. Topography in the main plant area generally slopes south and east toward the creeks, with a narrow topographic high running along the railroad line of the west. A drawing showing the topography surrounding the facility is included in Attachment A.

1.3 Floodplain Information



CONTOUR INTERVAL 10FT.

LATITUDE 37°11'22"
LONGITUDE 93°19'40"

N

2000 0 2000

SCALE FEET

THIS DRAWING TAKEN FROM U.S.G.S
SPRINGFIELD, MO. PHOTOREVISED
1975

E H & S DIR:	DATE	DRAWN BY: djb 04 APR 03	DATE
QUALITY & MATERIALS DIR:	DATE	PROC ENGR:	DATE
" "	DATE	PROJ ENGR:	DATE
" "	DATE	ENGINEERING MGR :	DATE
" "	DATE	MANUFACTURING DIR:	DATE
" "	DATE	FACILITIES DIR :	DATE

Euticals Inc.
PO Box 1246
Springfield
Missouri
65801

EUTICALS
API Manufacturing Custom Synthesis

FIGURE A-1
FACILITY LOCATION

PLOT SCALE: 1=1
DWG SCALE: NONE
SHEET: 1 of 1
DRAWING NUMBER: NPDES-03-4
REV: —

A portion of the facility is within the 100-year floodplain according to the Federal Emergency Management Agency's (FEMA) Flood Boundary and Floodway Map for Springfield, Missouri. A copy of this map and other documentation is located in Attachment B. The elevation of the 100-year floodplain in the southern portion of the plant is 1218.6 feet above mean sea level.

Euticals has constructed a floodwall around the facility to a height of approximately 1223.6 feet MSL.

2. NPDES PERMIT

2.1 Overview

The Missouri Department of Natural Resources (MDNR) issued NPDES Permit Number MO-0001970 (NPDES Permit) on February 6, 2009. Euticals is submitting an operating permit application approximately 180 days in advance of the expiration of the current operating permit (expiration date February 5, 2014).

2.2 Permitted Outfalls

The February 6, 2009 NPDES Permit regulated two Outfalls, 001 and 002. The Outfalls were defined as follows:

Outfall 001 — Discharge from Outfall 001 is from the Spill Prevention Control and Countermeasures (SPCC) shut-off valve for the Retention Basin located at the southern property boundary on the west side of the facility. The discharge from Outfall 001 is storm water runoff and non-contact cooling water. The receiving stream for Outfall 001 is Wilson's Creek.

Outfall 002 — Discharge from Outfall 002 is from the SPCC shut-off valve for the Retention Basin from the property on the East side of Jordan Creek. The discharge from Outfall 002 is storm water runoff. The receiving stream for Outfall 002 is Fassnight Creek.

A map showing the outfall locations and receiving streams is located in Attachment C.

3. STORM WATER MANAGEMENT - MODIFICATIONS AND IMPROVEMENTS

The Retention Basin at Outfall 001 was designed to maintain the rainfall from a 10-year storm event. A pump and level control system has been installed to allow the facility to bypass the Retention Basin and pump storm water directly to Wilson's Creek during storm events that exceed the Retention Basin's designed capacity. Euticals would like to include this as a special condition in the operating permit renewal. A drawing showing this modification is included in Attachment D. MDNR personnel have also discussed making this a separate outfall. Euticals feels this would best be counted as the same outfall as it will discharge the same storm runoff water as Outfall 001 but would only be used in emergency flooding situations.

4. NON-CONTACT COOLING WATER

The non-contact cooling water is a combination of water from process vessel jackets and cooling towers. The non-contact cooling water is discharged to a process wastewater collection tank onsite and then discharged to the Springfield Publicly Owned Treatment Works (POTW) during routine operations. Non-contact cooling water may be diverted to Outfall 001 when maintenance activities are performed on the process wastewater collection tanks and system. Cooling tower overspray occurs and is the only consistent source of non-contact cooling water to the NPDES outfall. The non-contact cooling tower treatment chemicals include anti-fouling agents, oil dispersants and a biocide. Copies of the Material Safety Data Sheets for the cooling tower treatment chemicals are located in Attachment E. The average daily flow for non-contact cooling water diverting to Outfall 001 is approximately 20 gallons per day (due to overspray) with a maximum 16,700 gallons per day, in the event of maintenance on the process wastewater collection tanks.

5. SPILL CONTAINMENT AND CONTROL

In the event of a spill to ground on the west side of the facility, the release materials will be contained in a small valve pit upstream from the Retention Basin, or released into the Retention Basin. The spilled materials will be pumped from the small valve pit or from the Retention Basin and transferred to containers for disposal or recovery.

In the event of a spill to ground on the east side of the facility, the release materials will be contained in the Retention Basin. The spilled materials will be pumped from the Retention Basin and transferred to containers for disposal or recovery.

6. PROPOSED NPDES PERMIT MONITORING PARAMETERS

6.1 Outfall 001 Non-contact Cooling Water

Monitoring for Outfall 001 will be performed at the SPCC shut-off valve for the Retention Basin. During normal operations, the discharge from Outfall 001 will be only storm water runoff. Non- contact cooling waters will be diverted to Outfall 001 only during periods of routine or emergency maintenance on the facility's process wastewater tank. Sampling for non-contact cooling water discharges will only be completed during periods when the cooling tower blowdowns are diverted from the process wastewater tank that discharges to the Springfield POTW.

Effluent parameters for Outfall 001 Non-contact Cooling waters will include:

- *Flow (MGD) - once per discharge: instantaneous estimate*
  Flow measurements will be recorded from the Retention Basin at the SPCC shut-off valve area. An estimate of the volumes discharged will be recorded for each discharge period.

- *Temperature (°F/°C) - once per discharge per Quarter; quarterly grab*
  Temperature will be monitored prior to the discharge entering Wilson's Creek at the SPCC shut-off valve.

- *Total Suspended Solids (mg/L) - once per discharge per quarter; quarterly composite*
  Total suspended solids (TSS) samples will be obtained prior to the discharge entering Wilson's Creek at the SPCC shut-off valve.

- *Chemical Oxygen Demand (mg/L) - once per discharge per quarter: quarterly grab*
  Chemical oxygen demand (COD) samples will be obtained prior to the discharge entering Wilson's Creek at the SPCC shut-off valve.

- pH (Std Units) – once per discharge: each discharge
  pH samples will be obtained from the Retention Basin prior to the discharge entering Wilson's Creek at the SPCC shut-off valve.

6.2 Outfall 001 - Storm water

Outfall 001 receives storm water runoff from the West portion of the facility. Storm water is collected in the Retention Basin and released from the SPCC valve to Wilson's Creek.

Effluent parameters for Outfall 001 -Storm water will include:

- *Flow (MGD) - once per discharge: instantaneous estimate*
  Flow measurements will be recorded from the Retention Basin at the SPCC shut-off valve area. An estimate of the volumes discharged will be recorded for each discharge period.

- *Temperature (°F/°C) - once per discharge per quarter; quarterly grab*
  Temperature will be monitored prior to the discharge entering Wilson's Creek at the SPCC shut-off valve.

- *Total Suspended Solids (mg/L) - once per discharge per quarter; quarterly composite*
  Total suspended solids (TSS) samples will be obtained prior to the discharge entering Wilson's Creek at the SPCC shut-off valve.

- *Chemical Oxygen Demand (mg/L) - once per discharge per quarter; quarterly grab*
  Chemical oxygen demand (COD) samples will be obtained prior to the discharge entering Wilson's Creek at the SPCC shut-off valve.

- *Oil and Grease (mg/L) - once per discharge; quarterly grab*
  Oil and grease samples will be obtained from the Retention Basin prior to the discharge entering Wilson's Creek at the SPCC shut-off valve.

- *pH (Std Units) - once per discharge; each discharge*
  pH samples will be obtained from the Retention Basin prior to the discharge entering Wilson's Creek at the SPCC shut-off valve.

- *Rainfall (inches per day) - once per day; daily*
  Rainfall will be recorded on a daily basis from a rain gauge located at the facility.

6.3 Outfall 002 - Storm water

Outfall 002 receives storm water runoff from the East portion of the facility. Storm water is collected in the Retention Basin and released from the SPCC valve to Fassnight Creek.

Effluent parameters for Outfall 002 -Storm water will include:

- *Flow (MGD) - once per discharge: instantaneous estimate*
  Flow measurements will be recorded from the Retention Basin at the SPCC shut-off valve area. An estimate of the volumes discharged will be recorded for each discharge period when a discharge occurs.

- *Temperature (°F/°C) - once per discharge per quarter; quarterly grab*
  Temperature will be monitored prior to the discharge entering Fassnight Creek at the SPCC shut-off valve.

- *Total Suspended Solids (mg/L) - once per discharge per quarter: quarterly composite*
  Total suspended solids (TSS) samples will be obtained prior to the discharge entering Fassnight Creek at the SPCC shut-off valve.

- *Chemical Oxygen Demand (mg/L) – once per discharge per quarter; quarterly erab* Chemical oxygen demand (COD) samples will be obtained prior to the discharge entering Fassnight Creek at the SPCC shut-off valve.

- *Oil and Grease (mg/L) - once per discharge; quarterly grab*
  Oil and grease samples will be obtained from the Retention Basin prior to the discharge entering Fassnight Creek at the SPCC shut-off valve.

- *pH (Std Units) - once per discharge; each discharge*
  pH samples will be obtained from the Retention Basin prior to the discharge entering Fassnight Creek at the SPCC shut-off valve.

- *Rainfall (inches per day) - once per day: daily*
  Rainfall will be recorded on a daily basis from a rain gauge located at the facility.

AP16122 C11923

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
FORM A – APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT UNDER MISSOURI CLEAN WATER LAW

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED

Note ► PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:
- ☐ An operating permit and antidegradation review public notice
- ☐ A construction permit following an appropriate operating permit and antidegradation review public notice
- ☐ A construction permit and concurrent operating permit and antidegradation review public notice
- ☐ A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)
- ☐ An operating permit for a new or unpermitted facility — Construction Permit # _____
- ☑ An operating permit renewal: permit # MO- 0001970 — Expiration Date February 5, 2014
- ☐ An operating permit modification: permit # MO-_____ — Reason: _____

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

2. FACILITY

NAME		TELEPHONE WITH AREA CODE / FAX	
Euticals Inc.		(417) 868-3314 / FAX (417) 868-3380	
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
2460 W. Bennett Street	Springfield	MO	65807

3. OWNER

NAME	E-MAIL ADDRESS	TELEPHONE WITH AREA CODE / FAX	
Euticals Inc.	bryce.parker@eutica	(417) 868-3314 / FAX (417) 868-3380	
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
PO Box 1246	Springfield	MO	65801

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

4. CONTINUING AUTHORITY

NAME		TELEPHONE WITH AREA CODE / FAX	
NA			
ADDRESS (MAILING)	CITY	STATE	ZIP CODE

5. OPERATOR

NAME	CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE / FAX	
NA			
ADDRESS (MAILING)	CITY	STATE	ZIP CODE

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE WITH AREA CODE / FAX
Bryce Parker	EHS Engineer	(417) 868-3314 / FAX (417) 868-3380

7. ADDITIONAL FACILITY INFORMATION

7.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)

001 NE ¼ SW ¼ Sec 27 T 29N R 22N Gree County
UTM Coordinates Easting (X):_____ Northing (Y): _____
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

002 NE ¼ SW ¼ Sec 27 T 29N R 22N Gree County
UTM Coordinates Easting (X): _____ Northing (Y): _____

003 ____ ¼ ____ ¼ Sec ____ T ____ R ____ ____ County
UTM Coordinates Easting (X):_____ Northing (Y): _____

004 ____ ¼ ____ ¼ Sec ____ T ____ R ____ ____ County
UTM Coordinates Easting (X):_____ Northing (Y): _____

7.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.

001 – SIC 2833 and NAICS 325411 002 – SIC 2833 and NAICS 325411
003 – SIC_____ and NAICS _____ 004 – SIC_____ and NAICS _____

8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION
(Complete all forms that are applicable.)

