



August 18, 2006

Mr. Thomas L. Bramscher
Water Enforcement and Compliance Assurance Branch
U.S. EPA Region V
77 W. Jackson Boulevard
Chicago, Illinois 60604-3590

Dear Mr. Bramscher:

**Regarding: Detroit Water and Sewerage Department
Combined Sewer Overflow Control Program Inspection**

This is in response to your letter dated July 18, 2006, which transmitted the report prepared by EPA's National Enforcement Investigation Center (NEIC) in November, 2005. That report includes several findings based on an extensive and thorough evaluation of the Detroit Water and Sewerage Department's (DWSD's) Combined Sewer Overflow Control Program.

We are pleased that EPA's evaluation indicates that DWSD's program is generally in compliance with both the NPDES Discharge Permit issued by the Michigan Department of Environmental Quality (MDEQ), and EPA's National CSO Control Policy issued in April, 1994. As you know, DWSD has expended more than a half billion dollars on the development and implementation of its CSO Control Program to date, and expects this total to exceed \$1 Billion when the projects, currently in the planning and design stage, are constructed. We believe that Detroit's CSO Control Program can serve as an outstanding example for other municipalities seeking to satisfy the Clean Water Act goals relating to water quality and public health protection.

We note that the NEIC report lists two specific concerns which are labeled as "potential violations," and eight other "areas of concern." This letter provides DWSD's response to the "potential violations" and the "areas of concern" as requested in your July 18, 2006 letter.

POTENTIAL VIOLATIONS

1. Annual Updates to the Collection System and CSO Operational Plan

The NEIC report notes that annual updates to DWSD's Collection System and CSO Treatment Facilities Operational Plan are not complete independent, stand alone documents. Rather, DWSD's practice since 1994 has been to submit an annual update to the approved Plan, which summarizes changes which have occurred over the past 12 months. The annual update includes replacement pages as necessary to reflect current conditions. EPA's investigators noted that this approach makes it difficult for an outside reviewer to understand and grasp the full scope of the Operational Plan. EPA staff compiled each of the annual updates and consolidated the submittals into the 1993 approved plan in order to create a complete document.



DWSD acknowledges that the annual update process is somewhat unwieldy and difficult to use. For that reason, DWSD has voluntarily agreed to completely re-write and compile a comprehensive Collection System and CSO Treatment Facility Operational Plan. This effort is currently underway, and will be completed so that the new comprehensive Plan can be submitted to MDEQ by October 1, 2006.

We note that the text of the NEIC report acknowledges that the NPDES permit does not require that a complete comprehensive Operational Plan be submitted annually. Rather, the permit requires an update, which is what DWSD has been preparing and submitting each year, and annual updates have been approved by the permitting authority (MDEQ). We would further note that the annual updates not only describe all of the changes and new infrastructure which were placed in service, but also provide status reports and descriptions of facilities still in the planning and design phases, along with a discussion of how these improvements will affect the overall system operation when they are placed in service.

2. Calibration of Analytical Instruments and Records Maintenance

The NEIC report states that “regularly scheduled” calibrations are essential to ensure that the equipment is accurate so that compliance can be determined. The report also notes that the investigators could not locate records to establish that the calibration and maintenance of analytical instruments was performed at the Puritan-Fenkell and Seven Mile CSO Retention Treatment Basins (RTB’s).

DWSD acknowledges that on-site records confirming the calibration and maintenance of instrumentation equipment at these two CSO basins were not on file at the facilities during the NEIC site visit. This situation has subsequently been rectified. Instructions have been issued to staff to ensure that all calibration and maintenance work activities are logged and kept on hand at each facility, rather than at the Hubbell-Southfield CSO facility office.

With regard to the calibration and testing issue, we note that the specific language in the NPDES permit requires the permittee to “periodically calibrate and perform maintenance procedures on all analytical instrumentation at intervals to ensure accuracy of measurements” (emphasis supplied). The permit does not establish any specific schedule for instrument calibration, as implied in the NEIC report.

The NEIC report acknowledges that the Seven Mile CSO Basin has never discharged to the Rouge River, and overflows from the Puritan-Fenkell Basin are extremely rare. Because of this situation, DWSD believes that it is inappropriate to calibrate and maintain these instruments on a pre-set schedule in order to conserve staff resources. DWSD has opted to conduct its periodic calibration and maintenance activities by having staff perform these tasks at the onset of wet weather events before a discharge occurs from the basins. In this way, DWSD ensures that the equipment is properly calibrated and maintained for purposes of determining compliance with permit requirements.



AREAS OF CONCERN

A. Dry Weather Overflow Monitoring

The NEIC report notes that the geographic area covered by DWSD's collection system is vast, and concludes that visual inspection and personal knowledge of the system may not be adequate for determining whether a dry weather overflow has occurred. The report recommends that additional efforts be made by DWSD to identify dry weather overflows through the utilization of the system-wide instrumentation and control project (PC-713).

Based on staff knowledge of the system and a long history of operational oversight, DWSD is confident that the historical approach for identifying dry weather overflows was adequate. Nevertheless, DWSD has recently placed a new instrumentation and control system (PC-713) into service, and has now begun to utilize this system to help monitor for dry weather overflows.

B. Signage at CSO Outfalls

The NEIC report points out that DWSD currently notifies the public, as required by state law, when CSO discharges occur. However, no signs have been erected to identify CSO outfall locations throughout the City. The NEIC report suggests that such signs should be installed to better inform the public as to the location of CSO discharges.

The issue of signage which identifies the location of CSO outfalls is a topic which DWSD disagrees with NEIC's recommendation. As a major public utility with significant concerns about terrorist activity and security issues, DWSD does not believe that the location of its facilities should be disclosed by signage. This is particularly true for facilities located at remote points in the system where it is difficult to limit access. For this reason, DWSD is opposed to the installation of signs indicating the location of specific outfall pipes.

