UNITED STATES DISTRICT COURT
for the
DISTRICT OF MASSACHUSETTS

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UNITED STATES OF AMERICA, .
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Plaintiff, .
. CIVIL ACTION
v. . No. 85-0489-MA
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METROPOLITAN DISTRICT COMMISSION, .
et al., .
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Defendants. .
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CONSERVATION LAW FOUNDATION OF .
NEW ENGLAND, INC., .
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Plaintiff, .
. CIVIL ACTION
v. . No. 83-1614-MA
.
METROPOLITAN DISTRICT COMMISSION, .
.
Defendants. .
.
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MWRA MONTHLY COMPLIANCE REPORT
FOR JUNE 2000 AND
PROGRESS REPORT AS OF JULY 17, 2000

The Massachusetts Water Resources Authority (the "Authority") submits the following monthly compliance report for the month of June 2000 and supplementary compliance information in accordance with the Court's order of December 23, 1985, subsequent orders of the Court and undertakings of the Authority.

I. Schedule Six.

A status report for the scheduled activities for the month of June 2000 on the Court's Schedule Six, certified by Douglas B. MacDonald, Executive Director of the Authority, is attached hereto as Exhibit "A."

A. Activities Completed.

1. Complete Construction of Neponset River Sewer Separation.

On June 13, 2000, the Boston Water and Sewer Commission ("BWSC"), after substantially completing construction of the Neponset River Sewer Separation project, closed the sole remaining combined sewer overflow ("CSO") regulator in the BOS 095 outfall system, thereby permanently eliminating CSO discharges to

the Neponset River. CSO discharges to the Neponset River had occurred at two outfall locations, BOS 093 and BOS 095. As part of the same sewer separation project, BWSC previously closed the CSO regulators associated with the BOS 093 outfall.1 BOS 093 and BOS 095 will continue to serve as outfalls in Boston's storm drain system.

BWSC plans to continue related construction in the Neponset area for at least another year, primarily to remove private downspout connections and reduce stormwater inflow in the sanitary sewer system further. The Authority has been funding and overseeing the Neponset River Sewer Separation project pursuant to the CSO Memorandum of Understanding and Financial Assistance Agreement it entered into with BWSC in 1996.2

B. Progress Report.

1. Harbor Management.

(a) Mid-Year Update.

The Authority submits as Exhibit "B" its Mid-Year Progress Report on the overall progress toward achieving the two remaining Deer-Island related Court-ordered milestones identified as priorities for 2000 in the Authority's 1999 Annual Report on the Boston Harbor Project submitted in January 2000. Because the Authority has reported extensively on both Secondary Battery C and the Effluent Outfall Tunnel in the monthly reports, the report provides only a brief summary of the progress achieved over the past six months.

(b) Construction of Effluent Outfall Tunnel.

Following the fitting out of the jack-up barge now in use to stage re-ventilation of the outfall tunnel, on July 7, 2000, the tunnel contractor moved the barge into position above diffuser No. 3. In the meantime, a sub-contractor had completed all preparatory work on the diffuser, readying it to accept the casing and vent line assembly.3 Following transport of that equipment to the diffuser site by cargo barge, installation proceeded.

On July 11, the outer casing was installed over diffuser No. 3 and partially dewatered, and the seals were tested. Leakage, at less than two gallons per minute, was well within design parameters. On July 12, the vent pipe was installed, and the manhole cover, removed. Ventilation and communication equipment were placed on the jack-up barge. By July 12, training of the work crews was complete, and work procedures were revised to incorporate final recommendations of the independent health and safety review committee.

The ventilation system has been in operation continually since July 14, and testing showed oxygen in the tunnel reached a normal atmospheric level by late Friday night. Monitoring of air quality is continual. Today a work crew entered the tunnel to restore most of the communications line and to test air and water quality conditions inside the tunnel. Currently the contractor anticipates that its crew will work tomorrow on removing the Hummer vehicle and related equipment left at the end of the tunnel last July. After additional preliminary work, plug removal may commence as early as Wednesday. The contractor has also completed repairs to the coatings at the top of the shaft (except areas which must be coated after the dewatering pumps have been removed).

Meanwhile, a separate tunnel start-up contractor completed inspecting and tagging all 55 diffusers. Finalization of the plan for filling the tunnel and initiating start up is ongoing.

