FACT SHEET

DATE:	November 14, 2017
FACILITY:	Olathe Harold Street Wastewater Treatment Facility
KANSAS PERMIT No.:	M-KS52-IO01
FEDERAL PERMIT No.:	KS0045802
LOCATION:	SE¼, Section 23, Township 13S, Range 23E, Johnson County

PROPOSED ACTION: The proposed action consists of reissuance of a Kansas/NPDES Water Pollution Control permit for an existing facility.

EXISTING PERMIT: The existing permit was issued for an average design flow of 3.2 MGD and included technology based effluent limits for Total Suspended Solids (TSS) and pH, and water quality based limits for Biochemical Oxygen Demand (BOD), ammonia, E.coli, Whole Effluent Toxicity (WET) testing, and Dissolved Oxygen (DO) (as a minimum concentration). Monitoring for nutrients, lead, rainfall, flow and a Priority Pollutant Scan (PPS) was also required.

FACILITY DESCRIPTION: The existing facility is a mechanical wastewater treatment plant consisting of: mechanical bar screen, eutek grit removal, primary clarification –chemically enhanced with ferric chloride, first stage trickling filters, Intermediate clarification, second stage (high rate) trickling filters, final clarification, UV disinfection, reaeration, anaerobic sludge digestion, extraneous flow basin, centrifuge, and sludge drying beds. The facility receives domestic wastewater from residential and commercial areas and industrial wastewater from local manufacturers.

RECEIVING STREAM: The Olathe Harold Street Wastewater Treatment Facility discharges to the Kansas River via Mill Creek (Kansas Surface Water Register, HUC 10270104-39). Pursuant to the Kansas Surface Water Quality Standards K.A.R 28-16-28 (b-g), the first classified stream is Mill Creek and is designated for expected aquatic life use, domestic water supply, food procurement, groundwater recharge, industrial water supply, irrigation, livestock watering, and Primary "B" contact recreation. The receiving stream has been delisted for zinc, lead, copper and chlordane.

PROPOSED LIMITS: The proposed permit is based upon an average discharge flow of 3.2 MGD to Mill Creek. The effluent limits are technology based per 40 CFR 133.102 for TSS and pH, and water quality based for BOD, ammonia, E.coli, WET testing and DO (as a minimum concentration). The monitoring requirements for the effluent from this facility are consistent with KDHE policy and with requirements of other similar facilities within the State. These monitoring requirements also reflect the best professional judgment of the permit writer considering design and process reliability, and past operational and effluent quality information. This permit is being reissued in accordance with the Basinwide Permit Planning Procedure, with a sampling frequency of once weekly for BOD, TSS, ammonia, and E.coli, once monthly for nutrients, copper, chloride and lead, and twice weekly for DO, with a reporting frequency of monthly. Limits for Biochemical Oxygen Demand, Total Suspended Solids, ammonia, E.coli, pH, and DO (as a minimum concentration) are required. Year round contact recreation based E.coli limits will be imposed, as the receiving stream is in an

urbanized area with a high potential for human contact with the stream water. The monitoring for chloride, copper, lead, rainfall, flow, and nutrients, with mass goals and a concentration goal for total phosphorus is also included. The monitoring for lead will be continued, as past monitoring results have exceeded water quality based effluent limits.

The basis of the effluent limits and monitoring applied in this NPDES Permit are as follows:

Parameter	Basis
Biochemical Oxygen Demand	KS Surface Water Quality Standards
Total Suspended Solids	EPA Secondary Treatment Regulation
pH	EPA Secondary Treatment Regulation
Ammonia	KS Surface Water Quality Standards
E. coli	KS Surface Water Quality Standards
Total Phosphorus	KS 303(d) Listing
Nitrates (NO_3) + Nitrites (NO_2)	KS Nutrient Reduction Plan
Total Kjeldahl Nitrogen (TKN)	KS Nutrient Reduction Plan
Total Nitrogen (TKN + NO_3 + NO_2)	KS Nutrient Reduction Plan
Chloride	KS TMDL Listing
Copper	Best Professional Judgement
Lead	Best Professional Judgement

