FACT SHEET
NPDES PERMIT REISSUANCE
WASHINGTON AQUEDUCT WATER TREATMENT PLANT
WASHINGTON, DC

October 20, 2008

NPDES Permit Number: DC0000019

1. NOTICE OF PERMIT RENEWAL

The United States Environmental Protection Agency (EPA), Region III has made a determination to reissue a permit for the discharge of residual treatment solids that result from the drinking water treatment process from the Washington Aqueduct; leakage from a spring which underdrains the Dalecarlia Sedimentation Basins; treated blowout from the Georgetown conduit; and dechlorinated water from the second and third high reservoirs. Permit requirements are based on the Clean Water Act (33 U.S.C. § 1251 et seq.), hereinafter referred to as the Act, and National Pollutant Discharge Elimination System (NPDES) regulations (40 C.F.R. Parts 122, 124, 125 and 133).

2. PERMITTING AUTHORITY

The NPDES permitting authority is the EPA, Region III, Office of NPDES Permits and Enforcement, NPDES Permitting Branch (3WP41), 1650 Arch Street, Philadelphia, PA 19103. The permit writer is Mary Letzkus (215-814-2087).

3. APPLICANT

The applicant is the Department of the Army, Washington Aqueduct, United States Corps of Engineers, Baltimore District, 5900 MacArthur Boulevard, NW, Washington, DC 20016 – 2515. The contact person is Thomas P. Jacobus, P.E., General Manager, (202) 764-0031.

4. EFFECTIVE DATES

This permit will become effective 30 days after the date upon which EPA issues the permit. The effective and expiration dates and all terms and conditions of this permit are final unless within 30 days of receiving the final permit an interested person(s) file an appeal to the agency's Environmental Appeal Board (EAB), to review any conditions of this permit as provided by 40 C.F.R. § 124.19.

In May of 2000, EPA published a final rule that revises certain regulations pertaining to the NPDES program, including the procedures for appealing EPA determinations on NPDES permits. See Amendments to Streamline the National Pollutant Discharge Elimination System Program Regulations; Round II, 65 Fed. Reg. 30886 (May 15, 2000). Included in the rule are revisions to the permit appeals process that replace evidentiary

hearing procedures with direct appeal to the EAB. The rule eliminates the evidentiary hearing process described at 40 C.F.R. Part 124, Subpart E-Evidentiary Hearings for EPA-Issued NPDES Permits and EPA-Terminated RCRA Permits, as part of its appeals process for NPDES permits. See 40 C.F.R. § 124.19.

5. PUBLIC NOTICE

A draft permit and fact sheet were offered for a 30-day public comment period on April 4, 2008. On that date, EPA published a notice in the *Washington Times*. In addition to the notice in the Times, in accordance with the requirements found at 40 C.F.R. § 124.10(c)(1), EPA mail mailed copies of the notice, draft permit and fact sheet to persons living in the District of Columbia and the surrounding area who are known to EPA to be interested in NPDES matters.

The public comment period ended on May 6, 2008. Comments were received from the Corps of Engineers and the Commonwealth of Virginia. By letter dated May 6, 2008, the Commonwealth of Virginia did not object to the issuance of the permit pending consideration of comments offered with its letter. Certification of the permit by the District of Columbia Department of the Environment was issued June 12, 2008. By letter dated, May 20, 2008, the State of Maryland did not object to the issuance of the permit. By letter dated October 14, 2008 and accompanying Biological Opinion, the National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries (NMFS) concluded that the proposed project may adversely affect but is not likely to jeopardize the continued existence of short nosed sturgeon.

When the March 2003 permit was issued, EPA and the Corps entered into a Federal Facilities Compliance Agreement (FFCA). The FFCA is an expression of EPA's enforcement discretion, and it establishes a schedule to allow the Washington Aqueduct a reasonable period of time to install treatment systems to comply with the NPDES permit. EPA and the Corps anticipate entering into technical amendments to the FFCA to incorporate into the FFCA the numeric discharge limitations set forth in this permit. It is not anticipated that issuance of this permit will affect the schedule for compliance set forth in the FFCA. Accordingly, the FFCA was not offered for public comment.

6. ENDANGERED SPECIES ACT (ESA) CONSULTATION AND REISSUANCE OF THIS PERMIT

In accordance with Section 7(a)(2) of the Endangered Species Act (ESA), EPA must consult with federal agencies having jurisdiction over threatened or living resources regarding permit conditions which may affect any federally listed threatened or endangered species. During the issuance of the March 2003 permit, EPA and NOAA Fisheries entered into informal Section 7 consultation. This resulted in the inclusion of several Special Conditions in the 2003 permit which provided additional protections for listed species.

In November of 2001, the United States Fish and Wildlife Service (FWS) informed EPA that no federally proposed or listed endangered or threatened species under their jurisdiction were known to exist within the boundaries of the proposed federal action area. Accordingly at that time no further consultation with FWS was required for the 2003 permit.

Pursuant to Section 7 of the Endangered Species Act (ESA), in July of 2003 EPA completed a second consultation with the National Marine Fisheries Service (NMFS) regarding the 2004 modified permit. This followed previous informal and formal consultations conducted on earlier drafts of the permit from the spring of 2001 through March 2003. Part III.C.1 and E. include recommendations, reasonable and prudent measures and terms and conditions which resulted from formal consultation.

By letter dated April 4, 2008, EPA has provided copies of the draft permit and fact sheet to NMFS and FWS. In letters dated June 2, 2008, EPA and the Corps confirmed to NMFS that EPA is the lead federal Agency. By letter dated April 17, 2008, EPA submitted a biological evaluation to NMFS which determined that the safeguards contained in the March 2003 permit and carried over in this draft permit, in addition to new provisions listed below are sufficient to protect threatened or endangered species in the Potomac.

In the Biological Opinion dated October 14, 2008, NMFS concludes that the proposed project may adversely affect but is not likely to jeopardize the continued existence of shortnose sturgeon. For this action, NMFS is not requiring any additional reasonable and prudent measures to minimize and monitor take. Further, if in the event that the level of incidental take is exceeded, EPA must immediately provide an explanation of the causes of the taking and review with NMFS the need for possible modification of the reasonable and potential measures.

The biological opinion recommends EPA and the Corps support further studies to evaluate habitat and the use of the Potomac River and the bay, in general by shortnose sturgeon.

The issuance of this biological opinion concludes formal consultation on the continued operation of the Washington Aqueduct and this permit.

