

Exhibit 8

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: DC Water and Sewer Authority
Blue Plains Treatment Facility
Draft Modified Permit DC0021199
WASA LTCP/DC Water Quality Standards
11/29/04

TO: DC0021199 File

WASA LTCP Water Quality Standards

A. Background

One of the primary goals of the 1994 Combined Sewer Overflow Policy (CSO Policy), is to achieve compliance with the Clean Water Act (CWA) by providing for the attainment of applicable water quality standards. The CSO Policy provides that WQS be achieved through implementation of the nine minimum controls and development and implementation of a long term control plan (LTCP). The DC Water and Sewer Authority (WASA) submitted its final LTCP dated July 2002 to EPA, the permitting authority in this instance. WASA chose the "demonstration" approach described in the CSO Policy, in developing its LTCP. Under the demonstration approach, WASA should demonstrate the following:

1. The planned control program is adequate to meet WQS and protect designated uses, unless WQS or uses cannot be met as a result of natural background conditions or pollution sources other than CSOs;
2. The CSO discharges remaining after implementation of the planned control program will not preclude the attainment of WQS or the receiving water's designated uses or contribute to their impairment. Where WQS and designated uses are not met in part because of natural background conditions or pollution sources other than CSOs, a total maximum daily load, including a wasteload allocation and a load allocation, or other means should be used to apportion pollutant loads;
3. The planned control program will provide the maximum pollution reduction benefits reasonably attainable; and
4. The planned control program is designed to allow cost effective expansion or cost effective retrofitting if additional controls are subsequently determined to be necessary to meet WQS or designated uses. CSO Policy, 59 FR 18688, at 18693.



On August 28, 2003, the District of Columbia Department of Health (DOH), informed EPA that upon its review of WASA's LTCP and other pertinent documents, DOH was satisfied that the discharges remaining after implementation of the LTCP, together with the other source reductions, will meet the narrative WQS in all receiving waters. In order to ensure that the degree of control of CSO in the LTCP, would achieve the numerical criteria, DOH used the same projected loadings as the final LTCP and performed allocation reductions to the other sources that affected the water body. The model calculations were checked for achievement of the WQS. The Anacostia Basin bacteria TMDL has a set of tables showing different parts of that River and the achievement of the numerical criteria. Additionally, the Anacostia Basin bacteria TMDL contains a detailed appendix of data that demonstrates compliance with the numerical criteria. DOH conducted the same exercise for bacteria loadings in Rock Creek and the Potomac River. In an effort to be conservative, DOH examined the allocation to see if the LTCP would achieve compliance with an even more stringent WQS specifically "no more than 10% of the days exceed 400 organisms/100 ml". DOH found that the LTCP allocation exceeded what would be needed for each of the relevant receiving waters within the District of Columbia, but that Maryland will need to achieve greater reductions (i.e., pollutant sources in Maryland) in order to achieve DC WQS. This determination includes the recognition that the LTCP will reduce the pollution loadings causing impairments by the amounts identified in the pertinent TMDLs. For its WQS compliance review, the DC DOH considered the capacity of the engineered controls as they relate to storm size, the numbers of anticipated overflows in each water body in an average year, (following complete implementation of the LTCP), the modeling for the LTCP, the permit requirements and the financial burden for implementation of the LTCP. After review of the LTCP and other relevant documents, EPA has determined that the DOH conclusion is reasonable and EPA has similarly concluded that the implementation of the LTCP is likely to protect WQS, based upon current available information.

The following summarizes EPA's analysis of the WASA LTCP in consideration of the requirements of the "demonstration" approach, under the CSO Policy:

1. The planned control program is adequate to meet WQS and protect designated uses, unless WQS or uses cannot be met as a result of natural background conditions or pollution sources other than CSOs.