A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below).	YES ☑	NO ☐
B.	Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C and D.	YES ■	NO ☐
C.	Is application for storm water discharges only? If yes, complete EPA Form 2F.	YES ☑	NO ☐
D.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
E.	Is wastewater land applied? If yes, complete Form I.	YES ☐	NO ☑
F.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES ☐	NO ☑

9. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions.
(PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).

NAME			
SEE ATTACHED SHEET			
ADDRESS	**CITY**	**STATE**	**ZIP CODE**

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE WITH AREA CODE
Steve Hancock, Director of US Operations, General Manager	(417) 868-3325
SIGNATURE	**DATE SIGNED**
	8 Aug 2013

MO 780-1479 (01-09)

BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.

Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

- ☑ Appropriate Fees?
- ☑ Map at 1" = 2000' scale?
- ☑ Signature?
- ☑ Form C, if applicable?
- ☑ Form D, if applicable?
- ☐ Form 2F, if applicable?
- ☐ Form I (Irrigation), if applicable?
- ☐ Form R (Sludge), if applicable?

FORM A – ITEM 9.00

NAME OF FIRST DOWNSTREAM LANDOWNERS

North Side

1. Union Pacific Railroad
   c/o Collections Center
   12567 Collections Center Drive
   Chicago, IL 60693

2. Ewing City Park
   Springfield-Greene County Park Board
   (area 50-75 feet on each side of the railroad track)
   1500 South Scenic
   Springfield, Missouri 65807

South Side

Prestressed Casting Inc.
1600 South Scenic
Springfield, Missouri 65807

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM C – APPLICATION FOR DISCHARGE PERMIT – MANUFACTURING, COMMERCIAL, MINING, SILVICULTURE OPERATIONS, PROCESS AND STORMWATER

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

NOTE: DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS

1.00 NAME OF FACILITY

Euticals Inc.

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER

MO-0001970

1.20 THIS IS A NEW FACILITY AND WAS CONSTRUCTED UNDER MISSOURI CONSTRUCTION PERMIT NUMBER (COMPLETE ONLY IF THIS FACILITY DOES NOT HAVE AN OPERATING PERMIT).

2.00 LIST THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES APPLICABLE TO YOUR FACILITY (FOUR DIGIT CODE)

A. FIRST 2833 B. SECOND 2869

C. THIRD _____ D. FOURTH _____

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) NE 1/4 SW 1/4 SEC 27 T 29N R 22 Greene COUNTY

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST)	RECEIVING WATER
Outfall 001	Wilson's Creek
Outfall 002 - Same legal description as 001	Fassnight Creek

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

Manufacture of bulk intermediate and finished pharmaceuticals. Also manufacture bulk intermediate and finished Organic Chemicals.

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.

1. OUTFALL NO.	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT	
(LIST)	A. OPERATION (LIST)	B. AVERAGE FLOW (INCLUDE UNITS) (MAXIMUM FLOW)	A. DESCRIPTION	B. LIST CODES FROM TABLE A
001	Noncontact cooling	20GPD (16,700GPD)	mixing	1-O
001	Stormwater Runoff	21,770GPD (700,000GPD)	slow sand filtration	1-V
		Note: Flow volume may be	sediment (settling)	1-U
		substantially higher during storm	discharge to surface	4-A
		events. Average discharge is		
		based on days when there is a		
		discharge after a rain event.		
002	Stormwater Runoff	Flow volumes vary with storm	sediment (settling)	1-A
		events.	discharge to surface	4-A

2.40 CONTINUED

C. EXCEPT FOR STORM RUNOFF, LEAKS OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?

☐ **YES** *(COMPLETE THE FOLLOWING TABLE)* ☑ **NO** *(GO TO SECTION 2.50)*

1. OUTFALL NUMBER *(list)*	2. OPERATION(S) CONTRIBUTING FLOW *(list)*	3. FREQUENCY		4. FLOW				C. DURATION *(in days)*
				A. FLOW RATE *(in mgd)*		B. TOTAL VOLUME (specify with units)		
		A. DAYS PER WEEK *(specify average)*	B. MONTHS PER YEAR *(specify average)*	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	4. LONG TERM DAILY	3. MAXIMUM AVERAGE	

2.50 MAXIMUM PRODUCTION

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?

☑ **YES** *(COMPLETE B.)* ☐ **NO** *(GO TO SECTION 2.60)*

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINES EXPRESSED IN TERMS OF PRODUCTION (OF OTHER MEASURE OF OPERATION)?

☐ **YES** *(COMPLETE c.)* ☑ **NO** *(GO TO SECTION 2.60)*

C. IF YOU ANSWERED "YES" TO B. LIST THE QUANTITY THAT REPRESENTS AN ACTUAL MEASUREMENT OF YOUR MAXIMUM LEVEL OF PRODUCTION, EXPRESSED IN THE TERMS AND UNITS USED IN THE APPLICABLE EFFLUENT GUIDELINE AND INDICATE THE AFFECTED OUTFALLS.

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS *(list outfall numbers)*
A. QUANTITY PER DAY	B. UNITS OF MEASURE	C. OPERATION, PRODUCT, MATERIAL, ETC. *(specify)*	

2.60 IMPROVEMENTS

A. ARE YOU NOW REQUIRED BY ANY FEDERAL, STATE OR LOCAL AUTHORITY TO MEET, ANY IMPLEMENTATION SCHEDULE FOR THE CONSTRUCTION, UPGRADING OR OPERATION OF WASTEWATER TREATMENT EQUIPMENT OR PRACTICES OR ANY OTHER ENVIRONMENTAL PROGRAMS THAT MAY AFFECT THE DISCHARGES DESCRIBED IN THIS APPLICATION? THIS INCLUDES, BUT IS NOT LIMITED TO, PERMIT CONDITIONS, ADMINISTRATIVE OR ENFORCEMENT ORDERS, ENFORCEMENT COMPLIANCE SCHEDULE LETTERS, STIPULATIONS, COURT ORDERS AND GRANT OR LOAN CONDITIONS.

☐ **YES** *(COMPLETE THE FOLLOWING TABLE)* ☑ **NO** *(GO TO 3.00)*

1. IDENTIFICATION OF CONDITION AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
				A. REQUIRED	B. PROJECTED

B. OPTIONAL: YOU MAY ATTACH ADDITIONAL SHEETS DESCRIBING ANY ADDITIONAL WATER POLLUTION CONTROL PROGRAMS *(OR OTHER ENVIRONMENTAL PROJECTS WHICH MAY AFFECT YOUR DISCHARGES)* YOU NOW HAVE UNDER WAY OR WHICH YOU PLAN. INDICATE WHETHER EACH PROGRAM IS NOW UNDER WAY OR PLANNED, AND INDICATE YOUR ACTUAL OR PLANNED SCHEDULES FOR CONSTRUCTION.

☐ **MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.**

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
There are no Table B Pollutants	known to be present in waters	discharging from Outfall 001	and 002.

3.10 BIOLOGICAL TOXICITY TESTING DATA

DO YOU HAVE ANY KNOWLEDGE OR REASON TO BELIEVE THAT ANY BIOLOGICAL TEST FOR ACUTE OR CHRONIC TOXICITY HAS BEEN MADE ON ANY OF YOUR DISCHARGES OR ON RECEIVING WATER IN RELATION TO YOUR DISCHARGE WITHIN THE LAST THREE YEARS?

☐ YES (IDENTIFY THE TEST(S) AND DESCRIBE THEIR PURPOSES BELOW.) ☑ NO (GO TO 3.20)

3.20 CONTRACT ANALYSIS INFORMATION

WERE ANY OF THE ANALYSES REPORTED PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

☑ YES (*LIST THE NAME, ADDRESS AND TELEPHONE NUMBER OF AND POLLUTANTS ANALYZED BY EACH SUCH LABORATORY OR FIRM BELOW.*) ☐ NO (*GO TO 3.30*)

A. NAME	B. ADDRESS	C. TELEPHONE *(area code and number)*	D. POLLUTANTS ANALYZED *(list)*
See Attached List.			

3.30 CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS APPLICATION AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE NUMBER WITH AREA CODE
Steve Hancock, Director of US Operations, General Manager	(417) 868-3325
SIGNATURE (SEE INSTRUCTIONS)	DATE SIGNED
	8 Aug 2013

3.20 CONTRACT ANALYSIS INFORMATION

Consulting Analytical Services International, Inc.
2804 E. Battlefield Road
Springfield, MO 65804-4014
Phone: 417-882-1017

OUTFALLS 001 & 002 (For NPDES Permit Renewal)

BOD
TOC
Ammonia (as N)

Bromide
Chlorine (Total Residual)
Color
Fecal Coliform
Fluoride
Nitrate--Nitrite (As N)
Nitrogen--Total Organic (As N)

Sulfate (as SO4)
Sulfide (As S)
Sulfite (As SO3)

Aluminum (Total)
Barium (Total)
Boron (Total)
Cobalt (Total)
Iron (Total)
Magnesium (Total)
Molybdenum (Total)
Manganese (Total)
Tin (Total)
Titanium (Total)

Cyanide (Total)
Phenols (Total)

Antimony (Total)
Arsenic (Total)
Beryllium (Total)
Cadmium (Total)
Chromium (Total)
Copper (Total)
Lead (Total)
Mercury (Total)
Nickel (Total)
Selenium (Total)
Silver (Total)
Thallium (Total)
Zinc (Total)

3.20 CONTRACT ANALYSIS INFORMATION

TEKLAB, INC.
5445 Horseshoe Lake Road
Collinsville, Illinois 62234
Phone: 618-344-1004

GC/MS FRACTION--VOLATILE COMPOUNDS

Acrolein
Acrylonitrile
Benzene
Bis (Chloromethyl) Ether
Bromoform
Carbon Tetrachloride
Chlorobenzene
Chlorodibromomethane
Chloroethane
2-Chloroethylvinyl Ether
Chloroform
Dichlorobromomethane
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethylene
1,2-Dichloropropane
1,2-Dichloropropylene
Ethylbenzene
Methyl Bromide
Methyl Chloride
Methylene Chloride
1,1,2,2,-Tetrachloroethane
Tetrachloroethylene
Toluene
1,2-Trans Dichloroethylene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene
Trichlorofluoromethane
Vinyl Chloride

GC/MS FRACTION--ACID COMPOUNDS

2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
4,6-Dinitro-O-Cresol
2,4-Dinitrophenol
2-Nitrophenol
4-Nitrophenol
P-Chloro-M-Cresol
Pentachlorophenol
Phenol
2,4,6-Trichlorophenol
Acenaphthene
Acenaphtylene
Anthracene
Benzidine
Benzo(a) Anthracene
Benzo (a) Pyrene
3,4-Benzofluoranthene
Benzo(ghi)Perylene
Benzo (k) Fluoranthene
Bis (2-Chloroethoxy) Methane
Bis (2-Chloroethyl) Ether
Bis (2-Chloroisopropyl) Ether
Bis (2-Ethylhexyl) Phthalate
4-Bromophenyl Phenyl Ether
Butyl Benzyl Phthalate
2-Chloronaphthalene
4-Chlorophenyl Phenyl Ether
Chrysene
Dibenzo (a.h) Anthracene
1,2-Dichlorobenzene
1,3-Dichlorobenzene

GC/MS BASE/NEUTRAL COMPOUNDS

1,4-Dichlorobenzene
3,3'-Dichlorobenzidine
Diethyl Phthalate
Dimethyl Phthalate
Di-N-Butyl Phthalate
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-N-Octyl-Phthalate
1,2-Diphenylhydrazine
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno (1,2,3-c-d) Pyrene
Isophorone
Naphthalene
Nitrobenzene
N-Nitro-sodimethylamine
N-Nitroso-N-Propylamine
N-Nitro-sodiphenylamine
Phenanthrene
Pyrene
1,2,4-Trichlorobenzene