7. BRIEF DESCRIPTION OF THIS ACTION

A. Background

The permit that EPA issued to the Corps in March of 2003, was appealed by both the Corps and the National Wilderness Institute (NWI), an environmental advocacy group, but for different reasons. The appeal filed by the Corps contested the performance of certain scientific studies, including but not limited to the spawning and genetics of shortnose sturgeon and portions of the discharge toxicity studies. In an effort to resolve these concerns, EPA, the Corps and other Federal stakeholders entered into discussions.

On November 17, 2003, EPA offered a modified permit for public comment that reflected a settlement of the issues with the Corps. The public comment period ended on December 16, 2003. EPA issued the modified permit in February of 2004. The resolution of the Corps's issues involving the performance of scientific studies required by the permit was independent of the issues raised by NWI and had no effect upon NWI's issues.

The information presented below at Part B of this section describes the results of the additional studies required by the 2004 modified permit. Section 11 of this Fact Sheet discusses the background of the NWI appeal and status of issues raised by NWI.

B. Toxicity Studies

Part III.D of the 2004 permit modification required the submission of a study plan to evaluate discharges from Outfalls 002 and 003 for acute and chronic toxicity. A final Study Plan was approved on July 14, 2004. The goals of this study were to determine whether the effluents have a reasonable potential to exceed applicable ambient water quality standards, and to ensure that the quality of the discharges does not change from historic data.

As required under Part III.D.1, the Aqueduct has submitted a written report describing the results of its yearly testing by February 1 for the years, 2004, 2005, 2006 and 2007. Overall, the results of the toxicity testing using *C. dubia*, fathead minnows and the freshwater amphipod *H. azteca* are consistent for all four years that the testing was performed and with the Toxicity Studies performed in 1999 – 2000.

For 2007, the most recent year for which toxicity studies were performed the results show that there is no instream toxicity for C. *dubia* and fathead minnows. The most toxic result was a ChV of 1.4 TUc (100/70.7 percent effluent) to C. *dubia* for the sample from Georgetown Basin #2 (February 12, 2007). This sample would require a chronic dilution factor of 1.4 to comply with US EPA's 1.0 TUc criterion at the edge of the mixing zone. The chronic dilution factor for outfall 003 is estimated to be 2.9:1 which means that there would be no instream chronic toxicity. None of the four samples were chronically toxic to the fathead minnows (P. *promelas*).

Toxicity using *H. azteca* has consistently demonstrated some reduction in growth in the animals, however, this is believed to be due to an inability to feed because the low density "floc" layer that is formed at the bottom of the laboratory vessel restricts access to food particles.

The annual toxicity testing program also includes the testing of Potomac River sediments from above and below Outfalls 002 and 003. Tests performed using *H. azteca* show no significant mortality in any of the test treatments, compared with the control. Ten day survival percentages ranged from 98 to 100 percent in the four test samples, and 99 percent survival for the laboratory control sediment. In 2007 results were slightly better

showing ten day survival percentages ranging from 99% to 100 % in the four test treatments and 99% survival for the laboratory control sediment. In addition, the growth dated (measured as mean dry weight in mg/organism) showed no statistically significant difference between any of the four test treatments (p=0.05) and the laboratory control.

Since the results of the yearly studies have not demonstrated toxicity, EPA has not required the Aqueduct to submit a plan for or perform Toxicity Identification Evaluation (TIE) studies.

Part III.D.2 requires that in the event that any discharges occur from the sedimentation basins during the spring spawning season (February 15 – June 30), toxicity testing to evaluate the effect of solids on embryo-larval fish will be conducted. The Corps submitted its plan pursuant to the permit condition and it was approved by EPA and the Services on January 31, 2005. Since the sedimentation basins have not been discharged during the prohibition period, there has been no necessity to conduct these studies.

During the pendency of the March 2003 permit, the Federal Facility Compliance Agreement (see section 8 below) was modified to extend the date for compliance with the numeric discharge limitations by eleven months. The new date for compliance is November 30, 2010. Accordingly on that date, or sooner if construction for the new Residuals Treatment Plant is completed earlier, toxicity testing will no longer be required.

C. TMDLs

Since the issuance of the 2003 NPDES permit and its 2004 modification, EPA has approved three TMDLs for the tidal Potomac watersheds and three for Rock Creek. Those TMDLS include:

1. The Tidal Potomac River PCB TMDL, approved October 31, 2007;
2. The Potomac River Watershed Fecal Coliform Bacteria TMDL, approved October 6, 2004 ;
3. Potomac River Tributary for Organics and Metals TMDL, approved May 24, 2005;
4. Rock Creek Tributary for Organics and Metals TMDL, approved February 27, 2004;
5. Rock Creek Metals TMDL, approved February 27, 2004; and
6. Rock Creek Bacteria TMDL, approved February 27, 2004.

None of the six approved TMDLs, apply as follows:

a. The Tidal Potomac River PCB TMDL, the Potomac River Watershed Fecal Coliform Bacteria TMDL, the Rock Creek Bacteria TMDL and the Rock Creek Metals TMDL (discusses copper, zinc, mercury, and lead) do not apply. The Tidal Potamac River PCB TMDL does not apply because there is no reason to believe that PCBs are in

the Aqueduct discharge. The Potomac River Watershed Fecal Coliform Bacteria TMDL does not apply because Fecal Coliform has not been identified in the Aqueduct's discharge. The Rock Creek Bacteria TMDL does not apply because bacteria has not been identified in the Aqueduct discharge. The Rock Creek Metals TMDL (copper, zinc, mercury and lead) do not apply because these pollutants have not been identified in the discharges to Rock Creek.

b. The Rock Creek Tributary for Organics and Metals TMDL does not apply because it is written for Broad Branch, Dumbarton Oaks, Fenwick Branch, Klingle Valley Creek, Luzon Branch, Melvin Hazen Valley Branch, Normanstone Creek, Pinehurst Branch, Piney Branch, Portal Branch and Soapstone Creek, none of which receives discharge from the permitted outfalls. Also, none of the pollutants discussed in the TMDL is identified in the permitted discharge.

c. The Potomac River Tributary for Organics and Metals TMDL does not apply because it is written for Battery Kemble Creek, Foundry Branch and the Dalecarlia Tributary, none of which receives discharge from the permitted outfalls.