(c) Construction of Secondary Battery C.

The contractor completed leak tests on the remaining three clarifier tanks, the effluent channel and on one of the three reactor trains. The contractor also finished replacing the 42 electrical surge suppressors in the foam spray water system and is now performing leak testing on the scum dip tubes. Once the contractor completes the critical punchlist items and conducts final checkout of the first six clarifier tanks and one of the three reactor trains, it will begin multiple pump testing of the first six return sludge line ("RSL") pumps.

The Construction Manager ("CM") completed inter-CP testing of both the foam spray water system and the reactor scum system with the process information and control system and is currently performing inter-CP testing of the clarifier scum pumps. In addition, the CM and Deer Island Treatment Plant ("DITP") staff have completed 30 of 40 scheduled walkthroughs, including the cryogenic and polymer buildings. The contractor has turned over the cryogenic building to DITP staff and expects to turnover the polymer building during the next few days. The Authority expects that walkthroughs will continue through the end of July.

To date, 33 percent of the 6,237 open items that are critical for turnover ("T" items) have been completed. The Authority continues to impress upon the contractor the importance of completing the remaining open items as urgently as possible. The CM is also working to ensure its timely review and approval of "T" items as the contractor completes them.

The Authority, the CM, its design engineers and construction contractor continue to make every effort to support an August turnover of all the Battery C facilities to DITP. With leak tests complete in the clarifiers and underway in the reactors, the Authority hopes that the contractor can begin the first of the multiple RSL pump tests shortly. Inter-CP testing of the all 18 RSL pumps remains the critical path for turnover.

2. Final NPDES Permit.

On July 10, 2000, the Environmental Protection Agency ("EPA") and the Massachusetts Department of Environmental Protection ("DEP") issued the final modifications to NPDES permit No. MA 0103284 issued to the Authority in May 1999, reflecting the settlement of various appeals.4 A copy of the modified permit is attached as Exhibit "C." The permit will become effective 30 days from issuance of the modifications, replacing NPDES permit No. MA 0102351.

When the new permit takes effect, Secondary Battery C, the Effluent Outfall Tunnel and various CSO projects will remain in construction under the remedial order of this Court. Accordingly, the Authority will be unable to meet some of the permit requirements for varying periods. The Authority attaches as Exhibit "D" an updated "Interim Compliance Status Report," describing those permit requirements that are or may be impossible to meet until construction is completed.5

3. Deer Island Staffing Report.

The Authority submits as Exhibit "E" its annual Deer Island Staffing Report. The report describes changes in the staffing plan over the past year, provides current staffing levels and sets forth future goals and expectations.

4. Combined Sewer Overflow Program.

(a) Cambridge Sewer Separation.

As anticipated, the Authority met with EPA and DEP staff on July 14, 2000, to discuss its revised recommended plan for controlling CSO impacts to Alewife Brook. In its presentation, the Authority reiterated what it has

reported over the last few months, that both the scope of the project under the revised plan and the related cost to the Authority and the City of Cambridge have dramatically increased, now that better information is available regarding combined sewer system conditions in Cambridge and the volume of CSO discharges.6 The Authority also noted that, notwithstanding the higher cost, both it and the City of Cambridge remain committed to providing a level of CSO control that is comparable to the level intended under the original plan, as demonstrated in the revised plan.

Although the Authority was expecting to prepare and submit a Notice of Project Change regarding the revised plan for review under the Massachusetts Environmental Policy Act ("MEPA") later in the summer, the agencies requested first an opportunity to review written documentation of the Authority's analyses supporting its recommendation. The Authority expects to provide a draft report to the agencies within two weeks, and the parties will meet again on August 21, 2000 to discuss next steps.

In the meantime, the Authority and Cambridge continue to negotiate an agreement between them that will include cost sharing terms and a proposed implementation schedule. The Authority anticipates that these negotiations will continue over the next few months. Cambridge is also continuing with the design of sewer separation in the CAM 004 area and the construction activities previously approved by the Authority. Construction is approximately 65 percent complete on the fourth contract, which includes the installation of storm drain and sanitary sewer interceptors in the downstream end of the CAM 004 tributary area.

(b) Cottage Farm CSO Facility Upgrade.