GC/MS FRACTION--PESTICIDES

Aldrin
a-BHC CAS # 319-84-6
ß-BHC
r-BHC CAS # 58-89-9
&-BHC CAS #319-86-8
Chlordane
4,4'-DDT
4,4'-DDE
4,4'-DDD
Dieldrin
a-Endosulfan
ß-Endosultan
Endosulfan Sulfate
Endrin
Endrin Aldehyde
Heptachlor
Heptachlor Epoxide
PCB-1242
PCB-1254
PCB-1221
PCB-1232
PCB-1248
PCB-1260
PCB-1016
Toxaphen

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 EFFLUENT CHARACTERISTICS

OUTFALL NO. 001

PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS *(specify if blank)*		4. INTAKE *(optional)*		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	6	25.8	NA	NA	6	1.1	1	mg/L	lbs/day	NA	NA	NA
B. Chemical Oxygen Demand (COD)	27	116	NA	NA	20.3	3.7	4	mg/L	lbs/day	NA	NA	NA
C. Total organic Carbon (TOC)	5.8	24.9	NA	NA	5.8	1.1	1	mg/L	lbs/day	NA	NA	NA
D. Total Suspended Solids (TSS)	14	60.1	NA	NA	8.3	1.5	4	mg/L	lbs/day	NA	NA	NA
E. Ammonia *(as N)*	0.15	0.6	NA	NA	<0.15	<0.03	4	mg/L	lbs/day	NA	NA	NA
F. Flow	VALUE 514,600		VALUE 47,470		VALUE 21,770		365		GPD	VALUE NA		NA
G. Temperature *(winter)*	VALUE 9.9		VALUE 12.2		VALUE 7.6		10	°C		VALUE NA		NA
H. Temperature *(summer)*	VALUE 22.4		VALUE 21.7		VALUE 15.5		15	°C		VALUE NA		NA
I. pH	MINIMUM 6.9	MAXIMUM 9.0	MINIMUM 7.3	MAXIMUM 8.3			12	STANDARD UNITS				

PART B – Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS														
A. Bromide (24959-67-9)	X		<0.5	<2.15	NA		<0.5	<0.09	1	mg/L	lbs/day	NA	NA	NA
B. Chlorine, Total Residual	X		<0.06	<0.26	NA		<0.06	<0.01	1	mg/L	lbs/day	NA	NA	NA
C. Color		X	Light tan		NA		Light tan		1	mg/L	lbs/day	NA	NA	NA
D. Fecal Coliform	X		<10	<8e6	NA		<10	<2e8	1	col/100ml	col/day	NA	NA	NA
E. Fluoride (16984-48-8)		X	<0.1	<0.43	NA		<0.1	<0.02	1	mg/L	lbs/day	NA	NA	NA
F. Nitrate - Nitrate *(as N)*	X		0.88	3.78	NA		0.88	0.16	1	mg/L	lbs/day	NA	NA	NA

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen, Total Organic *(as N)*	X		0.9	3.86	NA		0.9	0.16	1	mg/L	lbs/day	NA	NA	NA
H. Oil and Grease		X	<5.7	<24.48	NA		<5.25	<0.95	4	mg/L	lbs/day	NA	NA	NA
I. Phosphorus *(as P)*, Total (7723-14-0)	X		0.15	0.64	NA		0.09	0.02	4	mg/L	lbs/day	NA	NA	NA
J. Sulfate *(as SO^4)* (14808-79-8)	X		3.2	13.74	NA		3.2	0.58	1	mg/L	lbs/day	NA	NA	NA
K. Sulfide *(as S)*		X	<0.1	<0.43	NA		<0.1	<0.02	1	mg/L	lbs/day	NA	NA	NA
L. Sulfite (as SO^3) (14265-45-3)		X	<3	<12.88	NA		<3	<0.55	1	mg/L	lbs/day	NA	NA	NA
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)	X		<0.18	<0.77	NA		<0.18	<0.03	1	mg/L	lbs/day	NA	NA	NA
O. Barium, Total (7440-39-3)	X		0.07	0.30	NA		0.07	0.01	1	mg/L	lbs/day	NA	NA	NA
P. Boron, Total (7440-42-8)	X		0.17	0.73	NA		0.17	0.03	1	mg/L	lbs/day	NA	NA	NA
Q. Cobalt, Total (7440-48-4)		X	<0.01	<0.04	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
R. Iron, Total (7439-89-6)	X		0.60	2.58	NA		0.60	0.11	1	mg/L	lbs/day	NA	NA	NA
S. Magnesium, Total (7439-95-4)	X		2.58	11.08	NA		2.58	0.47	1	mg/L	lbs/day	NA	NA	NA
T. Molybdenum, Total (7439-98-7)		X	<0.01	<0.04	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
U. Manganese, Total (7439-96-5)	X		0.26	1.12	NA		0.26	0.05	1	mg/L	lbs/day	NA	NA	NA
V. Tin, Total (7440-31-5)		X	<0.05	<0.21	NA		<0.05	<0.01	1	mg/L	lbs/day	NA	NA	NA
W. Titanium, Total (7440-32-6)	X		<0.01	<0.04	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X	<0.01	<0.04	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
2M. Arsenic, Total (7440-38-2)		X	<0.05	<0.21	NA		<0.05	<0.01	1	mg/L	lbs/day	NA	NA	NA
3M. Beryllium, Total (7440-41-7)		X	<0.01	<0.04	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
4M. Cadmium, Total (7440-43-9)		X	<0.01	<0.04	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
5M. Chromium III (16065-83-1)		X	<0.01	<0.04	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
6M. Chromium VI (18540-29-9)		X	<0.01	<0.04	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
7M. Copper, Total (7440-50-8)		X	<0.01	<0.04	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
8M. Lead, Total (7439-92-1)		X	<0.01	<0.04	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
9M. Mercury, Total (7439-97-6)		X	<0.0002	0.00	NA		<0.0002	0.00	1	mg/L	lbs/day	NA	NA	NA
10M. Nickel, Total (7440-02-0)		X	<0.01	0.00	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
11M. Selenium, Total (7782-49-2)		X	<0.05	<0.21	NA		<0.05	<0.01	1	mg/L	lbs/day	NA	NA	NA
12M. Silver, Total (7440-22-4)		X	<0.01	<0.04	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
13M. Thallium, Total (7440-28-0)		X	<0.05	<0.21	NA		<0.05	<0.01	1	mg/L	lbs/day	NA	NA	NA
14M. Zinc, Total (7440-66-6)	X		0.10	0.43	NA		0.10	0.02	1	mg/L	lbs/day	NA	NA	NA
15M. Cyanide, Amenable to Chlorination	X		<0.005	<0.02	NA		<0.005	0.00	1	mg/L	lbs/day	NA	NA	NA
16M. Phenols, Total		X	<0.01	<0.04	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
RADIOACTIVITY														
(1) Alpha Total		X	NA		NA		NA					NA	NA	NA
(2) Beta Total		X	NA		NA		NA					NA	NA	NA
(3) Radium Total		X	NA		NA		NA					NA	NA	NA
(4) Radium 226 Total		X	NA		NA		NA					NA	NA	NA

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 EFFLUENT CHARACTERISTICS

OUTFALL NO. 002

PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS *(specify if blank)*		4. INTAKE *(optional)*		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	3	0.58	NA	NA	3	0.06	1	mg/L	lbs/day	NA	NA	NA
B. Chemical Oxygen Demand (COD)	<10	<1.94	NA	NA	<10	<0.19	1	mg/L	lbs/day	NA	NA	NA
C. Total organic Carbon (TOC)	3.5	0.68	NA	NA	3.5	0.07	1	mg/L	lbs/day	NA	NA	NA
D. Total Suspended Solids (TSS)	4	0.77	NA	NA	4	0.07	1	mg/L	lbs/day	NA	NA	NA
E. Ammonia *(as N)*	<0.1	<0.02	NA	NA	<0.1	0.00	1	mg/L	lbs/day	NA	NA	NA
F. Flow	VALUE 23,200		VALUE 2,240		VALUE 2,240		31		GPD	VALUE NA		NA
G. Temperature *(winter)*	VALUE NA		VALUE NA		VALUE NA		NA	°C		VALUE NA		NA
H. Temperature *(summer)*	VALUE 10.2		VALUE 10.2		VALUE 10.2		1	°C		VALUE NA		NA
I. pH	MINIMUM 7.7	MAXIMUM 8.2	MINIMUM 8.0	MAXIMUM 8.0	[redacted]		1	STANDARD UNITS		[redacted]		

PART B – Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS														
A. Bromide (24959-67-9)		X	<0.5	<0.10	NA		<0.5	<0.01	1	mg/L	lbs/day	NA	NA	NA
B. Chlorine, Total Residual		X	<0.05	<0.01	NA		<0.05	0.00	1	mg/L	lbs/day	NA	NA	NA
C. Color		X	Colorless		NA		Colorless		1	mg/L	lbs/day	NA	NA	NA
D. Fecal Coliform	X		1190	<1e9	NA		1190	<1e8	1	col/100ml	col/day	NA	NA	NA
E. Fluoride (16984-48-8)		X	<0.1	<0.02	NA		<0.1	0.00	1	mg/L	lbs/day	NA	NA	NA
F. Nitrate - Nitrate *(as N)*	X		0.05	0.01	NA		0.05	0.00	1	mg/L	lbs/day	NA	NA	NA

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen, Total Organic *(as N)*	X		0.3	0.06	NA		0.3	0.01	1	mg/L	lbs/day	NA	NA	NA
H. Oil and Grease		X	<5.3	<1.03	NA		<5.3	<0.10	1	mg/L	lbs/day	NA	NA	NA
I. Phosphorus *(as P)*, Total (7723-14-0)		X	<0.05	<0.01	NA		<0.05	0.00	1	mg/L	lbs/day	NA	NA	NA
J. Sulfate *(as SO^4)* (14808-79-8)		X	2.1	0.41	NA		2.1	0.04	1	mg/L	lbs/day	NA	NA	NA
K. Sulfide *(as S)*		X	<0.1	<0.02	NA		<0.1	0.00	1	mg/L	lbs/day	NA	NA	NA
L. Sulfite (as SO^3) (14265-45-3)		X	<3	<0.58	NA		<3	<0.06	1	mg/L	lbs/day	NA	NA	NA
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)	X		0.49	0.09	NA		0.49	0.01	1	mg/L	lbs/day	NA	NA	NA
O. Barium, Total (7440-39-3)	X		0.026	0.01	NA		0.026	0.00	1	mg/L	lbs/day	NA	NA	NA
P. Boron, Total (7440-42-8)	X		0.01	0.02	NA		0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
Q. Cobalt, Total (7440-48-4)		X	<0.005	0.00	NA		<0.005	0.00	1	mg/L	lbs/day	NA	NA	NA
R. Iron, Total (7439-89-6)	X		0.14	0.03	NA		0.14	0.00	1	mg/L	lbs/day	NA	NA	NA
S. Magnesium, Total (7439-95-4)	X		0.81	0.16	NA		0.81	0.02	1	mg/L	lbs/day	NA	NA	NA
T. Molybdenum, Total (7439-98-7)		X	<0.005	0.00	NA		<0.005	0.00	1	mg/L	lbs/day	NA	NA	NA
U. Manganese, Total (7439-96-5)	X		0.12	0.02	NA		0.12	0.00	1	mg/L	lbs/day	NA	NA	NA
V. Tin, Total (7440-31-5)		X	<0.05	<0.01	NA		<0.05	0.00	1	mg/L	lbs/day	NA	NA	NA
W. Titanium, Total (7440-32-6)	X		<0.005	0.00	NA		<0.005	0.00	1	mg/L	lbs/day	NA	NA	NA