8. CHANGES TO THE 2008 PROPOSED DRAFT PERMIT

The following is a summary of changes to the final permit:

a. The quarterly toxicological testing will no longer be required upon the completion of the construction for the residuals handling facility, which shall be on or before November 30, 2010. The reason for this is because with the completion of the new facilities, the Aqueduct will no longer discharge the residuals from the sedimentation basins into the Potomac River.
b. Monitoring and discharge limitations for all of the Dalecarlia and Georgetown sedimentation basins will be discontinued upon completion of the construction of the residuals handling facility, November 30, 2010. Upon completion of the construction, no additional discharges from the sedimentation basins will be permitted, except for the rare occasion of low volume accumulations of leakage, wash water or other non-process waters that may accumulate in the basins. These low volume non-process wastes may be discharged pending notification and from EPA and the DC DOE. The permit provides for analysis and written notification to these agencies in advance of any such discharge.
c. Monitoring and reporting requirements for the underdrain from the Dalecarlia Sedimentation Basins will continue as stated at Part I.C of the permit. (See section 12.C of this fact sheet for a discussion of this requirement).
d. Monitoring and reporting requirements for the City Tunnel, Georgetown Conduit, Second and Third High Reservoirs shall remain in effect for the pendency of this permit.
e. The Best Management Plan which is intended to prevent or minimize the potential for the release of toxic substances is required to be updated and implemented.

f. The prohibition to discharge during the spring spawning season for the endangered shortnose sturgeon remains in effect for the pendency of this permit. The dates of the prohibition are February 15 through June 30.
g. New numeric effluent limits for total recoverable and dissolved copper and total recoverable and dissolved iron have been placed on outfall 002. The limit for total recoverable and dissolved copper is based on a reasonable potential analysis (Technical Support Document for Water-Quality Based Toxics Controls (TSD), EPA/505/2-90-001) and the District of Columbia Water Quality Standards (DCMR 21 Chapter 11 Section 1104.8), using the acute toxicity criteria. The limit for dissolved and total recoverable iron is based on a Reasonable Potential Analysis and the DC Water Quality Standards using the chronic toxicity criteria. (See Section 15 below).
h. The numeric limit for total aluminum for outfall 002 has not changed from the existing permit because the existing technology-based limit is more stringent than a newly calculated numeric limit based on Discharge Monitoring Reports (DMRs), reasonable potential analysis and Best Professional Judgment (BPJ).
i. New numeric effluent limits for dissolved and total recoverable copper, total aluminum and dissolved and total recoverable iron have been placed on outfall 003. The limit for dissolved and total recoverable copper is based on a reasonable potential analysis and the DC Water Quality Standards using acute toxicity criteria. The limit for total aluminum is based on a reasonable potential analysis using DMR data, BPJ and acute toxicity criteria. The limit for dissolved and total recoverable iron is based on a reasonable potential analysis, the DC Water Quality Standards and chronic toxicity criteria. (See Section 15 below).
j. The requirement to consult with the National Park Service and to obtain permits for the removal of rocks in the vicinity of outfall 002 is removed from this permit.
k. The limits for dissolved and total recoverable portions for iron and copper are an attempt provide analyses that reconcile the total recoverable analyses necessitated by NPDES regulations at 40 C.F.R. Section 122.45 (c) and the DC water quality standards which are written for the dissolved fraction. The Corps has voluntarily agreed to provide both analyses.

9. SCHEDULE - FEDERAL FACILITY COMPLIANCE AGREEMENT (FFCA)

As noted above (Section 5), when this NPDES permit was issued in March of 2003, EPA and the Corps entered into a FFCA Docket No. CWA-03-2003-0136DN. The June 12, 2003 FFCA, set forth a schedule by which the Washington Aqueduct must achieve compliance with specific milestones, including the numeric discharge limitations set forth in the NPDES permit. Paragraph 22 of the FFCA required that one or more of the new sedimentation basins must be completed no later than March 1, 2008, and full compliance with the numeric discharge limitations at all basins must be achieved no later than December 30, 2009.

On May 3, 2007, the Washington Aqueduct requested two modifications to paragraph 22 of the FFCA. These modifications related to the following: (1) an extension of the final December 30, 2009 deadline to November 30, 2010; and (2) elimination of the March 1,

2008 interim deadline for compliance with one or more of the sedimentations. There were several reasons why these modifications were requested including, a necessary but unanticipated extension of the public comment period under the National Environmental Policy Act (NEPA) concerning the identity of remedial alternatives; contracting issues; discovery of large boulders beneath the Aqueduct property through which the foundation of the new treatment building must be placed; and increased cost of construction.

Following a 30-day public comment period and the receipt of a formal request by the Corps for modification of the FFCA; the modifications were approved by EPA by letter dated October 12, 2007. EPA and the Corps anticipate entering into technical amendments to the FFCA to incorporate into the FFCA the numeric discharge limitations set forth in this permit. Issuance of this permit will not affect the schedule for compliance set forth in the FFCA as modified by the October 12, 2007 letter.

10. FINAL ENVIRONMENTAL ASSESSMENT (EA)

NEPA establishes a federal framework for policy decisions regarding federal actions having a significant effect on the environment. Because the improvements at the Aqueduct are being undertaken by the Corps, a federal entity, NEPA requirements apply to this permit. This included the submission of an Environmental Impact Statement (EIS) and other documents related to the construction of the new water treatment plant.

Between December 2003 and September 2005, the Aqueduct prepared an EIS that evaluated numerous residuals collection, conveyance, process and disposal alternatives. This work culminated in the selection of a recommended residuals management alternative. On October 28, 2005, the Corps executed a Record of Decision (ROD) for the residuals project, which described the selected residuals management alternative. Subsequently, the Aqueduct began the design of the selected residuals management alternative.

A. Description of the Residuals Project

This project includes a number of essential design elements which will be implemented at the plant including the following:

1. Modifications to existing sedimentation basins at Dalecarlia to permit the installation of new continuous residuals collection equipment which is required to convey residuals to a central processing facility.

2. Construction of three new residuals pumping facilities (the Georgetown Residuals Pump Station, the Dalecarlia Residuals Pump Station and the Forebay Residuals Pump Station) which are required to pump the collected residuals to a central processing facility.

3. Expansion of an existing booster control station at the north end of the Dalecarlia Reservoir to provide power for new forebay residuals dredging and pumping facilities.

4. Installation of several new underground liquid residuals conveyance pipelines.

5. Construction of a new central residuals processing facility.

The construction of the proposed residuals processing facility will allow residuals to be collected and conveyed from the forebay portion of the Dalecarlia Reservoir and the sedimentation basins at both the Georgetown Reservoir and the Dalecarlia WTP to a central location to be thickened and dewatered prior to being loaded onto trucks that will haul the residuals to one or more remote disposal sites. The proposed residuals processing facility will be constructed on an existing cleared site immediately north of Little Falls Road; this site was referred to as the East Site for Thickening and Dewatering Residuals, or the East Dalecarlia Processing Site in the EIS.