The planned control program described in the LTCP consists of a combination of pump station improvements, construction of large storage tunnels, limited sewer separation, selected outfall consolidation, regulator improvements, low impact development and excess flow treatment improvements at the Blue Plains wastewater treatment plant. This system, once implemented, is designed to reduce overflows to the Anacostia River by 98%; reduce overflows to the Potomac River by 93%; and to reduce overflows to Rock Creek by 90% in an average year. These reductions are further described by the LTCP as two overflow events to the Anacostia, four overflow events to the Potomac and four overflow events to Rock Creek. The LTCP and TMDL reductions speak directly to reductions from the CSOs.

The District's waters are classified based on their current and designated uses. DC WQS provide the following: Class A - primary contact recreation; Class B - secondary contact recreation; Class C - protection and propagation of fish, shellfish and wildlife; Class D - protection of human health related to consumption of fish and shellfish, and; Class E - navigation. Class A is listed as a designated use for the District's waters affected by CSO overflows. Class B is listed as a current use.

For the toxics TMDL, the same hydrological conditions were used in the LTCP as in the TMDL. DOH used the overflow volumes in the LTCP and assigned concentrations to those volumes, then made allocations to WASA CSOs, the DC MS4 system and sources in Maryland. DOH determined that the volume of CSO remaining after implementation of the LTCP would not contain enough toxics to cause or contribute to non-attainment for an applicable water quality standard. The toxics TMDL contains calculations that ensure the LTCP will meet WQS. Further, and importantly, all TMDLs provide for a margin of safety.

EPA concludes that for Rock Creek, and the Potomac River the studies and modeling in the LTCP demonstrate that the remaining overflows after implementation of the LTCP will not preclude the attainment of the District's WQS in accordance with the CSO Policy.

3. *The planned control program will provide the maximum pollution reduction benefits reasonably attainable.* Chapter 9 of the LTCP contains a cost evaluation for the selected controls. The costs associated with reducing overflows to between 12 and zero per year were calculated. Based on CSO volume reduced, there appeared to be a point of lessening return, i.e., knee of the curve on a graph charting overflows reduced against cost, at about two overflows per year into the Anacostia River. At that point, the cost curve turned towards the vertical, implying significantly increasing costs for additional benefit, i.e., additional overflows reduced. Two overflows per year for the Anacostia appears to be the approximate knee of the curve for CSO overflow volume.

With regard to Rock Creek, with the exception of Piney Branch, the CSOs predicted in the LTCP are very small and infrequent compared to the other receiving waters. The knee of the curve analysis showed little change in benefit but a large increase in cost between two and four CSO discharges per year and the final LTCP recommended 4 overflows per year in Rock Creek and one in Piney Branch.

For the Potomac River, the LTCP recommends 4 overflows per year which represents the point of lessening returns based on CSO volume reduced.

Given the extent of the reductions in the CSO discharges compared to the cost of total elimination of the discharges, the controls provided by the LTCP appear to be reasonable. Effectiveness of the remedial alternatives will be physically measured during post-construction monitoring which is intended to verify actual reductions and to assess the need for additional controls.

4. *The planned program is designed to allow cost effective expansion or cost effective retrofitting if additional controls are subsequently determined to be necessary to meet WQS or designated uses.*

As described in CSO requirement number 3 above, post-construction monitoring is required to verify that the engineered alternatives meet their intended goals. As noted above, once LTCP is implemented, WASA will employ additional controls, e.g., baffles, catch basin modifications, netting systems, booms, skimming procedures and trash skimming will be employed to treat the remaining discharges. In addition, implementation of the nine minimum controls required by the permit, e.g., street sweeping, catch basin maintenance, etc., will improve the quality of waters reaching the sewers.

In the event that post-construction monitoring demonstrates that additional controls are necessary, the remaining outfalls can be retrofitted with additional controls such as chlorination facilities, additional screens, booms or other devices to improve their performance. The cost of these additional controls should be insignificant compared to the cost of sewer separation, building the tunnels, rehabilitation of the pumping stations and improvements at Blue Plains, should such additional controls be necessary.