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X	<0.01	0.00	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
2M. Arsenic, Total (7440-38-2)		X	<0.01	0.00	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
3M. Beryllium, Total (7440-41-7)		X	<0.005	0.00	NA		<0.005	0.00	1	mg/L	lbs/day	NA	NA	NA
4M. Cadmium, Total (7440-43-9)		X	<0.005	0.00	NA		<0.005	0.00	1	mg/L	lbs/day	NA	NA	NA
5M. Chromium III (16065-83-1)		X	<0.005	0.00	NA		<0.005	0.00	1	mg/L	lbs/day	NA	NA	NA
6M. Chromium VI (18540-29-9)		X	<0.005	0.00	NA		<0.005	0.00	1	mg/L	lbs/day	NA	NA	NA
7M. Copper, Total (7440-50-8)		X	0.006	0.00	NA		0.006	0.00	1	mg/L	lbs/day	NA	NA	NA
8M. Lead, Total (7439-92-1)		X	<0.005	0.00	NA		<0.005	0.00	1	mg/L	lbs/day	NA	NA	NA
9M. Mercury, Total (7439-97-6)		X	<0.0002	0.00	NA		<0.0002	0.00	1	mg/L	lbs/day	NA	NA	NA
10M. Nickel, Total (7440-02-0)		X	<0.005	0.00	NA		<0.005	0.00	1	mg/L	lbs/day	NA	NA	NA
11M. Selenium, Total (7782-49-2)		X	<0.01	0.00	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
12M. Silver, Total (7440-22-4)		X	<0.005	0.00	NA		<0.005	0.00	1	mg/L	lbs/day	NA	NA	NA
13M. Thallium, Total (7440-28-0)		X	<0.01	0.00	NA		<0.01	0.00	1	mg/L	lbs/day	NA	NA	NA
14M. Zinc, Total (7440-66-6)	X		0.035	0.01	NA		0.035	0.00	1	mg/L	lbs/day	NA	NA	NA
15M. Cyanide, Amenable to Chlorination		X	<0.005	0.00	NA		<0.005	0.00	1	mg/L	lbs/day	NA	NA	NA
16M. Phenols, Total		X	0.008	0.00	NA		0.008	0.00	1	mg/L	lbs/day	NA	NA	NA
RADIOACTIVITY														
(1) Alpha Total		X	NA		NA		NA					NA	NA	NA
(2) Beta Total		X	NA		NA		NA					NA	NA	NA
(3) Radium Total		X	NA		NA		NA					NA	NA	NA
(4) Radium 226 Total		X	NA		NA		NA					NA	NA	NA

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM D – APPLICATION FOR DISCHARGE PERMIT – PRIMARY INDUSTRIES

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

NOTE: DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS

1.00 NAME OF FACILITY

Euticals Inc.

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER

MO - 0001970

This form is to be filled out in addition to forms A and C "Application for Discharge Permit" for the Industries listed below:

INDUSTRY CATEGORY

Adhesives and sealants
Aluminum forming
Auto and other laundries
Battery manufacturing
Coal mining
Coil coating
Copper forming
Electric and electronic compounds
Electroplating
Explosives manufacturing
Foundries
Gum and wood chemicals
Inorganic chemicals manufacturing
Iron and steel manufacturing
Leather tanning and finishing
Landfill
Mechanical products manufacturing
Nonferrous metals manufacturing
Ore mining
Organic chemicals manufacturing
Paint and ink formulation
Pesticides
Petroleum refining
Pharmaceutical preparations
Photographic equipment and supplies
Plastic and synthetic materials manufacturing
Plastic processing
Porcelain enameling
Printing and publishing
Pulp and paperboard mills
Rubber processing
Soap and detergent manufacturing
Steam electric power plants
Textile mills
Timber products processing

APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES

TABLE II

NPDES # (*IF ASSIGNED*)	OUTFALL NUMBER
MO - 0001970	001

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-A for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-B for each pollutant you know or have reason to believe is present. Mark "X" in column 2-C for each pollutant you believe to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (*all seven pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT						D. NO. OF ANALYSES	4. UNITS		5. INTAKE (*optional*)		
	A. TEST-ING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)			A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	✓		✓	<0.01	<0.04			<0.01	0.00	1	mg/L	lbs/day			
2M. Arsenic, Total (7440-38-2)	✓		✓	<0.05	<0.21			<0.05	<0.01	1	mg/L	lbs/day			
3M. Beryllium, Total (7440-41-7)	✓		✓	<0.01	<0.04			<0.01	0.00	1	mg/L	lbs/day			
4M. Cadmium, Total (7440-43-9)	✓		✓	<0.01	<0.04			<0.01	0.00	1	mg/L	lbs/day			
5M. Chromium III (16065-83-1)	✓		✓	<0.01	<0.04			<0.01	0.00	1	mg/L	lbs/day			
6M. Chromium VI (18540-29-9)	✓		✓	<0.01	<0.04			<0.01	0.00	1	mg/L	lbs/day			
7M. Copper, Total (7440-50-8)	✓		✓	<0.01	<0.04			<0.01	0.00	1	mg/L	lbs/day			
8M. Lead, Total (7439-92-1)	✓		✓	<0.01	<0.04			<0.01	0.00	1	mg/L	lbs/day			
9M. Magnesium Total (7439-95-4)	✓	✓		2.58	11.08			2.58	0.47	1	mg/L	lbs/day			
10M. Mercury, Total (7439-97-6)	✓		✓	<0.0002	0.00			<0.0002	0.00	1	mg/L	lbs/day			
11M. Molybdenum Total (7439-98-7)	✓		✓	<0.01	<0.04			<0.01	0.00	1	mg/L	lbs/day			
12M. Nickel, Total (7440-02-0)	✓		✓	<0.01	<0.04			<0.01	0.00	1	mg/L	lbs/day			
13M. Selenium, Total (7782-49-2)	✓		✓	<0.05	<0.21			<0.05	<0.01	1	mg/L	lbs/day			
14M. Silver, Total (7440-22-4)	✓		✓	<0.01	<0.04			<0.01	0.00	1	mg/L	lbs/day			
15M. Thallium, Total (7440-28-0)	✓		✓	<0.05	<0.21			<0.05	<0.01	1	mg/L	lbs/day			
16M. Tin Total (7440-31-5)	✓		✓	<0.05	<0.21			<0.05	<0.01	1	mg/L	lbs/day			
17M. Titanium Total (7440-32-6)	✓		✓	<0.01	<0.04			<0.01	0.00	1	mg/L	lbs/day			
18M. Zinc, Total (7440-66-6)	✓	✓		0.10	0.43			0.10	0.02	1	mg/L	lbs/day			

CONTINUED FROM PAGE 3

19M. Cyanide, Amenable to Chlorination	☑	☑	☐	<0.005	<0.02			<0.005	0.00	1	mg/L	lbs/day			
20M. Phenols, Total	☑	☐	☑	<0.01	<0.04			<0.01	0.00	1					

DIOXIN

2,3,7,8 – Tetra – chlorodibenzo-P-Dioxin (1764-01-6)	☐	☐	☑	DESCRIBE RESULTS

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	☑		☑	<20.0	<0.086			<20.0	<0.004	1	ug/L	lbs/day			
2V. Acrylonitrile (107-13-1)	☑		☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
3V. Benzene (71-43-2)	☑		☑	<0.5	<0.002			<0.5	0.000	1	ug/L	lbs/day			
4V. Bis (*Chloromethyl*) Ether (542-88-1)	☐		☑								ug/L	lbs/day			
5V. Bromoform (75-25-2)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
6V. Carbon Tetrachloride (56-23-5)	☑		☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
7V. Chlorobenzene (108-90-7)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
8V. Chlorodibromomethane (124-48-1)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
9V. Chloroethane (75-00-3)	☑	☐	☑	<2.0	<0.009			<2.0	0.000	1	ug/L	lbs/day			
10V. 2-Chloroethylvinyl Ether (110-75-8)	☑	☐	☑	<5.0	<0.021			<5.0	<0.001	1	ug/L	lbs/day			
11V. Chloroform (67-66-3)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
12V. Dichlorobromomethane (75-27-4)	☑		☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
13V. Dichloro-difluoromethane (75-71-8)	☐	☐	☑								ug/L	lbs/day			
14V. 1,1 – Dichloroethane (75-34-3)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
15V. 1,2 – Dichloroethane (107-06-2)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
16V. 1,1 – Dichloroethylene (75-35-4)	☑		☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
17V. 1,3 – Dichloropropane (78-87-5)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
18V. 1,2 –Dichloropropylene (542-75-6)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
19V. Ethylbenzene (100-41-4)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
20V. Methyl Bromide (74-83-9)	☑	☐	☑	<2.0	<0.009			<2.0	0.000	1	ug/L	lbs/day			
21V. Methyl Chloride (74-87-3)	☑	☐	☑	<2.0	<0.009			<2.0	0.000	1	ug/L	lbs/day			

CONTINUE ON PAGE 4

NPDES # (*IF ASSIGNED*)	OUTFALL NUMBER

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	A. TESTING RE-QUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC.MS FRACTION – VOLATILE COMPOUNDS *(continued)*															
22V. Methylene Chloride (75-09-2)	☑	☐	☑	2.4	0.010			2.4	0.000	1	ug/L	lbs/day			
23V. 1,1,2,2 – Tetra-chloroethane (79-34-5)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
24V. Tetrachloroethylene (127-18-4)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
25V. Toluene (108-88-3)	☑	☐	☑	7.1	0.030			7.1	0.001	1	ug/L	lbs/day			
26V. 1,2 – Trans Dichloroethylene (156-60-5)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
27V. 1,1,1 – Tri – chloroethane (71-55-6)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
28V. 1,1,2 – Tri-chloroethane (79-00-5)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
29V. Trichloro – ethylene (79-01-6)	☑	☐	☑	<1.0	<0.004			<1.0	0.000	1	ug/L	lbs/day			
30V. Trichloro – fluoromethane (75-69-4)	☐	☐	☑								ug/L	lbs/day			
31V. Vinyl Chloride (75-01-4)	☑	☐	☑	<0.5	<0.002			<0.5	0.000	1	ug/L	lbs/day			
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2 – Chlorophenol (95-57-8)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
2A. 2,4 – Dichloro – phenol (120-83-2)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
3A. 2,4 – Dimethyl – phenol (105-67-9)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
4A. 4,6 – Dinitro - O-Cresol (534-52-1)	☑	☐	☑	<4	<0.017			<4	<0.001	1	ug/L	lbs/day			
5A. 2,4 – Dinitro – phenol (51-28-5)	☑	☐	☑	<10	<0.043			<10	<0.002	1	ug/L	lbs/day			
6A. 2-Nitrophenol (88-75-5)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
7A. 4-Nitrophenol (100-02-7)	☑	☐	☑	<4	<0.017			<4	<0.001	1	ug/L	lbs/day			
8A. P – Chloro – M Cresol (59-50-7)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
9A. Pentachloro – phenol (87-86-5)	☑	☐	☑	<4	<0.017			<4	<0.001	1	ug/L	lbs/day			
10A. Phenol (108-952)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
11A. 2,4,6 – Trichloro-phenol (88-06-2)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
12A. 2 - methyl – 4,6 dinitrophenol (534-52-1)	☐	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			

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CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
2B. Acenaphtylene (208-96-8)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
3B. Anthracene (120-12-7)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
4B. Benzidine (92-87-5)	☑	☐	☑	<14	<0.060			<14	0.003	1	ug/L	lbs/day			
5B. Benzo (a) Anthracene (56-55-3)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
6B. Benzo (a) Pyrene (50-32-8)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
7B. 3,4 – Benzofluoranthene (205-99-2)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
8B. Benzo (ghi) Perylene (191-24-2)	☑	☐	☑	<3	<0.013			<3	<0.001	1	ug/L	lbs/day			
9B. Benzo (k) Fluoranthene (207-08-9)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
11B. Bis (2-Chloroethyl) Ether (111-44-4)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
12B. Bis (2-Chloroisopropyl) Ether (39638-32-9)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	☑	☐	☑	<4	<0.017			<4	<0.001	1	ug/L	lbs/day			
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
15B. Butyl Benzyl Phthalate (85-68-7)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
16B. 2-Chloronaphthalene (91-58-7)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
18B. Chrysene (218-01-9)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
19B. Dibenzo (a.h) Anthracene (53-70-3)	☑	☐	☑	<3	<0.013			<3	<0.001	1	ug/L	lbs/day			
20B. 1,2 – Dichlorobenzene (95-50-1)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
21B. 1,3 – Dichlorobenzene (541-73-1)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			