B. Schedule for Construction of the Residuals Project

The design for the residuals management facilities was completed in July of 2007. Construction advertising followed which was completed in November of 2007, followed by an issuance of notice to proceed. The Corps has evaluated construction proposals and awarded a bid on March 19, 2008. Construction began in May of 2008 and will be completed by November 30, 2010 in accordance with the terms of the FFCA. This project has been approved by the Washington Aqueduct Wholesale Customer Board and construction spending has been approved up to $96 million.

11. STATUS OF PERMIT APPEALS

On April 11, 2003, the National Wilderness Society (NWI) filed a petition for review of the March 14, 2003 issued Washington Aqueduct NPDES permit. In its appeal, NWI raised numerous issues including the following:

a. The permit lacked water-quality based limits for acute and chronic toxicity and human health for priority pollutants;
b. The NPDES permit limits, terms and conditions for "groundwater and leakage" were based on inaccurate flow and inadequate information;
c. The permit contained inadequate information regarding potential chemical weapons contaminants;
d. The permit violated DC narrative water quality standards;
e. The removal of flow limitations constituted backsliding;
f. EPA's decision to enter into the FFCA with the Corps violates the CWA and applicable regulations.

On February 27, 2004, EPA issued a modification to the March 2003 permit which incorporated several of the appealed issues, specifically: it included monitoring and

numeric limitations for certain pollutants relating to groundwater leakage and possible chemical weapons contaminants. It included additional Special Conditions extending the time for the prohibition to discharge during the spring spawning season; required additional studies for acute and chronic toxicity; and requirements to minimize the impact of an anticipated or unanticipated upset or bypass.

Following the submission of numerous motions, on July 29, 2004, the Environmental Appeals Board (EAB) issued an Order remanding certain portions of the permit to Region III. The EAB ordered the Region to 1) revisit the reasonable potential analysis to make certain that its use of procedures to account for pollutant variability in conducting the analysis was clearly documented in the administrative record, and 2) respond to the National Wilderness Institute's (NWI) comments in a meaningful fashion that was sufficiently clear and thorough. The Region intends that this portion of the fact sheet will address the EAB's Order's requirements.

Variability in the data, including observational information from past permit applications and other sources, has been a contentious issue from the beginning of this permit. Historical data mining has uncovered many deficiencies in the data including but not limited to wide ranges of expected concentrations of pollutants in the discharge. In addition, more recent sampling performed by various groups did not always include supporting quality control information, and in some cases (former permit applications), relied upon engineering estimates of pollutants and concentrations in the discharge. These deficiencies are significant and rendered much of the data relied upon by the petitioners unusable. In order to address these deficiencies and to establish a reliable record of actual discharge data, the 2004 permit required the Aqueduct to conduct yearly toxicity studies to more accurately characterize the chemical makeup and toxicological affects of the discharge.

A. Background

The permit that EPA issued in March of 2003, was appealed by both the Corps and NWI, but for different reasons. The appeal filed by the Corps contested the performance of certain scientific studies, including but not limited to the spawning and genetics of shortnose sturgeon and portions of the discharge toxicity studies. In an effort to resolve these concerns, EPA, the Corps and other Federal stakeholders entered into discussions. On November 17, 2003, EPA offered a modified permit for public comment that reflected a settlement of the issues with the Corps. The public comment period ended on December 16, 2003. EPA issued the modified permit in February of 2004. The resolution of the Corps's issues involving the scientific studies required by the permit was independent of the issues raised by NWI and had no effect upon NWI's issues.

During the public comment periods for the permit and permit modification, NWI offered two sets of comments to Region III for consideration. The first was dated June 28, 2002, and consisted of a compilation of discharge data gleaned from available sources and a November 1996, Whitman, Requardt and Associates memorandum. The second set of comments submitted by NWI was dated January 30, 2003 and consisted of fourteen

comments and thirteen attachments. The January 30 letter also contained an analysis of metals data. (See 12.A.i and ii following)

In addition to the information submitted to EPA by NWI, in an effort to consider relevant analytical information, the Corps, at EPA's request, submitted two additional reports to EPA for consideration. The first is a document entitled, *Residuals Thickening and Dewatering Pilot Study Technical Memorandum Number 7,* prepared by Whitman, Requardt and Associates, dated March 1995, which was part of the Whitman Requardt study. It comprises a sediment testing analysis and documentation. The second document is a study report entitled, *Final Report Impacts of Sedimentation Basin Discharges from the Dalecarlia and Georgetown Reservoirs on the Potomac River*, prepared by Dynamac Corporation in 1993. This study was required by the 1989 NPDES permit.

B. Summary of the Data

1. Data Set A - This set of data was submitted with NWI's January 30, 2003 comments and was comprised of six different sampling events which are believed to have been taken from the Potomac River during 2002. One sample was analyzed for aluminum and the others for total metals. None of the required quality control or quality assurance information was submitted with this information. In addition, information regarding location of samples and sample taking methods and preservation of samples was not provided. EPA requested copies of the missing information from NWI, however, none was received. The lack of quality control information renders them unusable except for the purpose of discussion.

EPA performed a reasonable potential analysis on these samples using the highest concentrations reported for each metal, and found that if they had been useable the results for selenium, zinc and copper for outfall 003 would show a potential to exceed DC water quality standards. (See Administrative Record documents 52, 53 and 54).

2. Data Set B – NWI's June 28, 2002 comment letter requested that EPA consider limits on the following pollutants: chlorine; chloramines; trihalomethanes (THM); turbidity; metals; and other pollutants including pesticides, herbicides, fecal coliform as well as other pollutants subject to DC water quality standards.

EPA addressed chlorine and chloramine with no discharge limits in the 2004 modification. Those limits are carried over in this permit reissuance.

THMs are pollutants formed in drinking water distribution systems as a byproduct of drinking water disinfection. The Corps manages its THM formation post sedimentation basin (during the water treatment process) and rarely introduces chlorine into the sedimentation basins. In the rare instances where chlorine is introduced into the raw water, THMs are not likely to be detected in the discharge from the sedimentation basins because of the volatility of chlorine, the large surface area of the sedimentation basins,

and the long residence time of the material in the basins, all of which will promote loss of chlorine.

The turbidity standard is related to TSS as explained in the following regression equation ($R^2 = 0.76$):

$$TSS\ (mg/L) = 1.541\ Turbidity\ (NTU) - 2.40$$

After reviewing the 2001 Water Quality Studies, EPA concluded that the batch discharges from both outfalls 002 and 003 would meet the DC water quality standard of 20 NTU if the standard was applied at a reasonable distance downstream and with the use of an appropriate turbidity criteria averaging period. The installation of the new process equipment and elimination of the discharge will permanently address this issue.