The Authority has continued to address issues with the flow meters and automatic sampling systems at the newly upgraded Cottage Farm CSO facility. After reviewing flow meter calibration and performance data collected during the June 6 activation, the Authority found that both the influent and effluent flow meters experienced problems that appear to be due to adverse hydraulic conditions. The influent channel flows contained too much entrained air, not observable from above the surface of the flow, and the effluent channel hydraulic conditions were too unstable, due to turbulence. Because the flow meters no longer appear suitable for their intended use, the Authority is currently investigating alternative methods of flow measurement and expects to have a recommendation later this month.

Because the redesigned automatic sampling system performed well during the June 6 activation, the Authority has purchased similar strainer systems to retrofit the effluent pre- and post-dechlorination sampling systems. The Authority expects to install the new strainers by the end of this month.

(c) North Dorchester Bay and Reserved Channel Consolidation Conduits and CSO Facility.

The Authority is continuing preliminary work to prepare a Notice of Project Change ("NPC") to initiate consideration under MEPA of alternative sites for and approaches to the projects planned to provide CSO control for the North Dorchester Bay beaches and Reserved Channel. The Authority does not take issue with the United States' position, as stated in its June 22 *Response ... to the MWRA's June 15, 2000 Compliance and Progress Report*, that filing an NPC would be inconsistent with the current requirement of Schedule Six to begin construction of a portion of the projects in September 2000. As previously reported to the Court, however, given the fervent opposition of elected officials to the projects as currently sited, the Authority is effectively precluded from meeting the Schedule Six requirement. The Authority does not take lightly the prospect of not complying with the existing Court Order. Nevertheless, it believes that it should make every effort to work with the South Boston community and its representatives to attempt to move CSO control forward by addressing outstanding

issues raised by the community, in part through a reevaluation of site options and project alternatives.

Toward that end, the Authority proposes to prepare a draft NPC by the end of August that it can circulate prior to taking any formal action to reopen MEPA review. The Authority hopes that the preparation of a draft NPC may assist in demonstrating the value of taking this approach to getting the project accomplished and become the basis for continuing discussion both with the community and with the United States regarding a constructive process for attempting to reach consensus on a way to meet CSO control goals.

(d) Variance for CSO Discharges to Charles River.

On June 29, 2000, the Authority participated in a public forum conducted by DEP regarding a proposed one-year extension to the regulatory variance for CSO discharges to the Charles River.7 The proposal would extend the current 24-month variance from October 1, 2000 to October 1, 2001 and defer the deadline for the Authority to submit a report evaluating additional CSO control at the Cottage Farm CSO facility from July 1, 2000 to July 1, 2001.8 The hearing also provided an opportunity for various parties to discuss ongoing activities related to Charles River water quality.

At the forum, the Authority reviewed the status of its efforts to implement the CSO control plan as well as the results from recent receiving water monitoring on the Charles River. The Authority also noted that the Authority's ability to meet the proposed July 1, 2001 deadline for the submittal of its Cottage Farm report is dependent upon timely receipt of water quality data and an updated sewer system model from the United States Geological Survey, which is now approximately ten months behind schedule.

The public comment period on the proposed extension ran through July 11, 2000. If no new substantial questions were raised, DEP expects to issue the variance extension shortly thereafter.

(e) Floatables Control.

As previously reported, the Authority recently submitted a report to EPA and DEP on the status of ongoing work related to region-wide floatables control and outfall closing projects, as well as the prospect of necessary adjustments to the recommended plan and schedule.9 At a meeting scheduled for July 19, 2000, Authority staff will brief EPA and DEP staff on these issues and answer questions the agencies may have.

In the meantime, the Authority expects to begin work this month to update the characterization of the combined sewer systems and CSO discharges related to outfalls MWR 010, which the Authority plans to close, and MWR 018-020, where the Authority has encountered problems in implementing its recommended plan for floatables control. Work will include field inspections, flow metering and upgrades to the hydraulic model, to enhance system understanding and reassess the recommendations and options. The work likely will preclude the Authority from implementing the recommended controls at these locations by May 2001, as required by Schedule Six.

(f) Dorchester Brook Conduit In-line Storage.