CONTINUED FROM PAGE 5

NPDES # (*IF ASSIGNED*)	OUTFALL NUMBER

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT						D. NO. OF ANALYSES	4. UNITS		5. INTAKE (*optional*)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)			A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
22B. 1, 4-Dichlorobenzene (106-46-7)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
23B. 3, 3'-Dichlorobenzidine (91-94-1)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
24B. Diethyl Phthalate (84-66-2)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
25B. Dimethyl Phthalate (131-11-3)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
26B. Di-N-butyl Phthalate (84-74-2)	☑	☐	☑	<3	<0.013			<3	<0.001	1	ug/L	lbs/day			
27B. 2,4-Dinitrotoluene (121-14-2)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
28B. 2,6-Dinitrotoluene (606-20-2)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
29B. Di-N-Octyphthalate (117-84-0)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
30B. 1,2-Diphenylhydrazine (*as Azobenzene)* (122-66-7)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
31B. Fluoranthene (206-44-0)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
32B. Fluorene (86-73-7)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
33B. Hexachlorobenzene (87-68-3)	☑	☐	☑	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
34B. Hexachlorobutadiene (87-68-3)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
35B. Hexachloro-cyclopentadiene (77-47-4)	☑	☐	☑	<4	<0.017			<4	<0.001	1	ug/L	lbs/day			
36B. Hexachloroethane (67-72-1)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
37B. Indeno (1,2,3-c-d) Pyrene (193-39-5)	☑	☐	☑	<3	<0.013			<3	<0.001	1	ug/L	lbs/day			
38B. Isophorone (78-59-1)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
39B. Naphthalene (91-20-3)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
40B. Nitrobenzene (98-95-3)	☑	☐	☑	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
41B. N-Nitro-sodimethylamine (62-75-9)	☑	☐	☑	<4	<0.017			<4	<0.001	1	ug/L	lbs/day			

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CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT						D. NO. OF ANALYSES	4. UNITS		5. INTAKE (*optional*)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)			A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
42B. N-Nitroso N-Propylamine (621-64-7)	✓		✓	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
43B. N-Nitro-sodiphenylamine (86-30-6)	✓		✓	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
44B. Phenanthrene (85-01-8)	✓		✓	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
45B. Pyrene (129-00-0)	✓		✓	<2	<0.009			<2	0.000	1	ug/L	lbs/day			
46B. 1,2,4-Tri chlorobenzene (120-82-1)	✓		✓	<1	<0.004			<1	0.000	1	ug/L	lbs/day			
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	✓		✓	<0.01	0.000			<0.01	0.000	1	ug/L	lbs/day			
2P. α-BHC (319-84-6)	✓		✓	<0.01	0.000			<0.01	0.000	1	ug/L	lbs/day			
3P. β-BHC (319-84-6)	✓		✓	<0.02	0.000			<0.02	0.000	1	ug/L	lbs/day			
4P. γ-BHC (58-89-9)	✓		✓	<0.03	0.000			<0.03	0.000	1	ug/L	lbs/day			
5P. δ-BHC (319-86-8)	✓		✓	<0.01	0.000			<0.01	0.000	1	ug/L	lbs/day			
6P. Chlordane (57-74-9)	✓		✓	<0.02	0.000			<0.02	0.000	1	ug/L	lbs/day			
7P. 4,4'-DDT (50-29-3)	✓		✓	<0.03	0.000			<0.03	0.000	1	ug/L	lbs/day			
8P. 4,4'-DDE (72-55-9)	✓		✓	<0.01	0.000			<0.01	0.000	1	ug/L	lbs/day			
9P. 4,4'-DDD (72-54-8)	✓		✓	<0.03	0.000			<0.03	0.000	1	ug/L	lbs/day			
10P. Dieldrin (60-57-1)	✓		✓	<0.02	0.000			<0.02	0.000	1	ug/L	lbs/day			
11P. α-Endosulfan (115-29-7)	✓		✓	<0.01	0.000			<0.01	0.000	1	ug/L	lbs/day			
12P. β-Endosultan (115-29-7)	✓		✓	0.06	0.000			0.06	0.000	1	ug/L	lbs/day			
13P. Endosulfan Sulfate (1031-07-8)	✓		✓	<0.01	0.000			<0.01	0.000	1	ug/L	lbs/day			
14P. Endrin (72-20-8)	✓		✓	<0.02	0.000			<0.02	0.000	1	ug/L	lbs/day			
15P. Endrin Aldehyde (7421-93-4)	✓		✓	<0.01	0.000			<0.01	0.000	1	ug/L	lbs/day			
16P. Heptachlor (76-44-8)	✓		✓	<0.01	0.000			<0.01	0.000	1	ug/L	lbs/day			

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CONTINUED FROM PAGE 7

NPDES # (*IF ASSIGNED*)	OUTFALL NUMBER

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICISES *(continued)*															
17P. Heptachlor Epoxide (1024-57-3)	☑	☐	☑	<0.02	0.000			<0.02	0.000	1	ug/L	lbs/day			
18P. PCB-1242 (53469-21-9)	☑	☐	☑	<0.50	0.000			<0.50	0.000	1	ug/L	lbs/day			
19P. PBC-1254 (11097-69-1)	☑	☐	☑	<0.50	0.000			<0.50	0.000	1	ug/L	lbs/day			
20P. PCB-1221 (11104-28-2)	☑	☐	☑	<0.50	0.000			<0.50	0.000	1	ug/L	lbs/day			
21P. PCB-1232 (11141-16-5)	☑	☐	☑	<0.50	0.000			<0.50	0.000	1	ug/L	lbs/day			
22P. PCB-1248 (12672-29-6)	☑	☐	☑	<0.50	0.000			<0.50	0.000	1	ug/L	lbs/day			
23P. PCB-1260 (11096-82-5)	☑	☐	☑	<0.50	0.000			<0.50	0.000	1	ug/L	lbs/day			
24P. PCB-1016 (12674-11-2)	☑	☐	☑	<0.50	0.000			<0.50	0.000	1	ug/L	lbs/day			
25P. Toxaphene (8001-35-2)	☑	☐	☑	<0.35	0.000			<0.35	0.000	1	ug/L	lbs/day			
J. RADIOACTIVITY															
(1) Alpha Total	☐	☐	☑												
(2) Beta Total	☐	☐	☑												
(3) Radium Total	☐	☐	☑												
(4) Radium 226 Total	☐	☐	☑												

2.00 POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. IS ANY POLLUTANT LISTED IN ITEM 1.30 A SUBSTANCE OR A COMPONENT OF A SUBSTANCE WHICH YOU DO OR EXPECT THAT YOU WILL OVER THE NEXT FIVE YEARS USE OR MANUFACTURE AS AN INTERMEDIATE OR FINAL PRODUCT OR BYPRODUCT?

☒ YES *(LIST ALL SUCH POLLUTANTS BELOW)* ☐ NO *(GO TO B)*

NPDES OUTFALL-001
Toluene - as a a solvent
Methylene Chloride - as a solvent.
Metals due to metal building deterioration as noted in the above tables including: iron, zinc, magnesium.
No discharges are expected as all process waters go the POTW. This is only filled out in case of an unplanned discharge.

NPDES OUTFALL-002 is for stormwater runoff from an inactive plant sight. Due to no processing activities occurring on that side of the plant, Euticals believes it is impossible to have any type of process water discharge from that outfall.

B. ARE YOUR OPERATIONS SUCH THAT YOUR RAW MATERIALS, PROCESSES OR PRODUCTS CAN REASONABLE BE EXPECTED TO VARY SO THAT YOUR DISCHARGES OF POLLUTANTS MAY DURING THE NEXT FIVE YEARS EXCEED TWO TIMES THE MAXIMUM VALUES REPORTED IN ITEM 1.30?

☐ YES *(COMPLETE C BELOW)* ☒ NO *(GO TO SECTION 3.00)*

C. IF YOU ANSWERED "YES" TO ITEM B, EXPLAIN BELOW AND DESCRIBE IN DETAIL THE SOURCES AND EXPECTED LEVELS OF SUCH POLLUTANTS THAT YOU ANTICIPATE WILL BE DISCHARGED FROM EACH OUTFALL OVER THE NEXT FIVE YEARS, TO THE BEST OF YOUR ABILIITY AT THIS TIME. CONTINUE ON ADDITIONAL SHEETS IF YOU NEED MORE SPACE.

3.00 CONTRACT ANALYSIS INFORMATION

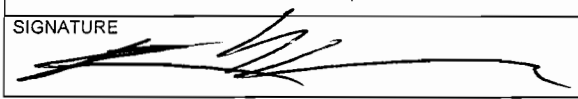
WERE ANY OF THE ANALYSES REPORTED IN 1.30 PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

☒ YES *(LIST THE NAME, ADDRESS, AND TELEPHONE NUMBER OF, AND ANALYZED BY, EACH SUCH LABORATORY OR FIRM BELOW)*
☐ NO *(GO TO SECTION 4.00)*

A. NAME	B. ADDRESS	C. TELEPHONE *(area code and number)*	D. POLLUTANTS ANALYZED *(list)*
TEKLAB, Inc.	5445 Horseshoe Lake Road	(618) 344-1004	See attached list
	Collinsville, Il 62234		
Consulting Analytical Services,	2804 East Battlefield	(417) 882-1017	See attached list
International, Inc.	Springfield, MO 65804		

4.00 CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	PHONE NUMBER (AREA CODE AND NUMBER)
Steve Hancock, Director of US Operations, General Manager	(417) 868-3325
SIGNATURE 	DATE SIGNED 8 Aug 2013

3.20 CONTRACT ANALYSIS INFORMATION

Consulting Analytical Services International, Inc.
2804 E. Battlefield Road
Springfield, MO 65804-4014
Phone: 417-882-1017

OUTFALLS 001 & 002 (For NPDES Permit Renewal)

BOD
TOC
Ammonia (as N)

Bromide
Chlorine (Total Residual)
Color
Fecal Coliform
Fluoride
Nitrate--Nitrite (As N)
Nitrogen--Total Organic (As N)

Sulfate (as SO4)
Sulfide (As S)
Sulfite (As SO3)

Aluminum (Total)
Barium (Total)
Boron (Total)
Cobalt (Total)
Iron (Total)
Magnesium (Total)
Molybdenum (Total)
Manganese (Total)
Tin (Total)
Titanium (Total)

Cyanide (Total)
Phenols (Total)

Antimony (Total)
Arsenic (Total)
Beryllium (Total)
Cadmium (Total)
Chromium (Total)
Copper (Total)
Lead (Total)
Mercury (Total)
Nickel (Total)
Selenium (Total)
Silver (Total)
Thallium (Total)
Zinc (Total)

3.20 CONTRACT ANALYSIS INFORMATION

TEKLAB, INC.
5445 Horseshoe Lake Road
Collinsville, Illinois 62234
Phone: 618-344-1004

GC/MS FRACTION--VOLATILE COMPOUNDS

Acrolein
Acrylonitrile
Benzene
Bis (Chloromethyl) Ether
Bromoform
Carbon Tetrachloride
Chlorobenzene
Chlorodibromomethane
Chloroethane
2-Chloroethylvinyl Ether
Chloroform
Dichlorobromomethane
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethylene
1,2-Dichloropropane
1,2-Dichloropropylene
Ethylbenzene
Methyl Bromide
Methyl Chloride
Methylene Chloride
1,1,2,2,-Tetrachloroethane
Tetrachloroethylene
Toluene
1,2-Trans Dichloroethylene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene
Trichlorofluoromethane
Vinyl Chloride

GC/MS FRACTION--ACID COMPOUNDS

2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
4,6-Dinitro-O-Cresol
2,4-Dinitrophenol
2-Nitrophenol
4-Nitrophenol
P-Chloro-M-Cresol
Pentachlorophenol
Phenol
2,4,6-Trichlorophenol
Acenaphthene
Acenaphtylene
Anthracene
Benzidine
Benzo(a) Anthracene
Benzo (a) Pyrene
3,4-Benzofluoranthene
Benzo(ghi)Perylene
Benzo (k) Fluoranthene
Bis (2-Chloroethoxy) Methane
Bis (2-Chloroethyl) Ether
Bis (2-Chloroisopropyl) Ether
Bis (2-Ethylhexyl) Phthalate
4-Bromophenyl Phenyl Ether
Butyl Benzyl Phthalate
2-Chloronaphthalene
4-Chlorophenyl Phenyl Ether
Chrysene
Dibenzo (a.h) Anthracene
1,2-Dichlorobenzene
1,3-Dichlorobenzene