NWI asserted that the studies EPA relied upon for the 2003 permit (EPA's October 21, 2002 results for aluminum, iron and TSS from the Dalecarlia basins and the 2001 Studies) were substantially lower (1,400 mg/l) than DMR and other records and were therefore invalid. NWI further argued that the lower levels of TSS in EPA's results would indicate that there were lower concentrations of metals in this discharge as well. Thus, NWI did not believe that EPA's sampling was representative of the sedimentation discharges.

DMRs submitted by the Corps for the years 2003 to 2007 show average TSS values in the range of 2285 mg/l (12/31/04) to 29,569 mg/l (2/28/05) for outfall 002; 132 mg/l (8/31/04) – 16,140 mg/l (11/30/05) outfall 003; and 50 mg/l (8/31/03) – 31,040 mg/l (11/30/05) for outfall 004. This compares with NWI DMR data for TSS of 1,861 mg/l (12/93) to 68,400 mg/l (3/1996) for outfall 002; 290 mg/l (February 2001) to 66,000 mg/l (3/1996) for outfall 003; and 1,163 mg/l (12/2000) to 68,905 mg/l (3/2001) for outfall 004. From the 2001 Studies 1,020 mg/l to 16,500 mg/l for outfall 002 and 4,700 mg/l to 12,300 mg/l for outfall 003.

Basin Number	2003 Permit TSS DMR	NWI TSS DMR	2001 Studies TSS	EPA 10/21, 2003 TSS
002	2,285 – 29,569	1,861 – 68,400	1,020 – 16,500	1,400
003	132 – 16,140	290 – 66,000	4,700 – 12,300	Not sampled
004	50 – 31,040	1,163 – 68,905	Not sampled	Not sampled

The above analysis of DMR data shows the variability of the data. Such variability is explained by several factors, the most significant of which are sampling technique and timing of the sample during the cleaning process. See part 11.E below for a discussion of sampling variability.

In addition to the analysis of the TSS in samples, EPA reviewed the 2003 – 2007 DMR data to determine whether there is a correlation between pH and the amount of dissolved iron and total aluminum in the samples. This was based upon the fact that the lower the pH in aqueous samples, the more metal will become available in the sample. The pH

ranges for outfall 002 range from 6.6 to 8.5 with the average in the range (6.7 – 7.6). PH ranges for outfall 003 range from 7.1 to 7.5. Given the wide variations of TSS in the samples it is difficult to draw any definitive conclusions with these pH and TSS data sets.

Nevertheless, EPA believes that the actual amounts of TSS and accompanying aluminum and iron are irrelevant since the 2003 and the proposed draft permit impose limits for each of those pollutants and once the remedial measures are installed at the facility, there will be no discharges from the basins after November 30, 2010.

Pesticides, herbicides, fecal coliform have not been identified in the Aqueduct discharge, accordingly, there is no reason to believe that they may exceed the District's water quality standard.

C. Results of New Toxicity Studies

As discussed at section 7.A of this Fact Sheet, Part III.D of the 2004 permit modification required the submission of a study plan to evaluate discharges from Outfalls 002 and 003 for acute and chronic toxicity. A final Study Plan was approved on July 14, 2004. The goals of this study were to determine whether the effluents have a reasonable potential to exceed applicable ambient water quality standards, and to ensure that the quality of the discharges does not change from historic data.

As required under Part III.D.1, the Aqueduct has submitted a written report describing the results of its yearly testing by February 1 for the years, 2004, 2005 and 2006. 2007 results were not available at the time of this writing. Overall, the results of the toxicity testing using *C. dubia*, fathead minnows and the freshwater amphipod *H. azteca* are consistent for all three years and with the Toxicity Studies performed in 1999 – 2000 as recorded in the 2001 Studies. Those results show that there is no instream toxicity for C. dubia and fathead minnows. Toxicity using *H. azteca* has consistently demonstrated some reduction in growth in the animals, however, this is believed to be due to an inability of the animals to feed because the low density "floc" layer that is formed at the bottom of the laboratory vessel restricts access to food particles.

The annual toxicity testing program also includes the testing of Potomac River sediments from above and below Outfalls 002 and 003. Tests performed using *H. azteca* show no significant mortality in any of the test treatments, compared with the control. Ten day survival percentages ranged from 98 to 100 percent in the four test samples, and 99 percent survival for the laboratory control sediment. In addition, the growth dated (measured as mean dry weight in mg/organism) showed no statistically significant difference between any of the four test treatments ($p=0.05$) and the laboratory control.

Since the results of the yearly studies have not demonstrated toxicity, the Aqueduct has not been required to submit a plan for or perform Toxicity Identification Evaluation (TIE) studies.

Part III.D.2 requires that in the event that any discharges occur from the

sedimentation basins during the spring spawning season (February 15 – June 30), toxicity testing to evaluate the effect of solids on embryo-larval fish will be conducted. The Corps submitted its plan pursuant to the permit condition and it was approved by EPA and the Services on January 31, 2005. Since the sedimentation basins have not been discharged during the prohibition period, there has been no necessity to conduct these studies.

D. Perchlorate

During the late spring and summer of 2003, concentrations of perchlorate were found during the investigation and clean up associated with the Spring Valley neighborhood. In response to information provided by NWI during the 2003 public comment period, EPA sampled the effluent which is a combination of groundwater and possible leakage from the Dalecarlia sedimentation underdrain. These and subsequent confirmatory samples were analyzed for a wide variety of inorganic and organic chemicals. In July and September of 2003, perchlorate concentrations ranging from 6.49 ppb to 7.9 ppb were found. This information prompted EPA to require quarterly monitoring for perchlorate at the time the 2004 permit modification was issued.

In accordance with the 2004 permit modification the Corps has sampled and reported the results of quarterly monitoring for this discharge. During the period September 30, 2003 to September 30, 2007, two quarterly samples (12/31/04 and 9/30/05) were reported at 5 ug/l (ppb).

In 2005, EPA issued a recommended Drinking Water Equivalent Level (DWEL) for perchlorate of 24.5 ug/L (ppb). The District of Columbia has not promulgated a water quality standard for perchlorate. The source of the perchlorate is believed to be the Spring Valley Superfund site, not the Aqueduct. In order to justify a permit requirement to treat this discharge, the 24.5 ug/l would need to be met or exceeded. Accordingly, this permit continues the quarterly monitoring requirement so that if in the future the levels of perchlorate increase it may be appropriately addressed.

In June of 2008, the District of Columbia Department of the Environment entered into a separate agreement with the Corps for the performance of Whole Effluent Toxicity to (WET) Testing to determine whether on not the discharge is acutely or chronically toxic for the perchlorate discharge.

