



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

NOV 02 2009

Mr. Karl Mueldener, Director  
Bureau of Water  
Kansas Department of Health and Environment  
1000 SW Jackson St. Suite 420  
Topeka, KS 66612-1367

Re: Objection to draft permit for the Douglas L. Smith Middle Basin Wastewater Treatment Plant (Permit number M-M028-0001)

Dear Mr. Mueldener:

On October 5, 2009, EPA Region VII received a draft National Pollutant Discharge Elimination System (NPDES) permit for the Johnson County Douglas L. Smith Wastewater Treatment Plant (Permit number M-M028-0001, "Douglas L. Smith" or "Indian Creek" Plant). We have conducted a preliminary review of the draft permit and supporting information, and based on this review, Region VII is hereby objecting to the proposed permit, pursuant to 40 C.F.R. § 123.44(b).

**A. Background**

The draft Douglas L. Smith Plant permit describes two (2) outfalls which discharge into Indian Creek. The principal outfall (001A1) receives the discharge from the primary treatment systems of the Plant and is subject to enumerated effluent limitations. An additional outfall (002A1) is described as receiving flow from peak wet weather biological basins which is only allowed to be used when "peak flow through the mechanical plant exceeds 23 MGD." The draft permit also proposes weekly average limits for Biological Oxygen Demand (BOD) of 45 mg/l and for Total Suspended Solids (TSS) of 120 mg/l. There is no percentage removal requirement proposed for either BOD or TSS. The draft permit proposes a limit for E-coli of 2,358 colonies per 100 mg/l for the entire year, without more stringent limits imposed for the summer recreational season.

The draft permit also describes three (3) monitoring locations. Of specific concern is monitoring location 007A1, at which flow comprised of "raw sewage to the Blue River (MO) WWTF via KCMO Interceptor Line" is required to be monitored. There are no other limitations on the timing, volume, use or contents of the transfer to the KCMO system.

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## **B. Basis of Objection and Request for Changes to Draft Permit**

### **Outfall 002A1**

Outfall 002A1 does not set forth limits for BOD and TSS which comply with the secondary treatment standards set forth at 40 C.F.R. 133. The draft Douglas Smith permit does specify percentage removal for BOD or TSS as required by either 40 C.F.R. 133.102, or alternatively, 40 C.F.R. 133.105. The Region requests that the draft permit be revised to fully establish and require full secondary treatment in compliance with 40 C.F.R. Part 133 for all discharges from Outfall 002A1. The appropriate Secondary Treatment Standards (STS) for discharges from Outfall 002A1 are found at 40 C.F.R. 133.102, which are applicable, unless the conditions for "special consideration" found at 40 C.F.R.133.103 are satisfied (See, EPA's outstanding objection to the Johnson County, Nelson Facility permit), or the treatment process for Outfall 002A1 qualifies for the "equivalent to secondary" treatment standards found at 40 C.F.R.133.105.

For a facility to qualify for "treatment equivalent to secondary" it must provide "significant biological treatment" (See 40 C.F.R. 133.101(g)(3)). The draft Douglas Smith permit describes the wet weather basins that discharge from Outfall 002A1 as "biological" which is different than the description of the lagoons in the current permit, which states the Outfall receives flow from an aerated lagoon. However, the draft permit states that these basins only are "used" when flows through the mechanical plant are above 23 MGD. The fact sheet for the draft permit does not describe the retention times for the wet weather basin, or the mechanism by which biological treatment is achieved. If KDHE chooses to revise the draft permit consistent with the standards for treatment "equivalent to secondary"(40 C.F.R. 133.105), the Region requests that KDHE provide adequate information in a revised fact sheet for the permit to clearly explain to the public how adequate retention time can be achieved for peak wet weather flows.

The limit for bacteria for Outfall 002A1 is only expressed in terms of compliance with the criteria for the Primary Contact Recreational "B" designated use for the winter season (November through March) which is 2358 E. coli colonies per 100/ml, but there is no limit expressed that complies with the criteria for the summer season for this designated use (April through October), which is 262 E. coli colonies per 100/ml). The Region requests that the draft permit be revised to establish limits for E-coli for the summer season that complies with the criteria for the designated use for Indian Creek. Due to the use of chlorine disinfection the Douglas L. Smith permit, Outfall 002A1, also should be revised to establish a Total Residual Chlorine daily limit of 21 ug/l. This limit is consistent with the Tomahawk Creek permit.

The description of the discharge from Outfall 002A1 also appears to be a designed diversion of sewage from the main treatment plant, or a "bypass" that will occur during wet weather events, without having satisfied the criteria for a bypass in the federal regulations at 40 C.F.R. 122.41(m). The Region is objecting to the draft permit because of its authorization of Outfall 002A1 as a bypass, without compliance with the requirements of 40 C.F.R. 122.41(m). Additionally, the Region is objecting to this aspect of the permit because of the permit's reliance on KDHE's Standard Condition (Paragraph 9), which is less stringent than the federal requirement for approval of a bypass, as set forth at 40 C.F.R. 122.41(m).