Schedule Six contains milestones for commencement of design, commencement of construction and completion of construction of a Dorchester Brook Conduit In-line Storage CSO project (July 2000, April 2003 and September 2004 respectively). In its 1997 Final CSO Facilities Plan, the Authority reported that "future planned conditions" at the Deer Island Treatment Plant and in the related collection system would bring the Dorchester Brook Conduit overflows into compliance with the state's water quality [SB(cso)] standard for Fort Point Channel and recommended elimination of the Dorchester Brook Conduit In-Line Storage project from the Final

CSO Plan. Subsequently, EPA (Region 1) and DEP approved the Authority's recommendations to eliminate the project from the final CSO plan. However, EPA was unwilling to agree to the Authority's proposal to remove the project milestones from Schedule Six without confirmation that the overflow events at CSOs associated with the Dorchester Brook Conduit are within the level predicted in the Final CSO Plan. At the time, the Authority agreed to retain the related milestones in Schedule Six, pending subsequent verification of flow conditions in the Dorchester Brook conduit because it expected that the new Deer Island outfall would be on line and "future planned conditions" met well before the July 2000 milestone.10

Although the outfall was still not complete, earlier this year the Authority initiated activities to determine whether it could already demonstrate system performance consistent with the recommendation to delete the project.11 Over the past several months, the Authority gathered field information by means of metering and "block testing."12 In addition, it reviewed performance data to see if the system currently operates in accordance with model assumptions. Although the data gathered to date supports the assumptions that the Authority used to predict CSO activation and frequency for the Dorchester Brook Conduit, the Authority has determined that the information is not sufficiently conclusive to support a proposal to delete the milestones at this time. The Authority intends to perform additional metering to take into account certain variables that may affect the reliability of the block testing and to confirm actual flows, as well as additional modeling.

Under the circumstances, the Authority believes a one-year postponement of each of the milestones for the Dorchester Brook Conduit In-line Storage project is appropriate to allow time for the additional investigations to take place over the next several months. The Authority has submitted a letter to EPA and DEP summarizing its recent monitoring activities and describing its plans. The Authority hopes to obtain EPA's agreement on a proposal to defer the milestones to submit to the Court before the end of the month.

By its attorneys,

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Dated: July 17, 2000

Notes:

1. See Compliance and Progress Report dated September 15, 1998, p. 13.

2. See Compliance and Progress Report dated July 15, 1996, pp. 3-4.

3. Preparations to the diffusers included removing rock from the base to expose the ringwall, cleaning marine growth from the ringwall, removing the protective dome from the top of the diffuser and removing the bolts that secured the manhole cover to the top of the diffuser riser pipe.

4. See Compliance and Progress Reports for June 15, 1999, pp. 8-14; and June 15, 2000, pp. 11-12.

5. The Authority first submitted an "Interim Compliance Status Report" on June 15, 1999 (with corrections made in a copy submitted July 15, 1999) after the new permit was originally issued in May 1999 and before the Authority's Board of Directors made the decision to appeal certain sections of the permit.

6. The original plan (Final CSO Facilities Plan and Environmental Impact Report, July 1997) called for reducing annual CSO volume (believed at the time to be 17 million gallons) by 76 percent and reducing the discharge frequency from eight to four times per year, at an estimated cost of $13.8 million. The revised plan calls for reducing annual CSO volume of 50 million gallons by 85 percent and reducing discharge frequency from 63 to seven times per year, at an estimated cost of $65.8 million.

7. In December 1997, DEP gave the Authority a variance from water quality standards for the Charles River, as part of its overall water quality determinations made in support of the Authority's Final CSO Control Plan. See January 15, 1998 Compliance and Progress Report, Exhibit "B" and pp. 3-4. The conditions of the variance were issued by DEP in September 1998. See September 15, 1998 Compliance and Progress Report, Exhibit "B" and pp. 11-13.

8. In its February 15, 2000 Compliance and Progress Report, pp. 18-19 the Authority noted that it would be unable to complete the required Cottage Farm report by July 2000.

9. See Compliance and Progress Report dated May 15, 2000, pp. 11-12.

10. At that time, footnote 38 was added to Schedule Six. The footnote states that the need for the project would be reviewed after the system reached "future planned conditions."

11. See CSO Annual Report Progress Report on the CSO Control Plan, February 2000, pp. 22-23 and the Compliance and Progress Report dated February 15, 2000, pp. 14-15.

12. Block testing consisted of placing a block of wood, tethered to the regulator wall, on top of the CSO weir during dry weather, then observing its location after storms.