



ARLINGTON COUNTY, VIRGINIA

**County Board Agenda Item
Meeting of July 10, 2010**

DATE: July 13, 2010

SUBJECT: Consent Order between the State Water Control Board and the Arlington County Board to resolve violations related to bypasses and permit excursions at the Water Pollution Control Plant (WPCP).

C. M. RECOMMENDATION:

Authorize the County Manager to enter into the Consent Order with the State Water Control Board (SWCB) to resolve violations concerning bypasses and permit excursions at the WPCP, including a civil charge of \$87,590, and further Authorize the County Manager to pursue an option with the Department of Environmental Quality (DEQ) whereby the County could fund a local environmental project in lieu of paying a portion of the civil charge.

ISSUE: Should the County enter into a Consent Order with the State Water Control Board to resolve alleged violations concerning bypasses and permit excursions at the WPCP?

SUMMARY: The County was cited by DEQ for three (3) unauthorized external bypasses of partially treated sewage totaling 57 million gallons and various other permit violations at the WPCP during 2009 and early 2010 as well as two (2) collection system overflows totaling 113,000 gallons during November 2009 and January 2010. This resulted in the issuance of six (6) Notices of Violation by DEQ between March 2009 and May 2010. The violations are primarily related to limited capacity and changing infrastructure during the \$568 million upgrade and expansion construction project which will increase capacity at the WPCP from 30 to 40 million gallons per day (mgd). The proposed Consent Order is intended to resolve the violations and avoid any further regulatory action concerning these events.

BACKGROUND: In January 2003, the County Board endorsed the concept for the WPCP MP01 upgrade and expansion project at the DES Water Pollution Control Plant to enable the County to meet current and future capacity demands in the most environmentally appropriate manner. The project will minimize external bypasses, install state-of-the-art nutrient removal technology, and generate higher quality effluent to better protect the public health and environment. The County Board authorized implementation and funding of this project and

County Manager: MB

County Attorney: JM SM

Staff: Lawrence Slattery, Bureau Chief, Department of Environmental Services:
Bureau

Additional Item

strongly encouraged staff to complete the work as rapidly as possible, and to not only meet all regulatory requirements, but also to anticipate any new requirements likely in the near future. The resulting MP01 project will reduce the total nitrogen discharged to state-of-the-art levels beginning in 2011 and will provide increased capacity, which would meet existing flow and estimated flows to the year 2015-2020+, and provide a positive environmental impact for Four Mile Run, the Potomac River, and the Chesapeake Bay.

On November 16, 2004, the County Board authorized the County Manager to sign a Consent Order with the SWCB to set a compliance schedule to complete the construction of the various phases of MP01 projects at the WPCP. It should be noted that the County Board authorized the MP01 in January 2003 as part of the County's environmental commitment, well before the new Virginia Pollutant Discharge Elimination System (VDPES) permit requirements were created and received in 2007, and also before the existing Consent Order dated March 23, 2005. The MP01 project construction began in earnest in June 2004 and after six (6) years of sustained effort, it is at least one and one-half years ahead of the scheduled overall completion date of February 28, 2012, and Consent Order components will be completed in the summer/fall of 2010. The WPCP is already generating total nitrogen values less than 3 mg/l in the plant effluent (2.2 mg/l for June 2010) and will have the capability to minimize the volume and frequency of external bypasses in the next few months.

The WPCP experienced three (3) unauthorized discharges (external bypasses) totaling 57 million gallons during 2009 in violation of state law and the VDPES permit. All the external bypasses consisted of partially treated wastewater that received preliminary treatment, primary treatment, and chlorination prior to discharge. Both the Arlington County and Alexandria health departments were notified of the bypasses per the Permit requirements. No fish kills or other adverse environmental impacts were noted after any of the external bypasses; however, the external bypasses imposed additional nutrient and oxygen demand loads on the receiving waters. The bypasses were either construction or weather related. The WPCP also failed to meet certain permit requirements related to minimum pH requirements (February 2009 and April 2010) and minimum Chlorine requirements (March and April 2010), failed to report E. coli results (January 2009), exceeded cBOD permit limits (January 2010), exceeded Ammonia as N permit limits (April and June 2009), exceeded Total Suspended Solids (March 2010), exceeded Total Phosphorus (March 2010), exceeded the Chesapeake Bay Annual Total Nitrogen limit (CY 2009), and experienced other minor non-discharge violations. The violations in most instances were due to temporary construction-related events and were within 10% of the permit limits or 1mg/l, and are otherwise being addressed through the facility improvements. In addition, apart from the WPCP project, the two (2) wastewater collection system overflows totaling 113,000 gallons occurred during November 2009 and January 2010. The November 2009 overflow was caused by a partial power loss to a lift station and the emergency generator firmware would not let the unit start up as one of three phases was still viable. The firmware was replaced in December 2009. The other overflow occurred when a sewage line became clogged with grease and roots. The County cleared the sewer line within one day of becoming aware of the problem. The section of sewer line involved is scheduled to be relined within CY 2010. As a result of the above violations, DEQ issued six (6) Notices of Violation (March, June and August of 2009, and January, March and May of 2010).