303(d) and TMDL LIST: The 2016 Kansas Water Quality Limited Segments (303 (d) List) shows the first classified receiving stream, Mill Creek, HUC 10270104, Segment 39 is impaired by Total Phosphorus and TSS. The proposed permit addresses these parameters as appropriate by requiring TSS limits and the monitoring for Total Phosphorus with mass and concentration goals. TMDL's have been written for chloride, biological conditions, biological sedimentation, and E.coli bacteria. The proposed permit addresses these parameters as appropriate by requiring limits for BOD, TSS, E.coli, and the monitoring for chloride.

PRETRETMENT: The permittee was required to develop an approved pretreatment program, since the permittee operates at least one wastewater treatment plant with a total design flow greater than 5 million gallons per day (MGD) and receives pollutants from Industrial Users which could pass through or interfere with the operation of the POTW, The permittee's pretreatment program was approved by KDHE and EPA on September 17, 1984, which has enabled the permittee to regulate all Significant Industrial Users, which includes both categorical and non-categorical industries. The permittee has also submitted several substantial program modifications to KDHE and EPA for approval, as required. This included a local limits evaluation for both the Harold Street and the Cedar Creek wastewater treatment plant. Technically based local limits were approved by KDHE and EPA for both wastewater treatment plants on July 25, 2005 (attached).

WHOLE EFFLUENT TOXICITY (WET) TEST: The Chronic Whole Effluent Toxicity (WET) tests have been conducted each year as required. The 7-day chronic fathead minnows and Cladoceran tests as noted from the ESC Lab Sciences results indicated the Olathe Harold Street effluent discharge for the past four years were acceptable as described in EPA 821-R-02-13.

The WET test also includes testing for certain metals. The table below shows the detected parameters. All parameters measured below the water quality based effluent limits, except copper, therefore no further action is required. Since copper measured above the water quality based effluent limit, the permit will require monitoring for copper. The proposed permit will require WET testing in calendar years 2019 and 2021.

Parameter:	Sample	PQL	Water Quality Limit
Arsenic	1.4 µg/l	1 µg/l	24 µg/l
Calcium	62,600 µg/l	100 µg/l	No water quality listing
Copper	16 µg/l	1 µg/l	15 µg/l
Hardness	202 mg/l	0.5 mg/l	No water quality listing
Magnesium	11,000 µg/l	50 µg/l	No water quality listing
Nickel	4.1 µg/l	1 µg/l	140 µg/l
Selenium	2.8 µg/l	1 µg/l	6 µg/l
Zinc	44.8 µg/l	10.0 µg/l	266 µg/l

PRIORITY POLLUTANT SCAN: The June 21, 2016 Priority Pollutant Scan (PPS) report by ESC Lab Sciences had a total of four parameters detected above the PQL. The table below shows the detected parameters.

Parameter:	Sample	PQL	Water Quality Limit
Arsenic	1.18 µg/l	1 µg/l	24 µg/l
Copper	12 µg/l	1 µg/l	15 µg/l
Nickel	34.2 µg/l	1 µg/l	140 µg/l
Zinc	22.9 µg/l	10 µg/l	266 µg/l

There were four test results detected above the Practical Quantitation Limit (PQL). These parameters were arsenic, copper, nickel, and zinc. Arsenic, nickel, and zinc measured below the Water Quality Based Permit Effluent limit, therefore no further action is required. Copper measured below the water quality based effluent limit but monitoring will be required due to the fact the WET testing sample measured above the water quality based effluent limit of 15 µg/l. The proposed permit will require a total of three Priority Pollutant Scans in calendar years 2018, 2020, 2022.

SLUDGE: The sludge produced at this facility is subject to the 40 CFR Part 503 Sludge Regulations and is land applied.

CERTIFIED OPERATOR: The facility employs at least one operator with the correct level of certification (Class 4 minimum) for this size of treatment facility.

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