GC/MS BASE/NEUTRAL COMPOUNDS

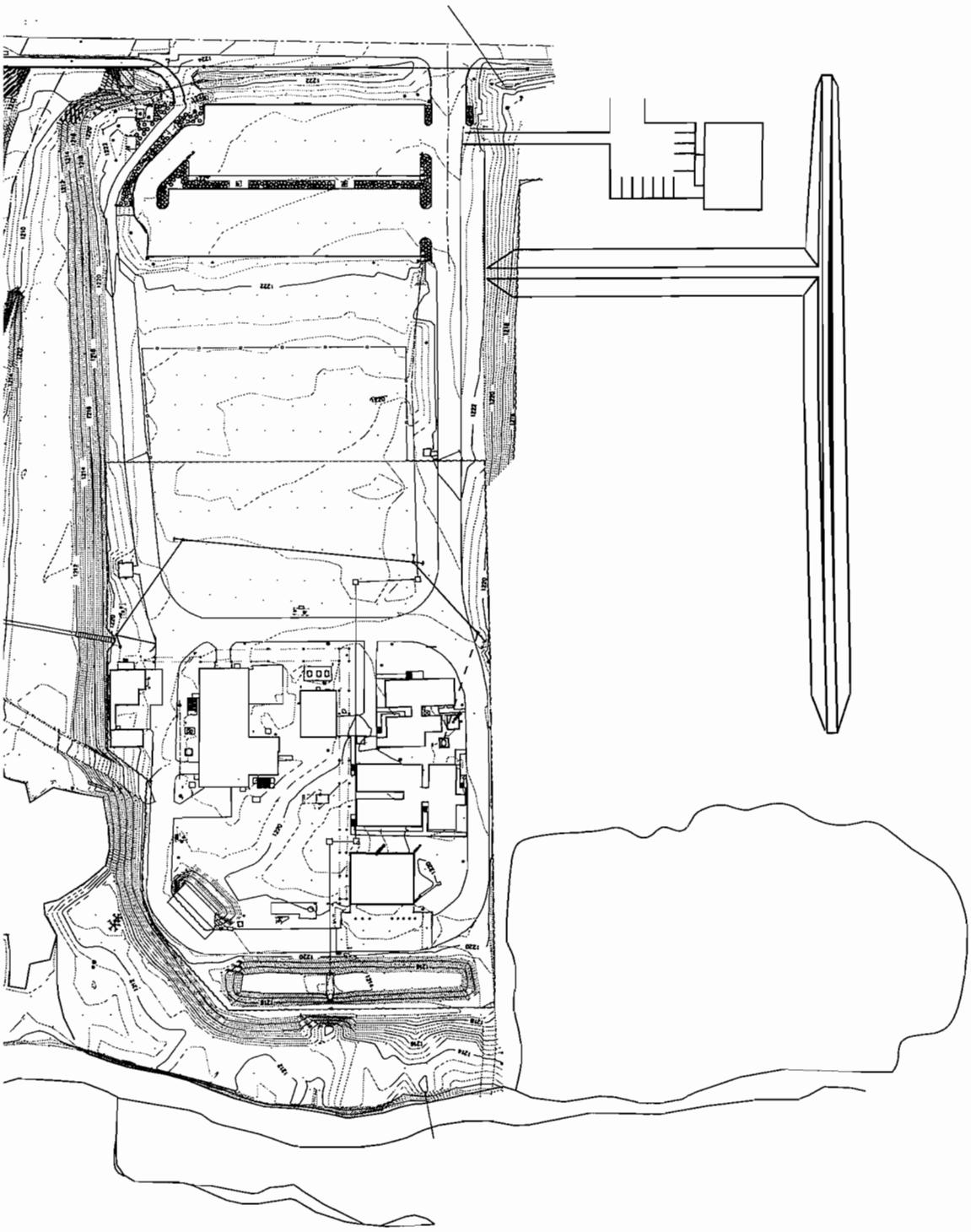
1,4-Dichlorobenzene
3,3'-Dichlorobenzidine
Diethyl Phthalate
Dimethyl Phthalate
Di-N-Butyl Phthalate
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-N-Octyl-Phthalate
1,2-Diphenylhydrazine
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno (1,2,3-c-d) Pyrene
Isophorone
Naphthalene
Nitrobenzene
N-Nitro-sodimethylamine
N-Nitroso-N-Propylamine
N-Nitro-sodiphenylamine
Phenanthrene
Pyrene
1,2,4-Trichlorobenzene

GC/MS FRACTION--PESTICIDES

Aldrin
a-BHC CAS # 319-84-6
ß-BHC
r-BHC CAS # 58-89-9
&-BHC CAS #319-86-8
Chlordane
4,4'-DDT
4,4'-DDE
4,4'-DDD
Dieldrin
a-Endosulfan
ß-Endosultan
Endosulfan Sulfate
Endrin
Endrin Aldehyde
Heptachlor
Heptachlor Epoxide
PCB-1242
PCB-1254
PCB-1221
PCB-1232
PCB-1248
PCB-1260
PCB-1016
Toxaphen

ATTACHMENT A

SITE TOPOGRAPHY MAP



SCALE: 1' = 140'
(ON 11 X 17)

E.H. & S. DATE		DRAWN BY: DATE	djb 03 APR 03
QUALITY & MATERIALS DATE		PROC ENGR: DATE	
- DATE		PROJ ENGR: DATE	
- DATE		ENGINEERING MGR: DATE	
- DATE		MANUFACTURING DIR: DATE	
- DATE		FACILITIES DIR: DATE	

Euticals Inc.
PO Box 1246
Springfield
Missouri
65801

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SPRINGFIELD SITE
SITE TOPOGRAPHY

PLOT SCALE: 1"=140'
DWG SCALE: NONE
SHEET: 1 of 1

DRAWING NUMBER: NPDES-03-1
REV: -

ATTACHMENT B

FLOOD MAP INFORMATION

Federal Emergency Management Agency

Washington, D.C. 20472

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

The Honorable Thomas J. Carlson
Mayor, City of Springfield
830 Boonville
Springfield, Missouri 65802

IN REPLY REFER TO:
Case No.: 92-07-019P

Community: City of Springfield, Missouri
FBFM Panel Number: 290149 0008 and 0006

Effective Date of This Revision: FEB 17 1993

102A

Dear Mayor Carlson:

This is in response to a letter dated July 17, 1992, from Mr. Michael L. Giles, P.E., Principal Engineer for the City of Springfield, regarding the effective Flood Boundary and Floodway Map (FBFM) for the City of Springfield. In his letter, Mr. Giles requested that we revise the effective FBFM to show the effects of floodway optimization to utilize more of the allowable floodway surcharge along Wilson's, Jordan, and Fassnight Creeks. In addition, this request involves correcting the effective model to include the effects of Bennett Street Bridge along Jordan Creek. In support of his request, Mr. Giles submitted data with his letter dated July 17, 1992. In addition, Mr. Chester P. Carson, Jr., P.E., Carson-Mitchell, Inc., submitted data with his letters dated August 17 and September 2, 1992, and Mr. Charles R. Turner, P.E., Assistant Director of Public Works, City of Springfield, submitted data with his letter dated October 1, 1992.

We have completed our review of the submitted data with regard to the data used to produce the effective FBFM, and have revised the FBFM to modify the floodway boundary delineations of a flood having a 1-percent probability of being equaled or exceeded in any given year (base flood) along a 317-foot section of Wilson's Creek, starting at a point 13.56 miles above its mouth and ending at mile 13.62 at the confluences of Jordan and Fassnight Creeks. The floodway modification also includes a section of Jordan Creek starting at its confluence with Wilson's Creek and ending 1,267 feet upstream of the confluence. In addition, a section of Fassnight Creek floodway is modified, starting at its confluence with Wilson's Creek and ending 633 feet upstream of the confluence. The floodway modification resulted in a revised floodway through the above reaches. While the addition of Bennett Street Bridge changed the floodway on Jordan Creek, the base flood elevations (BFEs) were not increased.

The modification is shown on the enclosed annotated copies of FBFM Panels 290149 0008 and 0006. This Letter of Map Revision (LOMR) hereby revises these panels of the effective FBFM dated October 16, 1991.

The floodway is provided to your community as a tool to regulate floodplain development. Therefore, the floodway modifications described in this letter, while acceptable to the Federal Emergency Management Agency (FEMA), must also be acceptable to your community and adopted by appropriate community action, as specified in Paragraph 60.3(d) of the National Flood Insurance Program (NFIP) regulations.

This modification has been made pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and is in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448), 42 U.S.C. 4001-4128, and 44 CFR, Part 65.

As required by the legislation, a community must adopt and enforce floodplain management measures to ensure continued eligibility to participate in the NFIP. Therefore, your community must enforce these regulations using, at a minimum, the BFEs, zone designations, and floodways in the Special Flood Hazard Areas shown on the FBFM for your community, including the previously described modifications.

This response to your request is based on minimum floodplain management criteria established under the NFIP. Your community is responsible for approving all proposed floodplain developments, including this request, and for ensuring that necessary permits required by Federal or State law have been received. With knowledge of local conditions and in the interest of safety, State and community officials may set higher standards for construction, or may limit development in floodplain areas. If the State of Missouri or the City of Springfield has adopted more restrictive or comprehensive floodplain management criteria, these criteria take precedence over the minimum NFIP requirements.

The community number and suffix code listed above will be used for all flood insurance policies and renewals issued for your community on and after the effective date listed above.

The modifications described herein are effective as of the date of this letter. However, a review of the modifications and any requests for changes should be made within 30 days. Any request for reconsideration must be based on scientific or technical data.

This LOMR will not be printed and distributed to primary map users such as local insurance agents and mortgage lenders; therefore, the community will serve as a repository for these new data. We encourage you to disseminate the information reflected by this LOMR widely throughout the community in order that interested persons such as property owners, insurance agents, and mortgage lenders may benefit from this information. We also encourage you to consider preparing an article for publication in the community's local newspaper that would describe the changes that have been made and the assistance the community will provide in serving as a clearinghouse for these data and interpreting NFIP maps.

If you have any questions regarding the modifications described herein, please contact the Chief, Natural and Technological Hazards Division, FEMA, in Kansas City, Missouri, at (816) 283-7002, or Mr. Alan Johnson of my staff in Washington, DC, at (202) 646-3403, or by facsimile at (202) 646-3445.