At 40 C.F.R. 122.41(m)(4), it is clearly stated that bypasses are prohibited unless (1) necessary to prevent loss of life, injury or property damage; (2) there are no feasible alternatives; and (3) proper notice is given. The Region requests that the draft permit be revised to expressly reference and incorporate the requirements of 40 C.F.R. § 122.41(m), and to state that discharges from Outfall 002A1 are prohibited unless the requirements of 40 C.F.R. § 122.41(m) have been satisfied.

### **Transfers to KCMO Interceptor Line**

The draft Douglas L. Smith permit describes transfers of sewage to the KCMO Interceptor Line, as monitored at Outfall 007A1. Although the draft permit describes flows transferred from Johnson County as to the "raw sewage to the Blue River (MO) WWTF via KCMO Interceptor Line", the transfers from Johnson County are actually not directly to the Interceptor Line but flow first into the broader separate sanitary sewer system in southern KCMO, which is gravity fed to the 87<sup>th</sup> Street Pump Station. EPA understands that transfers from the Douglas L. Smith Plant occur during both dry and wet weather flows. In January 2009, KCMO completed an Overflow Control Plan (OCP) which addressed waste water flows from both the combined and separate sanitary systems.

The 87<sup>th</sup> Street Pump Station in southern KCMO is one of the largest in the KCMO's collection system, and delivers approximately 2 billion gallons of typical year wet weather flow from a total service population of 182,000 to the Blue River Interceptor Sewer ("Interceptor"). That population includes 55,000 KCMO residents and 124,000 residents from Johnson County. The Interceptor carries flow from the combined sewer system and wastewater from the separate sanitary sewer (SSS) service area south of the Missouri River to the Blue River wastewater treatment facility (WWTP) (Round Grove Pump Station serves the remaining SSS service area).

Wastewater from the Blue River South Basin flows by gravity to the 87<sup>th</sup> Street Pump Station and is discharged directly through a 72 inch diameter force main to the Interceptor. KCMO's OCP estimates that the current overflow volume of separate sewer overflows (SSOs) upstream of 87<sup>th</sup> Street Pump Station, during the "typical year," is 29.1 million gallons at a frequency of 3 times in a typical year (63.5 million gallons during a 5-year, 24-hour storm event). These SSOs occur because, during wet weather, KCMO does not have capacity to transport wet weather flows to the Blue River WWTP without discharges, or "overflows" occurring.

Region VII is objecting to the provisions in the draft Douglas L. Smith permit that allow transfers of "raw sewage" by Johnson County to the KCMO separate sanitary system, because the Kansas City OCP now documents that these transfers of sewage occur when the Interceptor does not have the capacity to accept flows from the Blue River South Basin, which includes the flows transferred from Johnson County. Specifically, the sewage transferred by Johnson County to the Interceptor Line during wet weather events will not all reach the Blue River WWTP for treatment, and will inevitably cause and/or contribute to the SSO discharges within KCMO. To address this issue, the Region requests that the draft permit be revised to prohibit transfers of sewage to KCMO's separate sanitary system (or Interceptor Line) unless there is documented

adequate capacity within the KCMO system to transport or store such transfers of sewage to the Blue River WWTP without discharges, or SSOs, occurring.

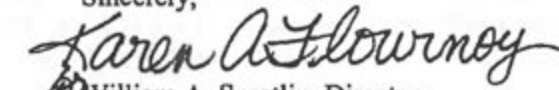
### C. Opportunity to Request Hearing

Pursuant to 40 C.F.R. § 123.44(e), within ninety (90) days of your receipt of this letter, KDHE may either revise the permit to meet EPA's objections and then resubmit the revised permit to EPA for review and approval, or alternatively, request a public hearing on EPA's grounds for this objection. If KDHE does not revise the permit or request a public hearing, pursuant to 40 C.F.R. § 123.44(h)(1), EPA may move forward to issue the permit for the Douglas L. Smith Plant. If a public hearing is requested and EPA does not withdraw its objection, pursuant to 40 C.F.R. § 123.44(h)(2), KDHE must revise the permit to meet EPA's objections and then resubmit the revised permit to EPA for review, or EPA may move forward to issue the permit for the Douglas L Smith Plant.

Pursuant to 40 C.F.R. § 123.29 and KAR 28-16-62(a)(1), the Douglas L Smith permit may not be issued by KDHE until the objections outlined by this letter have been resolved. The Region hopes to resolve this objection by additional discussions with both KDHE and Johnson County.

If you have any questions of the above, please contact Tanya Nix, of my staff, at (913)551-7710, or Howard Bunch, attorney, at (913) 551-7879.

Sincerely,

  
William A. Spratlin, Director  
Water, Wetlands, and Pesticides Division

cc: Mike Tate, KDHE  
John O'Neil, Johnson County Wastewater Administrator