E. Anomalies in Sampling

One of the most vexing problems with rendering an analysis of the data is the comparison of highly variable concentrations of solids in the samples. The principle reason for this is the difficulty in obtaining a "representative sample". NPDES regulations and practice recognize two basic types of sampling, grab and composite. A grab sample is a single sample collected at a particular time and place. It represents the wastestream only at that time and place. For samples such as the residual discharge from the Aqueduct, EPA recommends the second type of sampling known as composite sampling. A composite

sample is a collection of individual samples obtained at regular intervals, usually based on time or flow volume. Composite samples are preferred when the material being sampled varies significantly over time either as a result of flow or quality changes. Composite sampling is used for TSS, metals and toxicity analysis at the Aqueduct.

For the purposes of the toxicity studies and DMR reporting, samples collected are intended to represent "worst case" solids discharge concentrations. Samples obtained from the Dalecarlia sedimentation basins one and two are collected in an underground vault when hose cleaning operations are pushing the largest masses of solids overhead in the basins. The collection point for Dalecarlia sedimentation basins three and four is at the drain valve at the end of the basin.

Georgetown sedimentation basin 1 is sampled at the manhole at the far south west corner close to basin 3. Georgetown sedimentation 2 is sampled at the drain valve on the catwalk before the discharge enters the pipe leading to the outfall. At Georgetown, samples for toxicity testing and DMR reporting are taken when the front end loaders actively push solids into the conduit from the deepest areas of the reservoir.

Whether for DMR testing or toxicity study testing, multiple containers of solids from each of the basin are composited for testing. The composites represent the discharge from each discrete basin; the samples from different basins are not composited together.

Every effort is made to collect the most concentrated sample of the discharge at the time of collection, however, sample results are dependent upon the timing of the sample collection and the results (see 12.B.2 above) appear to reflect that. It is not a homogeneous mix.

F. Conclusions

The difficulties inherent in analyzing Washington Aqueduct data and attempting to derive meaningful effluent limits are many. This is due to a number of factors, including but not limited to the volume of data, the variability of the data for each basin and between basins, sample collecting technique, timing of the sample and other factors. The composition of the discharge is dependant upon many naturally occurring and man-made conditions, including but not limited to seasonal variations in the raw river water, the size and numbers of the various sedimentation basins, the extent of drought or rainfall, the amount of organic matter in the river at the time that it is withdrawn and the length of time it resides in the basins. For an analysis to be meaningful it is important to pair similar data sets. It can be very challenging to choose the most meaningful and relevant information to accurately characterize this discharge. For the 2008 reissuance of this permit, EPA reevaluated available historical data and compared it to more recently available data.

In its attempt to set regulatory limits, in the presence of sometimes conflicting information, EPA attempted to use what it believed to be the most scientifically

defensible, accurate and recent information. This is not to say, however, that using different data sets, different conclusions may not be drawn. EPA was aided in this task by scientists and policy makers from other government agencies, including those from the US Fish and Wildlife Service, the National Marine Fisheries Service, the US Park Service and others. Their expertise was essential not only in establishing enforceable effluent limits but in justifying the prohibition against discharges during the spring spawning season, which is a very stringent permit condition. These Agencies also assisted EPA in establishing a schedule for building a new sediment treatment facility capable of treating and thereby permanently removing these discharges from the Potomac River.

Following a through analysis of the data, EPA has concluded that given the limits imposed by the permit which are based upon worst case data sets, the limits are protective of the environment.

12. FACILITY DESCRIPTION

The United States Corps of Engineers owns and operates the Dalecarlia and McMillan Water Treatment Plants which supply potable water to approximately one million residents in the District of Columbia, Arlington County, the City of Falls Church and portions of Fairfax County and Maryland. The plants provide water at cost to the Wholesale Customers, which is the District of Columbia, Arlington County and the City of Falls Church, Virginia. The Wholesale Customers approve the capital construction budget and are responsible for depositing sufficient funds with the Aqueduct to cover their proportional share of the total cost of running and funding improvements at the Aqueduct.

An act of Congress created the Washington Aqueduct Division water supply system in the mid-1800's with the construction of the Great Falls Dam and intake, which is located in Maryland on the Potomac River. There is a second intake at Little Falls, also located in Maryland which the Corps uses intermittently. Water flows by gravity from the Great Falls intake to a forebay adjacent to the Dalecarlia Reservoir. From the forebay, a low-lift booser pump station pumps water into the Dalecarlia Reservoir. The Little Falls pumping station can also deliver water directly to the Dalecarlia Reservoir.

The Dalecarlia Reservoir is a 46-acre earthen basin which serves as a pretreatment reservoir for the two water treatment plants. Approximately 51% of the untreated sediments, which are naturally occurring solids in the raw water taken from the Potomac River, are separated from the aqueous portion of the untreated water in the Dalecarlia Reservoir. These untreated sediments are high quality soil that is periodically removed from the reservoir and land applied.

Water from the Dalecarlia Reservoir is delivered by gravity to both the Dalecarlia Water Treatment Plant (Dalecarlia sedimentation basins) and the Georgetown sedimentation basins, which is locally known as the Georgetown Reservoir. Water from the Georgetown sedimentation basins is delivered to the McMillan Water Treatment Plant.

Water from the Dalecarlia sedimentation basins is treated at the Dalecarlia Water Treatment Plant. Regardless of which plant processes the water, treatment is a three-step process which includes sedimentation, filtration and disinfection. The average production is 180 million gallons per day, however, during the summer the peak may approach 265 gallons per day.

Water delivered to the sedimentation basins at Dalecarlia and the Georgetown sedimentation basins contains solids that did not physically settle out at the Dalecarlia Reservoir. To make the water drinkable, these solids must be chemically treated. The Corps does this by adding aluminum sulfate (alum), a widely used drinking water flocculent.

The Dalecarlia facility uses 36 rapid dual media filters and the McMillan facility is equipped with 12 rapid dual media filters. Except for the filter backwash water at the McMillan Water Treatment Plant which is recycled to the McMillan Reservoir, and the filter backwash water at the Dalecarlia Water Treatment Plant, which is recycled to the Dalecarlia Reservoir, all sedimentation residuals are returned to the Potomac River.

13. PERMITTED OUTFALLS

A. Dalecarlia Sedimentation Basins – Outfall 002 is the primary outfall for process water and the alum treated sediments from the Dalecarlia Sedimentation Basins (identified as basins 1, 2, 3 and 4). In addition, Outfall 002 is the discharge point for the permitted leakage from the sedimentation basins and a spring located beneath the Dalecarlia basins. The leakage, which has an average flow of 19.3 million gallons per year, is captured in a pipe which discharges to Outfall 002. Outfall 002 discharges to the Potomac River. Each of the Dalecarlia Sedimentation Basin is discharged (cleaned) approximately four times per year (eight discharges per year for all the basins in an average year).

