Form SC	KENTUCKY POLLUTION DISCHARGE ELIMINATION SYSTEM Permit Application	Division of Water

NAME OF FACILITY:	AGENCY USE ONLY
PERMIT NO.:	COUNTY:

I. OUTFALL LOCATION

☐ For each outfall, list the latitude and longitude of its location to five decimal points.

OUTFALL NUMBER	LATITUDE In Decimal Degrees	LONGITUDE In Decimal Degrees	RECEIVING WATER (name)

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

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.

B. For each outfall, provide a description of:
(1) operations contributing wastewater to the effluent;
(2) the average and/or design flow contributed by each operation; and
(3) the treatment received by the wastewater.

OUTFALL NUMBER	SOURCES OF WASTEWATER		TREATMENT DESCRIPTION (refer to Table SC-1 for description)
	Operations Contributing to Flow	Average / Design Flow (include units)	

III. FACILITY DISCHARGE

A. Check the appropriate boxes indicating the types of wastewater discharged.

☐ Domestic wastewater (60% or more sanitary sewage)

☐ Non-contact cooling water

☐ Filter backwash

☐ Other non-process wastewaters. Provide description:

B. Does discharge occur all year?

☐ Yes.

How many days per week does discharge occur?

What is the average duration of discharge? Specify hours or days.

☐ No.

C. Except for stormwater runoff, leaks, or spills, are any of the discharges intermittent or seasonal?

☐ Yes. If yes, provide description of approximate number, duration, and volume of seasonal or intermittent flows.

☐ No.

D. Provide the basis for design and sizing of the wastewater facility.

E. If the facility is a new discharger, what is the anticipated discharge date?

Treatment Plants Only to complete Section F & G.

F. Does all water used at facility (except for human consumption) flow to a treatment plant?

☐ Yes.

☐ No. If no, please describe.

G. What is the design capacity of the treatment system MGD

IV. AREA SERVED BY WASTEWATER TREATMENT PLANT

NAME OF AREA OR COMMUNITY	ACTUAL POPULATION SERVED
Total Population Served	

V. COOLING WATER ADDITIVES

Are cooling water additives used?

☐ Yes. In the table below, list each additive, its composition, concentration, and feed rate. Attach Safety Data Sheets for each.

☐ No

NAME OF ADDITIVE	COMPOSITION	CONCENTRATION	FEED RATE

VI. EFFLUENT CHARACTERISTICS	OUTFALL NO: _____
Complete Sections A, B, and C for each outfall.	
A. What is the frequency and duration of flow?	
B. In the first part of the table below, provide results of effluent analysis for each pollutant / parameter listed.	
C.	

POLLUTANT/PARAMETER	UNITS	MAX DAILY VALUE	AVG DAILY VALUE	NUMBER OF SAMPLES
☐BOD_5 or ☐$CBOD_5$	mg/l			
Total Suspended Solids	mg/l			
E.Coli	colonies/ 100 ml			
Total Residual Chlorine	mg/l			
Oil and Grease	mg/l			
Chemical Oxygen Demand	mg/l			
Total Organic Carbon	mg/l			
Ammonia	mg/l			
Discharge of Flow	MGD			
pH	s.u.			
Temperature (winter)	°F			
Temperature (summer)	°F			

METALS	UNITS	AVG CONCENTRATION
☐ Antimony	µg/l	
☐ Arsenic	µg/l	
☐ Beryllium	µg/l	
☐ Cadmium	µg/l	
☐ Chromium	µg/l	
☐ Copper	µg/l	
☐ Lead	µg/l	
☐ Mercury	µg/l	
☐ Nickel	µg/l	
☐ Selenium	µg/l	
☐ Silver	µg/l	
☐ Thallium	µg/l	
☐ Zinc	µg/l	

VII. CERTIFICATION	
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
PRINTED NAME AND TITLE:	
SIGNATURE:	DATE:
TELEPHONE NO.	EMAIL:

Return completed application form and attachments to:
Division of Water
Surface Water Permits Branch
300 Sower Boulevard, 3rd Floor
Frankfort, KY 40601

Direct questions to: Surface Water Permits Branch at (502) 564-3410.

KPDES FORM SC – INSTRUCTIONS

Listed below are explanations of select Form SC questions. If further information is needed concerning any questions, please contact the Division of Water, at (502) 564-3410.

Section I: Outfall Location

Use the map you provided for Item II of Form 1 to determine the latitude and longitude of each of your outfalls and the name of the receiving water. The latitude and longitude should be given to five decimal places.

Section II: Flows, Sources of Pollution, and Treatment Technologies

A. The line drawing should show generally the route taken by water in your facility from intake to discharge. Show all operations contributing wastewater, including process and production areas, sanitary flows, cooling water, and storm water runoff. Group similar operations into a single unit and label to correspond to the more detailed listing in Item II.B.

B. List all sources of wastewater to each outfall. Operations may be described in general terms (for example, "dye-making reactor" or "distillation tower"). Estimate the flow contributed by each source if no data are available. For storm water, use any reasonable measure of duration, volume, or frequency. For each treatment unit, indicate its size, flow rate, and retention time; and describe the ultimate disposal of any solid or liquid wastes not discharged. Treatment units should be listed in order. Select the proper code from Table C-1 to fill in the treatment code for each treatment unit. Insert "XX" for the treatment code if no code corresponds to a treatment unit you have listed.