In Michigan, state law prescribes the specific procedures to be used to notify the public about CSO discharges. Michigan's CSO notification program has recently been lauded by several environmental groups in published reports as a national model for disseminating information to the media, downstream communities, and the general public. DWSD is currently complying with these state notification requirements.

C. Under Utilization of Puritan-Fenkell and Seven Mile CSO Basins

The NEIC report notes that the Seven Mile CSO Basin has never discharged to the Rouge River, and the frequency of overflows from the Puritan-Fenkell Basin is quite low. The report suggests that DWSD develop a program to increase the utilization of these facilities, such as routing flow from other drainage districts into the service area for these basins.



DWSD acknowledges that the Puritan-Fenkell and Seven Mile CSO Basins have far exceeded their design projections with respect to capture and elimination of CSO discharges in their service areas. An initial evaluation of the feasibility of re-routing flows from adjacent drainage areas to these CSO basins was conducted as part of the Basis of Design for the new CSO storage tunnel which will control overflows from 17 outfalls along the upper portion of the Rouge River. This evaluation concluded that it would not be cost effective to route flows to the Puritan-Fenkell and Seven Mile Basins. Other possible mechanisms for expanding the utilization of these basins are currently being examined, and DWSD will continue to pursue feasible options for maximizing flow to CSO control facilities.

D. Sodium Hypochlorite Decay

The NEIC report notes that because of the infrequent utilization of disinfectant (sodium hypochlorite) at both the Puritan-Fenkell and Seven Mile Basins, DWSD has had to monitor the strength of the chemical solution which decays over time. After the chemical has degraded to a concentration inadequate to achieve disinfection at the design flow rate, DWSD disposes of the unused chemical and then fills the storage tanks with a new stock of sodium hypochlorite. We would note that the wasting of disinfectant is done during wet weather periods to further dilute the concentration. Furthermore, the wastewater has a large chlorine demand so the chemical dissipates rapidly in the downstream sewer.

DWSD acknowledges that the gradual decay in disinfectant is problematic for these two facilities. However, the current procedures for disinfection were established in the Basis of Design Report, which was approved by MDEQ after significant discussion with the state agency staff. As a matter of practice, DWSD constantly reviews information generated during operation of the facilities, and in collaboration with MDEQ, we will continue to strive for operational improvements, including disinfection procedures. DWSD's staff is currently looking into inventory management optimization as one possible way to minimize this problem. DWSD remains committed to utilizing chemical disinfection at both basins to ensure that the effluent bacteria limits are met.

E. Operational Plan Updates

This issue is addressed above (see Item 1 under the "potential violations" section of this response). As previously noted, DWSD has committed to preparing a complete comprehensive re-write of the Operational Plan for submittal in October, 2006.

F. Outfall Designation

The NEIC report notes that several different numbering and labeling protocol are used by DWSD. The report notes that the numbering and labeling system used by DWSD is different from the outfall number sequence listed in the NPDES permit.



The situation with respect to numbering of outfalls was created when NPDES permits were first developed in the 1970's, in response to the newly enacted Clean Water Act. Prior to that time, DWSD had already established a system for labeling and numbering its outfalls, backwater gates, regulators and other facilities. When the new NPDES permit was issued, a new set of numbers were given to the CSO outfalls, which results in two unrelated labeling systems.

DWSD believes that this is not a significant problem since the staff is intimately familiar with the facilities. Furthermore, DWSD has created several documents which provide a cross reference so that any particular facility, or outfall can be identified under either labeling system. Because of the longstanding history of usage and the large number of documents in existence with DWSD's labeling designations, it would be inappropriate to abandon this system in order to utilize the NPDES permit outfall numbering system.

G. Undocumented Operating Procedures

The NEIC report notes that with respect to the Puritan-Fenkell and Seven Mile CSO Basins, certain operating procedures appear to have been omitted in the manuals maintained on site. These documents were not available during the inspection because they were in the process of being updated. The NEIC report acknowledges that DWSD's operators are familiar with the facilities and are knowledgeable about this information even though reference documents were not available at the facility during the site visit. DWSD has taken steps to remind its staff that standard procedures require that all maintenance records and logs pertaining to operational protocols at CSO treatment facilities be completed and kept on hand at each site.

H. Electrical and Instrumentation Maintenance Records

The NEIC report notes that there was a delay in obtaining records documenting electrical and instrumentation preventive maintenance work performed at the Hubbell-Southfield CSO Basin. The NEIC report acknowledges that these records were subsequently produced and made available by DWSD.

DWSD has reminded its staff and consultants about the necessity of retaining such records and documents on-site. Procedures have been established to ensure that all such documents are available at these facilities.

SUMMARY

In summary, DWSD believes that the NEIC investigation has served to substantiate the acceptability of the City's overall CSO Control Program based on a thorough, comprehensive review, which spanned a several week period. With respect to the two "potential violations," DWSD believes that this response addresses these issues. With respect to the eight "areas of concern," DWSD believes that appropriate measures have been instituted to fully address these issues and ensure that no future problem arises.



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I trust that this adequately responds to the issues set forth in the NEIC report. If you need further information, or have questions on this, please feel free to contact Mr. Gary Fujita at (313) 224-4784.

Very truly yours,

A handwritten signature in black ink, appearing to read "Victor M. Mercado".

Victor M. Mercado
Director

cc: Mr. Gary Fujita, DWSD Deputy Director
Mr. Phil Argiroff, MDEQ Southeast Michigan District Office

bcc: Ms. Louise Lieberman, DWSD
Mr. Ramesh Shukla, DWSD
Mr. Mirza Rabbaig, DWSD
Mr. Terrance Moore, DWSD
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