B. Georgetown Sedimentation Basins – have two outfalls identified as Outfalls 003 and 004. Both outfalls discharge to the Potomac River. Outfall 003 is the principal outfall for the process water and alum treated sediments discharged from Georgetown sedimentation basin 2. Georgetown Sedimentation Basin 2 is generally discharged (cleaned) two times per year.

Outfall 004 is the outfall for process water and alum treated sediments from Georgetown sedimentation 1. Since Georgetown sedimentation basins 1 and 2 are connected, when Georgetown Sedimentation Basin 2 is cleaned (Outfall 003), a concurrent discharge may occur from Outfall 004.

C. Other Permitted Outfalls

1. City Tunnel - discharges through Outfall 007 to Rock Creek. This discharge is treated water which is cleared from the City Tunnel approximately every five to ten years

to enable the tunnel to undergo inspection. The average annual flow is 0.06 million gallons per year.

2. Georgetown Conduit - discharges through Outfall 006 to Rock Creek. This discharge is treated water which is cleared from the Georgetown conduit every one to five years to enable the conduit to undergo inspection. The average annual flow is one million gallons per year.

3. Second High Reservoir - discharges dechlorinated finished water through Outfall 008 to the District's stormwater system. Discharges associated with cleaning or inspection occurs approximately once every five to eight years. When the discharge occurs the average flow is 14 million gallons.

4. Third High Reservoir – discharges dechlorinated finished water through Outfall 009 to Mill Creek. Discharges associated with cleaning or inspection occurs once every five to eight years. When this discharge occurs the average flow is 20 million gallons.

14. SUMMARY OF TECHNOLOGY-BASED LIMITS

All of the technology-based limits required by the 2003 permit and its modifications issued in 2004 for all of the outfalls remain unchanged and in effect, with the exception of the total aluminum limit for outfall 003. Technology-based limits are established for TSS, aluminum (outfall 002), and iron.

15. SUMMARY OF WATER QUALITY-BASED LIMITS

EPA performed a Reasonable Potential Analysis using the *Technical Support Document for Water Quality Based Toxics Controls* (TSD), EPA/505/2-90-001. The data was obtained from Discharge Monitoring Reports submitted pursuant to the 2003 permit and 2004 permit modification. For pollutants in which the reasonable potential analysis shows the potential to exceed in-stream water quality values, water quality-based effluent numbers must be calculated as required at 40 CFR 122.44(d). Because the Aqueduct's discharges are intermittent, EPA used acute toxicity criteria with the exception of the calculations for dissolved iron. Acute criterion is applied for a shorter exposure time typical of an intermittent discharge. Chronic criterion was applied for dissolved iron because only chronic criteria have been established for this pollutant.

Using the TSD, the following is a description of the steps used for determining excursions above ambient water quality criteria (see Box 3-2 page 50 TSD):

a. Determine the total number of effluent data for the pollutant of interest (n) and identify the highest value of the dataset for that parameter.
b. Determine the coefficient of variation (CV) of the data set. The CV is equal to the standard of deviation divided by the long term average.
c. Determine the appropriate confidence level for the reasonable potential analysis. The analysis for this permit EPA used the 99th confidence level.

d. Determine the reasonable potential multiplier, using Table 3-1. If n is greater than 20, uses the multiplier assigned to 20 samples as identified on Table 3-1.

Example

Outfall 002, Total Aluminum
Number of samples = 23
Highest effluent concentration = 5620 mg/l
CV = 0.6
Confidence interval = 99%
Reasonable potential multiplier from Table 3-1 of the TSD = 2.3

*Adjusted effluent concentration (AEC) = 5620 mg/l *2.3 = 12,926 mg/l*

Maximum Receiving Waste Concentration (MRWC)

MRWC = (AEC-Cd)/DF + Cb

Cb – Background concentration – 0.39 mg/l
DF – Dilution factor – 169
MRWC = (12.926 mg/l – 0.39 mg/l)/169 + 0.39 mg/l = 76.9 mg/l

Acute criterion = 0.75 mg/l

As the MRWC is greater than the instream acute water quality criterion for total aluminum, we conclude that there is a reasonable potential and a water quality based limit must be developed for this parameter.

Developing a Water-Quality Based Effluent Calculation

For those pollutants where there was a potential to exceed water quality standards (total copper, total aluminum and dissolved iron at Outfalls 002 and 003), the second step is the development of water quality based effluent limit (WQBEL) for each pollutant. The procedure for this is described at Section 5.4 of the TSD.

Step 1. Compute the Wasteload allocation

WLA = WQC – Cb) * DF + Cb

WLA = Wasteload allocation
WQC = Water quality criterion for the pollutant of concern
Cb = Background concentration for the pollutant of concern
DF = Dilution factor

Example: Outfall 002
WQC = Total Aluminum = 0.75 mg/l
Cb – 0.39 mg/l
Coefficient of Variation = 0.6
DF = 169

WLA = (0.75mg/l – 0.39 mg/l) * 169 + 0.39 mg/l = 61.23 mg/l

Step 2. Calculate the Long-Term Average

LTA = WLA * $e^{(0.5 \text{ sigma square} - 2.326 \text{ sigma})}$

The long term average calculation is based on the 99th confidence level as reflected with the z score of 2.326.

Sigma square = $\text{In}(CV^2 + 1) = \text{In}\ (0.6^2 + 1) = 0.307$

Sigma = square root of Sigma squared = 0.555

LTA = 61.23 mg/l mg/l $e^{(0.5 * 0.307 - 2.326 * 0.555)}$ = 19.6 mg/l

Step 3. Calculate the Maximum Daily Limits

Maximum Daily Limits (MDL) – LTA * $e^{(2,326 * \text{sigma} - 0.5 * \text{sigma square})}$

The maximum daily limit is based on the following:

MDL = 19.6 mg/l * $e^{(2.326 * 0.555 - 0.5 * 0.307)}$ = 61 mg/l

Step 4. Calculate the Average Monthly Average

AML = LTA * $e^{(1.645 * \text{sigma} - 0.5 * \text{sigma square})}$
AML = 19.6 mg/l * $e^{(1.645 * 0.555 - 0.5 * 0.307)}$ = 42 mg/l

Step 5. Compare the Water Quality Based Limits with the Technology Based Limits

In this example of total aluminum for Outfall 002, the Maximum Daily Limit of 61 mg/l and the Average Monthly Limit of 42 mg/l are larger than the Technology Based Best Professional Judgment Limits previously calculated (2003). Accordingly, the more stringent of the two, or the technology based BPJ limits will apply for all outfalls.