Section III: Facility Discharge

A. Check the type(s) of wastewater being discharged.

B. Indicate if discharge(s) occur all year. Complete Item IX for any intermittent discharges.

C. Indicate the number, duration, and volume of seasonal or intermittent flows.

D. Give the basis of design for sizing the wastewater treatment facility. Indicate the **actual** number of population served, **actual** number of students for schools, square feet of space, etc. used in determining the size of the wastewater treatment plant.

E. If application is being submitted by new discharger, indicate date of expected commencement of discharge.

F. Indicate whether all water used at the facility (except for human consumption) flows to a treatment plant.

G. Indicate the design capacity of the treatment system in million gallons per day (mgd).

Section IV: Area Served by Wastewater Treatment Plant

For each area served by the wastewater treatment plant, enter the actual population served at the time of application.

Section V: Cooling Water Additives

List any cooling water additives (if applicable), their composition, approximate concentration, and feed rate.

Section VI: Effluent Characteristics

This part must be completed by all applicants for all outfalls, including outfalls containing only noncontact cooling water or storm water runoff. However, at your request, the Division of Water may waive the requirements to test for one or more of these pollutants based upon a determination that testing for the pollutant(s) is not appropriate for your effluent(s).

List quantitative data for the pollutants or parameters listed. The data may be collected over the past 365 days if they remain representative of current operations. Applicant must collect and analyze samples in accordance with 40 CFR

Part 136. Grab samples must be used for pH, temperature, oil and grease, total residual chlorine, and E. coli. For all other pollutants, 24-hour composite samples must be used.

New dischargers should include estimates for the pollutants or parameters listed instead of actual sampling data, along with source of each estimate. All levels must be reported or estimated as concentration and as total mass, except for flow, pH and temperature.

Describe the frequency of flow and duration of any intermittent discharge (except for storm water runoff, leaks, or spills).

Section VII: Certification

The permit application must be signed as follows:

- **Corporation:** by a principal executive officer of at least the level of vice president.
- **Partnership or sole proprietorship:** by a general partner or the proprietor respectively.
- **Municipality, state, federal, or other public agency:** by either a principal executive officer or ranking elected official.

TABLE SC-1
CODES FOR TREATMENT UNITS
(For use with Form SC, Section II)

PHYSICAL TREATMENT PROCESSES

1-A.....Ammonia Stripping
1-B.....Dialysis
1-C.....Diatomaceous Earth Filtration
1-D.....Distillation
1-E.....Electrodialysis
1-F.....Evaporation
1-G.....Flocculation
1-H.....Flotation
1-I.....Foam Fractionation
1-J.....Freezing
1-K.....Gas-Phase Separation
1-L.....Grinding (Comminutors)
1-M.....Grit Removal
1-N.....Microstraining (Microscreening)
1-O.....Mixing
1-P.....Moving Bed Filters
1-Q.....Multimedium
1-R.....Rapid Sand Filtration
1-S.....Reverse Osmosis (Hyperfiltration)
1-T.....Screening
1-U.....Sedimentation (Settling)
1-V.....Slow Sand Filtration
1-W.....Solvent Extraction
1-X.....Sorption
1-Y.....Equalization
1-Z.....Intermittent Sand Filters

CHEMICAL TREATMENT PROCESSES

2-A.....Carbon Adsorption
2-B.....Chemical Oxidation
2-C.....Chemical Precipitation
2-D.....Coagulation
2-E.....Dechlorination
2-F.....Disinfection (Chlorine)
2-G.....Disinfection (Ozone)
2-H.....Disinfection (Other)
2-I.....Electrochemical Treatment
2-J.....Ion Exchange
2-K.....Neutralization
2-L.....Reduction
2-M.....Odor Control
2-N.....Chemical Hydrolysis

BIOLOGICAL TREATMENT PROCESS

3-A.....Activated Sludge
3-B.....Aerated Lagoons
3-C.....Anaerobic Treatment
3-D.....Nitrification-Denitrification
3-E.....Pre-Aeration
3-F.....Spray Irrigation/Land Application
3-G.....Stabilization Ponds
3-H.....Trickling Filtration
3-I.....Rotating Biological Contractors
3-J.....Polishing Lagoons
3-K.....Biological Hydrolysis
3-L.....Post Aeration
3-M.....Treatment by Plain Aeration
3-N.....Holding or Detention Pond
3-P.....1-Cell Lagoon
3-Q.....2-Cell Lagoon
3-R.....3-Cell Lagoon
3-S.....4-Cell Lagoon
3-T.....Septic Tanks

OTHER PROCESSES

4-A.....Discharge to Surface Water
4-B.....Ocean Discharge Through Outfall
4-C.....Reuse/Recycle of Treated Effluent
4-D.....Underground Injection
4-E.....Reuse or Sale of Wastewater
4-F.....Temperature Control
4-G.....Eutectic Freezing
4-H.....Grease Removal

SLUDGE TREATMENT AND DISPOSAL PROCESSES

5-A.....Aerobic Digestion
5-B.....Anaerobic Digestion
5-C.....Belt Filtration
5-D.....Centrifugation
5-E.....Chemical Conditioning
5-F.....Chlorine Treatment
5-G.....Composting
5-H.....Drying Beds
5-I.....Elutriation
5-J.....Flotation Thickening
5-K.....Freezing (Sludge Treatment)
5-L.....Gravity Thickening
5-M.....Heat Drying
5-N.....Heat Treatment
5-0.....Incineration
5-P.....Land Application (Sludge)
5-Q.....Landfill
5-R.....Pressure Filtration
5-S.....Pyrolysis
5-T.....Sludge Lagoons
5-U.....Vacuum Filtration
5-V.....Vibration
5-W.....Wet Oxidation