Sincerely,

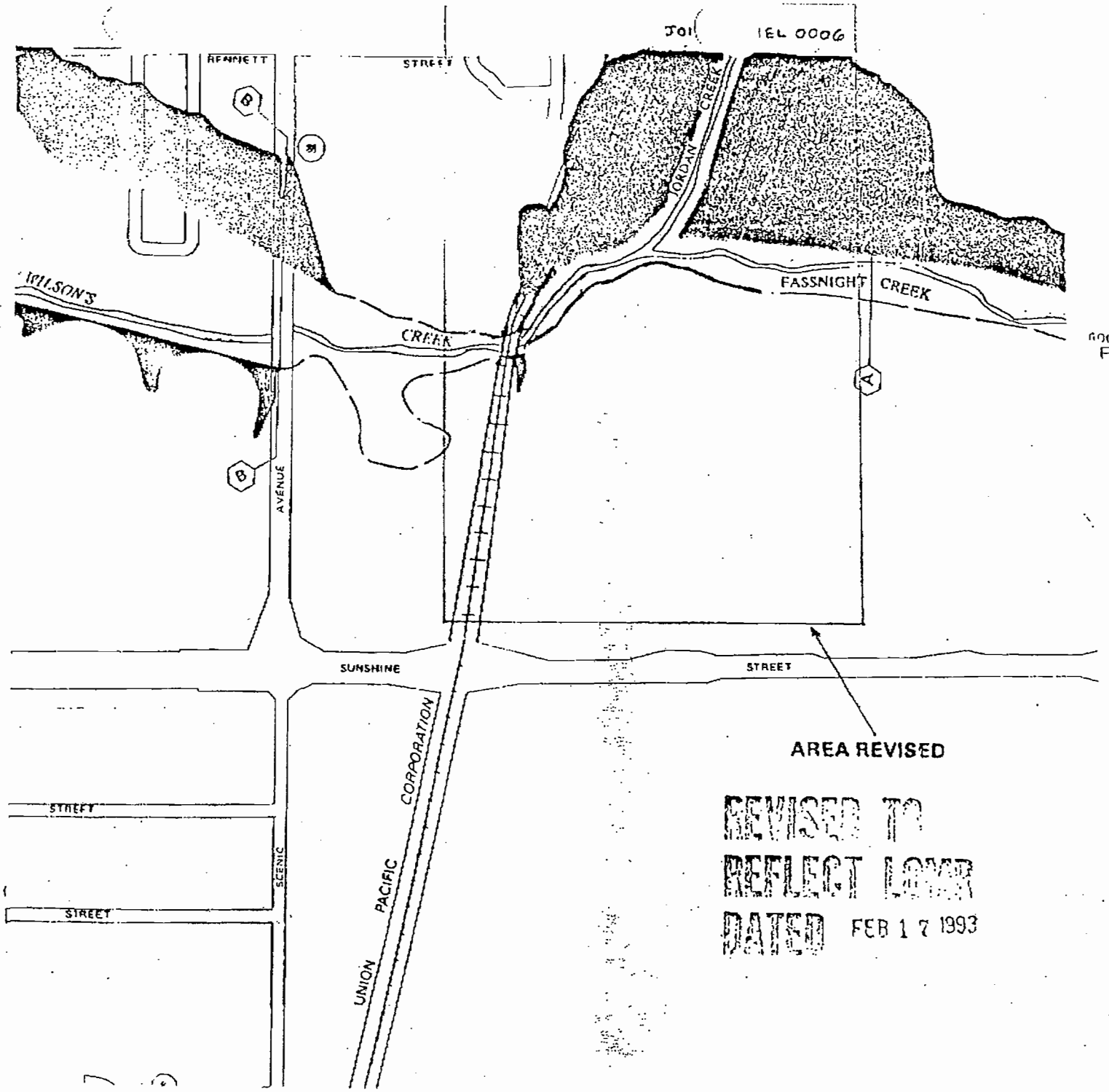
William R. Locke
Chief, Risk Studies Division
Federal Insurance Administration

Enclosures

cc: Mr. Michael L. Giles, P.E.
Principal Civil Engineer
Department of Public Works

Mr. Chester P. Carson, Jr., P.E.
Carson-Mitchell, Inc.

Mr. Charles R. Turner, P.E.
Assistant Director of Public Works



N

APPROXIMATE SCALE

600 0 600 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FLOODWAY

FLOOD BOUNDARY AND FLOODWAY MAP

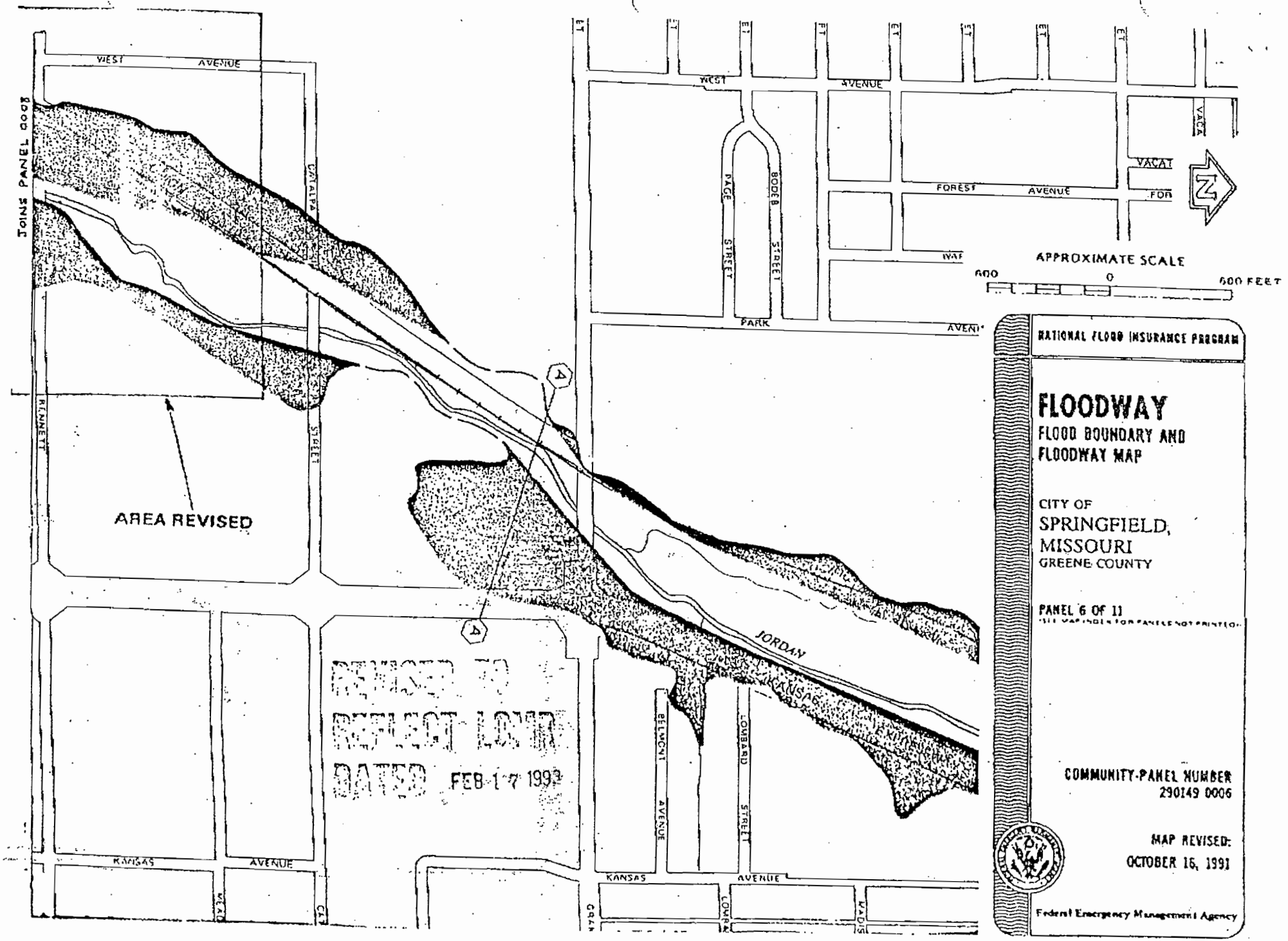
CITY OF
SPRINGFIELD,
MISSOURI
GREENE COUNTY

PANEL 8 OF 11
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
290149 0008

MAP REVISED:
OCTOBER 16, 1991

Federal Emergency Management Agency



NATIONAL FLOOD INSURANCE PROGRAM

FLOODWAY

FLOOD BOUNDARY AND FLOODWAY MAP

CITY OF
SPRINGFIELD,
MISSOURI
GREENE COUNTY

PANEL 6 OF 11
"SEE FIRM INDEX FOR PANELS NOT PRINTED"

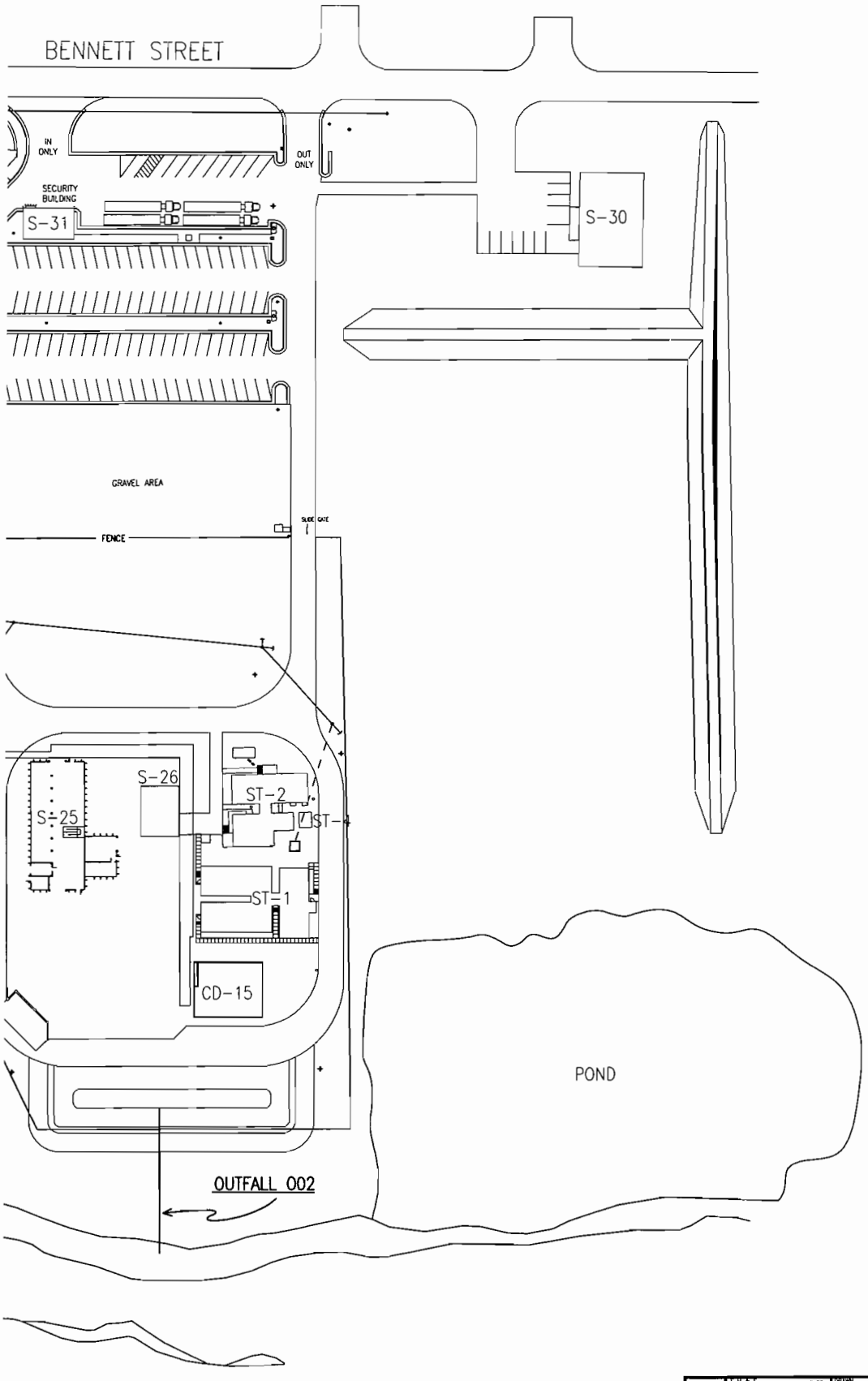
COMMUNITY-PANEL NUMBER
290149 0006

MAP REVISED:
OCTOBER 16, 1991

Federal Emergency Management Agency

ATTACHMENT C

NPDES OUTFALL LOCATIONS



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QUALITY & MATERIALS DIR:	DATE	PROC ENGR:	DATE
- -	DATE	PROJ ENGR:	DATE
- -	DATE	ENGINEERING MGR :	DATE
- -	DATE	MANUFACTURING DIR.	DATE
- -	DATE	FACILITIES DIR :	DATE

Euticals Inc.
PO Box 1246
Springfield
Missouri
65801

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API Manufacturing Custom Synthesis