Using the above formulas calculated water quality based limits were determined as follows:

For Outfall 002

Pollutant	Criteria (mg/l)	Default Translator	Total Recoverable Translator	BC (mg/l)	DF	WLA (mg/l)	CV
Iron	1	1	1	0.186	169	137.752	0.6
Copper	0.01702	0.96	0.0177	0.0125	169	0.896229	0.6

Sigma Sq	Sigma	LTA Exponential calculation	TLA (mg/l)	Sigma Sq	Sigma	MDL Exponential calculation
0.086178	0.29356	0.527433444	72.65501	0.3074847	0.554513	3.114457427
0.307485	0.554513	0.321083214	0.287764	0.3074847	0.554513	3.114457427

MDL (mg/l)	AML Exponential Calculation	AML (mg/l)
226	2.134925141	155
0.90	2.134925141	0.61

For Outfall 003 and 004 (the values for 004 are shown because they yield more stringent limits).

Pollutant	Criteria (mg/l)	Default Translator	Total Recoverable Criteria	BC (mg/l)	DF	WLA (mg/l)	CV
Iron	1	1	1	0.186	2.33	2.08262	1.4
Copper	0.01702	0.96	0.0173	0.0125	2.33	0.396465	0.6
Aluminum	0.75	N/A	0.75	0.39	2.33	1.2288	1.7

Sigma Sq	Sigma	LTA Exponential calculation	TLA (mg/l)	Sigma Sq	Sigma	MDL Exponential calculation
0.398776	0.631487	0.280986	0.585187	1.085189	1.041724	6.556493
0.307485	0.554513	0.321083	0.127298	0.307485	0.554513	3.114457
0.307485	1.165508	0.131104	0.1611	1.35409	1.165508	7.637555

MDL (mg/l)	AML Exponential Calculation	AML (mg/l)
3.8	3.22535055	1.9

0.396	2.13492514	0.272
1.2	3.44890319	0.6

For Outfall 002Q which is the spring fed discharge beneath the Dalecarlia Basins, because of the low volume discharge the calculations showed no potential to exceed water quality standards for TSS, dissolved iron or total aluminum. Accordingly, no water quality based limit is necessary.

For chloroform and perchlorate, which are pollutants for which the District of Columbia has not promulgated numeric water quality standards, the narrative standards would apply. For both pollutants the monitoring requirements remain in effect. In the case of perchlorate, in the event that measured perchlorate levels equal or exceed an actionable level of 24.5 ug/l, treatment or containment may be required.

16. STANDARD CONDITIONS

A. Standard Conditions are requirements that must be incorporated into every permit, in accordance with 40 C.F.R. Sections 122.41 and 122.42. These requirements delineate the legal, administrative and procedural requirements of the permit. It includes the standard provisions governing discharges that may be bypasses or upsets. The Standard Conditions remain unchanged from the final permit that was issued in March of 2003 and its 2004 modification with the exception of the following:

1. Language describing the Section 7 consultation with the National Marine Fisheries Service (NMFS) for the 2004 permit modification was deleted. Consultation for this permit was reinitiated and the results of that consultation are discussed at Sections 5 and 6 of this fact sheet.

2. The notification requirements in the event of an anticipated upset or unanticipated upset or bypass which were recommended by National Marine Fisheries Service (NMFS)are retained in this permit.

3. The name of the Government of the District of Columbia Department of Health (DDOE) has been changed from the former Environmental Health Administration.

17. SPECIAL CONDITIONS

A. The permittee is authorized to discharge in accordance with the terms and conditions set forth in Part I of this permit.

1. The prohibition to discharge from the sedimentation basins from outfalls 002, 003 or 004 during the spring spawning season is retained from the 2003 permit and its 2004 modification.

2. The special conditions relating to upset and bypass conditions are retained from the 2003 permit and its 2004 modification and are expressed at Part II.B.3 and 4 of the permit.

3. The requirement to test the liquid and solid discharge from the Dalecarlia sedimentation basins for chlorine is retained from the 2003 and its 2003 modification. The detectable level of 0.1 mg/L remains as does the requirement to provide treatment to ensure that there is no detectable amount of chlorine discharged to the Potomac River.

4. Discharges from the Second and Third High Reservoirs must also be treated for chlorine. The detectable level of 0.1 mg/l total chlorine is carried over from the 2003 and its 2004 modification as is the requirement to provide treatment to ensure that there is no detectable amount of chlorine in these discharges.

5. In the event of an unanticipated discharge from March 1 to May 15, the permittee must record and report certain water temperatures as specified at Part III.C.1. This requirement is retained from the 2003 permit and its 2004 modification.

6. The prohibition against discharging dredged material from the Dalecarlia Reservoir is retained from the 2003 permit and its 2004 modification.

7. The permittee shall continue to perform the toxicity monitoring program which evaluates the discharges acute and toxic toxicity on selected species for outfalls 002 and 003 is retained from the 2003 permit and its 2004 modification until the Residuals Process Facility is operational or November 30, 2010 , whichever is earlier, at which time all discharges from the sedimentation basins shall cease.

8. The requirement to perform toxicity testing in the event of a discharge from the sedimentation basins during the period of time February 15 - June 30 is retained from the 2003 permit and its 2004 modification until the Residuals Process Facility is operational or November 30, 2010, whichever is earlier, at which time all discharges from the sedimentation basins shall cease.

9. For the duration of this permit, the anticipated and unanticipated upset and bypass provisions of Part III.E are retained from the existing permit, including the time after completion of the residuals project.

10. This permit contains no new requirements for the submission of study plans or the performance of any new studies. It does require the continuation of the performance of existing toxicity studies.

18. OTHER

a. Date publication of the draft permit and fact sheet are published in the Washington Times: April 4, 2008
b. End date of public notice: May 6, 2008
c. Date requested District of Columbia Certification: April 4, 2008
d. Date DDOE Certification issued: June 12, 2008
e. Date of the notice of new permit issuance to NOAA Marine Fisheries Service: April 4, 2008
f. Date of the notice of new permit issuance to US FWS: April 4, 2008
g. Date of the notice of new permit issuance to the State of Maryland: April 4, 2008
h. Date the State of Maryland notified EPA it does not object to the issuance of the permit: May 20, 2008
i. Date of the notice of new permit issuance to the Commonwealth of Virginia: April 4, 2008
j. Date of Commonwealth of Virginia notified EPA it does not object to the issuance of the permit pending consideration of comments: May 6, 2008
k. Date of NMFS Biological Opinion: October 14, 2008