



DEPARTMENT OF NATURAL RESOURCES

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FEB 2 2009

Mr. John DeLashmit
U.S. Environmental Protection Agency
Region VII
901 North Fifth Street
Kansas City, KS 66101

RE: Permit for Piedmont Wastewater Treatment Facility in Lieu of Total Maximum Daily Load for McKenzie Creek (WBID 2786)

Dear Mr. DeLashmit:

McKenzie Creek near Piedmont in Wayne County, Missouri, was originally placed on the 2002 303(d) List for Biochemical Oxygen Demand (BOD). The impairment was changed to low dissolved oxygen (DO) on the 2004-2006 303(d) List. The source of this impairment is the Piedmont Wastewater Treatment Facility (WWTF), Permit Number MO-0047341. The Missouri Department of Natural Resources (department) has opted to correct these impairments through permit limits in lieu of a Total Maximum Daily Load (TMDL).

Two and one half miles of McKenzie Creek were listed as impaired as a result of three water quality surveys conducted by the department in August 2000, June, 2001 and July 2001 (see data sheet enclosed). These surveys showed that the Piedmont wastewater lagoon was causing significant reductions in the dissolved oxygen levels in McKenzie Creek directly downstream of and attributable to the WWTF. In looking at these data, it was noted that one site upstream of the plant had low DO. This reading was taken just 30 yards upstream of the WWTF outfall. Judging by the conductivity at that spot and at the outfall at that time, it is possible that the low DO results are caused by hydrologic backflow. On September 14, 2007, department staff conducted additional monitoring and investigation to determine if, indeed, there was low DO upstream of the WWTF. At a site about 2.5 miles upstream of the WWTF outfall, the morning DO was 7.8 mg/L, while it was 1.7 mg/L at the outfall and 3 mg/L 1.6 miles below the outfall. Later in the day, the DO readings were 8.3, 2.8 and 6.9 mg/L respectively at these locations (see enclosed data sheet). Specific conductivity more than doubled between the upstream site and the outfall. Based on these measurements, the department concludes that low DO is not an issue upstream of the WWTF.

There are currently three permitted facilities upstream of the Piedmont WWTF. One facility is the Piedmont Industrial Park with a design flow of 5,000 gallons per day. Because of its low flow and distance upstream of the Piedmont WWTF (four miles), it is not a significant contributor to low DO below the WWTF. There are also two storm water outfalls in the upper McKenzie Creek watershed, one 3.5 miles upstream of the WWTF and another 7.6 miles upstream. Neither of these outfalls is considered a source of low DO. Based on these findings, the department has determined that the Piedmont WWTF is the sole source of the low DO impairment below this facility.



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The department reissued the Piedmont WWTF permit on July 3, 2008, with effluent limits (effective in three years) ensuring stream water quality standards will be met. The DO water quality standard of 5 mg/L will be achieved by limiting the BOD in the effluent to 20 mg/L daily maximum and 10 mg/L monthly average. The previous permit had limits for BOD of 65/45 (weekly/monthly average) mg/L. The wasteload allocation for BOD was established under contract by Parsons Corporation in 2005 and used the Qual2K model.

The City of Piedmont is currently under enforcement action because the Piedmont WWTF cannot meet limits for BOD and Total Suspended Solids. Abatement Order on Consent (AOC) No.997 between the City of Piedmont and the department was signed January 21, 2009 (copy enclosed). The agreement in the AOC has two phases. Phase I requires interim upgrades and/or operational changes that will enable the city to comply with its current permit limits. Phase II requires later upgrades or replacement of the WWTF that will enable its effluent to meet the new limits noted above. A compliance schedule is included in the AOC with targets tied to the date of signatures. There will also be detailed schedules in the two phases of upgrades.

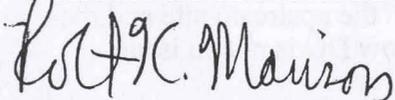
An added issue is a significant industrial user to the Piedmont WWTF, Windsor Foods, which discharges a high BOD load to the WWTF (historically from 936 to 8110 mg/L). In the newly issued permit, this discharge is treated as a separate outfall (#002) and the industry must meet city-mandated limits, which are set by ordinance at 300 lbs/day or 360 mg/L at 0.1 MGD. The upgrades the city is planning for the WWTF are tied to this low BOD influent stream.

Enclosed please find the Missouri State Operating Permit for the Piedmont WWTF. The new effluent limits will go into effect three years after issuance (July 3, 2011) and by meeting them, the water quality standards should be achieved in McKenzie Creek. Ambient stream monitoring by the department will be scheduled following completion of the upgrades to determine if the new permit limits have eliminated the impairment. In addition, the permit requires monthly instream monitoring of DO downstream of Outfall #001. Finally, a reopener clause is included in the permit to allow for stricter limits if monitoring shows water quality standard violations.

With this letter, the department submits the Piedmont WWTF permit to the U.S. Environmental Protection Agency for concurrence that the permit will serve in lieu of a TMDL for McKenzie Creek. We appreciate EPA taking prompt action on this. If you have any questions, please contact Mr. John Hoke at (573) 526-1446 or by mail at Missouri Department of Natural Resources, Water Protection Program, P. O. Box 176, Jefferson City, MO 65102-0176.

Sincerely,

WATER PROTECTION PROGRAM



Robert K. Morrison, P.E., Chief
Water Pollution Control Branch

RKM:apl

Enclosures

c: Mr. Daniel R. Schuette, Director, DEQ
Mr. Earl Pabst, Deputy Director, DEQ
Missouri Clean Water Commission