SPRINGFIELD SITE NPDES OUTFALLS

PLOT SCALE: 1=1
DWG SCALE: NONE
SHEET: 1 of 1

MASTER DRAWING

DRAWING NUMBER: NPDES-03-2

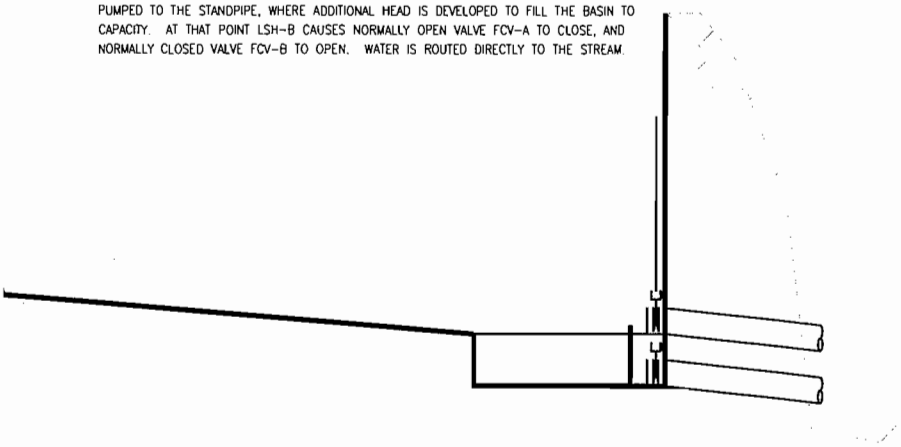
REV:

ATTACHMENT D

OUTFALL 001 BYPASS INFORMATION

OPERATION

WATER RUN OFF IS COLLECTED AT VARIOUS POINTS THROUGHOUT THE PLANT. WATER GRAVITY ORAINS TO THE DETENTION BASIN VIA THE PUMP PIT AND STANDPIPE UNTIL IT REACHES A LEVEL IN THE BASIN SUCH THAT GRAVITY FLOW CAN NO LONGER BE MAINTAINED. AT THAT TIME THE FLOOD PUMP IS AUTOMATICALLY TURNED ON DUE TO LSH-A. WATER IS PUMPED TO THE STANDPIPE, WHERE ADDITIONAL HEAD IS DEVELOPED TO FILL THE BASIN TO CAPACITY. AT THAT POINT LSH-B CAUSES NORMALLY OPEN VALVE FCV-A TO CLOSE, AND NORMALLY CLOSED VALVE FCV-B TO OPEN. WATER IS ROUTED DIRECTLY TO THE STREAM.



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QUALITY & MATERIALS DIR:	DATE	PROC ENGR:	DATE
- -	DATE	PROJ ENGR:	DATE
- -	DATE	ENGINEERING MGR :	DATE
- -	DATE	MANUFACTURING DIR:	DATE
- -	DATE	FACILITIES DIR :	DATE

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Springfield
Missouri
65801

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DRAINAGE SYSTEM

PLOT SCALE: 1=1
DWG SCALE: NONE
SHEET: 1 of 1

DRAWING NUMBER: NPDES-03-3
REV: -

ATTACHMENT E

COOLING TOWER TREATMENT CHEMICALS
MATERIAL SAFETY DATA SHEETS

Material Safety Data Sheet

Cooling Water Microbiocide 2130

Latest Revision Date 09/15/12 Print Date 5/23/13

Section 1 Distributor Information

Quality Water Treatment, Inc.
9909 Manchester Road, PMB 312
St. Louis, MO 63122
Phone: (314) 966-2003

Emergency Response: (800) 255-3924

Section 2 Product Identification

Product Name		QWT Cooling Water Microbiocide 2130
Trade Name or Chemical Name		Cooling Water Microbiocide 2130
Chemical Formula		Proprietary
Chemical Family		Microbiocide
NFPA	Health Hazard	3
	Fire Hazard	0
	Reactivity Hazard	0

NFPA Scale: 4=extreme 3=high 2=moderate 1=slight 0=insignificant
Key: NA=Not Applicable ND=Not Determined

Section 3 Hazardous Ingredients

Chemical Name (9)	CAS Number	% WT	TLV-TWA	PEL	SEC 313	Carcinogen?
Unreacted Sodium Hydroxide	1310-73-2	<10	2 MG/M3	2 MG/M3	NA	NA

Section 4 Shipping Data

DOT Proper Shipping Name	Corrosive Liquids, Basic, Inorganic, N.O.S. (Halogenated complex, Sodium Hydroxide)
DOT Hazard Class	Corrosive Material Class 8
DOT Labels Required	Corrosive
UN/NA ID Number	UN 3266
Packaging Group	III
Non Bulk Shipping Name	Hypochlorite Solutions, 8, UN 1791, PG III
Bulk Shipping Name	Hypochlorite Solutions, 8, UN 1791, PG III, RQ (if 666 lbs or more in one package)

Section 5 Physical Data

Boiling/Freezing Point @760 mmHg	214° F - 216° F
PH	12.5-13.0
Vapor Pressure mn Hg @20°C	19MM HG
Vapor Density (air=1)	NE
Percent Volatile by weight	NA
Specific Gravity (@20° C)	1.35
Solubility in Water	Miscible
Appearance and Odor	Yellow liquid, mild odor

Section 6 Fire and Explosion Hazard Data

Flash Point (test method)	NA
Auto ignition Temperature	NA
Flammability Limits in Air (% V)	NA
Extinguishing Media	As used on surrounding fire
Special Fire Fighting Procedures	Avoid breathing fumes
Unusual Fire & Explosion Hazards	None known

Section 7	Reactivity Data
Product Stability	Stable
Conditions to Avoid	Extreme Heat
Chemical Incompatibility	Strong reducing agents, steel, aluminum, alcohols, aldehydes, acids
Hazardous Decomposition Products	Chlorine and Bromine
Hazardous Polymerization	Will not occur

Section 8	Health Hazard Data
Skin Contact	Severe irritant, may result in skin damage
Eye Contact	Severe irritant, corrosive to eye tissues upon contact
Inhalation	Very irritating to mucous membranes
Ingestion	Causes irritation and possible ulceration of gastrointestinal system.

Section 9	Emergency and First Aid Procedures
Skin	Remove contaminated clothing and flush exposed skin with soap and water. If irritation persists or develops get medical attention. Launder contaminated clothing before reuse.
Eyes	Flush immediately with cool water for 15 minutes. Call physician immediately.
Ingestion	If person is conscious, give water to dilute DO NOT INDUCE VOMITING, seek medical attention immediately. Never give anything by mouth to an unconscious person
Inhalation	If breathing is difficult, give oxygen. Move to fresh air. Aid in breathing if necessary and get medical attention.

Section 10	Environmental Data
Spill or Leak Procedures	Large and small spill: completely contain all spilled material. Absorb onto inert compound and reclaim to a closed DOT approved container. Residual may be flushed to waste with large quantities of water.
Waste Disposal Method	Corrosive. Dispose of in accordance with all federal, state and local regulations.
Container Disposal	Empty containers may contain residuals. Thoroughly clean, then offer for recycling, reuse or disposal in accordance with governmental regulations.
Other Precautions	Store at room temperature. Keep container closed when not in use.

Section 11	Special Protection Information
Respiratory Protection	None required under normal conditions
Ventilation	Not required
Protective Clothing	Neoprene gloves, apron, boots as necessary to prevent skin contact.
Eye Protection	Chemical goggles or splash proof safety goggles or face shield.
Other Precautions	Safety shower and eyewash fountains should be easily accessible. Store below 104° F

Section 12 Supplier Information

This information provided in this Material Safety Data Sheet has been obtained from sources believed to be reliable and is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of this product for particular uses are beyond our control. All risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use of suitability of the product.

Material Safety Data Sheet

Cooling Tower Treatment 1590

Latest Revision Date 11/01/12 Print Date 5/23/13
Prepared By: John Haynes

Section 1 Distributor Information

Quality Water Treatment, Inc.
9909 Manchester Road, PMB 312
St. Louis, MO 63122
Phone: (314) 966-2003 Emergency Response: (800) 255-3924

Section 2 Product Identification

Product Name		QWT 1590
Trade Name or Chemical Name		Cooling Tower Treatment 1590
Synonyms		Potassium Hydroxide
Chemical Family		Corrosive Liquid
NFPA	Health Hazard	2
	Fire Hazard	0
	Reactivity Hazard	0
	PPE	C

NFPA Scale: 4=extreme 3=high 2=moderate 1=slight 0=insignificant
Key: NA=Not Applicable ND=Not Determined

Section 3 Hazardous Ingredients

Chemical Name (9)	CAS Number	% WT	TLV-TWA	PEL	SEC 313	Carcinogen?
Potassium Hydroxide	1310-28-3	N/A	2 ppm	2 ppm	No	d

Section 4 Shipping Data

DOT Proper Shipping Name	Corrosive Liquid, Basic, Inorganic, NOS
DOT Hazard Class	8
DOT Labels Required	Yes
UN/NA ID Number	UN 3266
\Packaging Group	PG II
Non-Bulk Shipping Name	Corrosive Liquid, Basic, Inorganic, NOS (Potassium Hydroxide) Class 8, PG III, UN 3266
Bulk Shipping Name	N/A

Section 5 Physical Data

Boiling/Freezing Point @760 mmHg	100 C
pH	10.0 (As is)
Vapor Pressure mn Hg @20°C	N/A
Vapor Density (air=1)	1.0
Percent volatile by weight (%)	N/A
Specific Gravity @20°C	1.06
Solubility in Water	Complete
Evaporation Rate	1.0
Appearance and Odor	Clear to light amber, non-viscous liquid with bland odor.

Section 6 Fire and Explosion Hazard Data

Flash Point (test method)	N/A
Auto ignition Temperature	NA
Flammability Limits in Air (% V)	NA
Extinguishing Media	Non-combustible
Special Fire Fighting Procedures	N/A
Unusual Fire & Explosion Hazards	Can react with aluminum to liberate hydrogen gas. If heated to decomposition, may liberate oxides of sulfur and phosphorus

Section 7	Reactivity Data
Product Stability	Stable
Conditions to Avoid	N/A
Chemical Incompatibility	Acids, aluminum, magnesium
Hazardous Decomposition Products	Oxides of sulfur and phosphorus
Hazardous Polymerization	Will not occur

Section 8	Health Hazard Data
Primary Exposure Routes	Ingestion, Eye
Skin Contact	Highly Irritating. Prolonged contact may result in tissue damage and/or destruction.
Eye Contact	Highly Irritating. May result in tissue damage and/or destruction.
Inhalation	Highly irritating to respiratory tract and mucous membranes. Prolonged contact may result in tissue damage and/or destruction.
Ingestion	Highly Irritating. Prolonged contact may result in tissue damage and/or destruction.

Section 9	Emergency and First Aid Procedures
Skin	Remove contaminated clothing and flush exposed skin with soap and water. If irritation persists or develops, get medical attention.
Eyes	Immediately flush eyes with large amounts of water for 15 minutes and get medical attention if any discomfort persists.
Ingestion	If swallowed, DO NOT INDUCE VOMITING. Drink solution of vinegar and water, then large quantities of water. Get medical attention immediately.
Inhalation	Move to fresh air. Get medical attention, if indicated.

Section 10	Environmental Data
Spill or Leak Procedures	Carefully sweep up and place in suitable containers for proper disposal. Do Not flush residues with water to sanitary sewer.
Waste Disposal Method	Dispose of in accordance with all federal, state and local regulations.
Hazardous Waste 40CFR261	N/A.
Container Disposal	Empty containers may contain residuals. Thoroughly clean, then offer for recycling, reuse or disposal in accordance with governmental regulations.

Section 11	Special Protection Information
Respiratory Protection	None required
Ventilation	Local exhaust is generally sufficient to minimize exposure
Protective Clothing	Chemical Resistant gloves may be worn, but not required.
Eye Protection	Chemical goggles or face shield
Other Precautions	Safety shower and eyewash fountain should be easily accessible.

Section 12 Supplier Information

This information provided in this Material Safety Data Sheet has been obtained from sources believed to be reliable and is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of this product for particular uses are beyond our control. All risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use of suitability of the product.