DISCUSSION: The proposed Consent Order reflects DEQ's more aggressive recent approach regarding violations at other facilities. Similar consent orders concerning bypasses, overflows, and permit excursions have been executed over the last several years with other jurisdictions, and more are planned across the state.

The County cannot dispute the most significant violation notices as the violations did, in fact, occur. In fact, the County self-reported the violations as required by the Permit. Defenses under the "strict liability" Clean Water Act and VPDES regulatory program are extremely limited and the enforcement authority including penalty authority is substantial (e.g., statutory penalty of \$37,500 per day per violation). Consequently, permittees routinely seek to settle such matters by a State-level Consent Order.

Performing extensive renovation/upgrade construction on a tight site while attempting to meet permit limits, manage wet weather events, and other challenges is a highly complex and difficult undertaking, particularly when the capacity of the facility has been significantly reduced in order to perform the required construction. Despite the best efforts of the WPCP staff during this construction effort, bypasses and permit excursions occurred that were construction related. In addition, a few permit excursions were related to power supply, equipment, weather, and operational challenges. Most of the permit excursions were less than or near 10% of the permit limits or 1 mg/l. Every effort was made to achieve the permit limits. Staff has taken many actions to minimize the probability of recurrences with the result of significant reductions in the frequency and volume of bypasses in 2010 as compared to 2009. Nevertheless, ongoing construction may continue to impact operations and performance, and until the construction has been completed, some risk of additional bypasses or excursions remains. Once the construction is complete the frequency and volume of any external bypasses and permit violations will be significantly reduced and the WPCP capacity will be expanded to 40 mgd and will have state-of-the-art nutrient removal capabilities.

Staff recommends that the County enter into the Consent Order. The Consent Order is intended to resolve any other potential enforcement or regulatory action by DEQ against the County concerning the violations that have occurred during the referenced time period.

The Consent Order does not require corrective action, and in fact recognizes that a number of the violations have been corrected. However, the Consent Order does require the County to pay a civil charge of \$87,590. The civil charge being assessed is consistent with the charges other jurisdictions have been assessed for similar violations. Staff is also pursuing an option with DEQ that might allow a portion of the civil charge to fund a local environmental project in lieu of the entire penalty being paid directly to the State.

If the County Board authorizes the County Manager to sign the Consent Order on behalf of the Board, the Order will become effective after the SWCB approves the Order at its meeting in September.

FISCAL IMPACT: The assessment, \$87,590, will be funded by the Utilities Fund operating budget (fund 503, cost center 44201).



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE

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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

STATE WATER CONTROL BOARD ENFORCEMENT ACTION - ORDER BY CONSENT ISSUED TO ARLINGTON COUNTY BOARD FOR ARLINGTON COUNTY WPCP VPDES Permit No. VA0025143

SECTION A: Purpose

This is a Consent Order issued under the authority of Va. Code § 62.1-44.15, between the State Water Control Board and Arlington County, regarding the Arlington County Water Pollution Control Plant ("WPCP"), for the purpose of resolving certain violations of the State Water Control Law and the applicable Regulation and Permit.

SECTION B: Definitions

Unless the context clearly indicates otherwise, the following words and terms have the meaning assigned to them below:

1. "Arlington" means Arlington County Board, a political subdivision of the Commonwealth of Virginia. Arlington is a "person" within the meaning of Va. Code § 62.1-44.3.
2. "Board" means the State Water Control Board, a permanent citizens' board of the Commonwealth of Virginia, as described in Va. Code §§ 10.1-1184 and 62.1-44.7.
3. "Department" or "DEQ" means the Department of Environmental Quality, an agency of the Commonwealth of Virginia, as described in Va. Code § 10.1-1183.
4. "Director" means the Director of the Department of Environmental Quality, as described in Va. Code § 10.1-1185.
5. "DMR" means Discharge Monitoring Report.

6. "Facility" or "Plant" means the Arlington County WPCP located at 3402 South Glebe Road in Arlington, Virginia, which treats and discharges treated sewage and other municipal wastes, for the residents and businesses of Arlington County.
7. "Notice of Violation" or "NOV" means a type of Notice of Alleged Violation under Va. Code § 62.1-44.15.
8. "O&M" means operations and maintenance.
9. "Order" means this document, also known as a "Consent Order" or "Order by Consent," a type of Special Order under the State Water Control Law.
10. "Permit" means VPDES Permit No. VA0025143, which was issued under the State Water Control Law and the Regulation to Arlington County Board on September 23, 2008 and which expires on September 22, 2013.
11. "Pollutant" means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 USC § 2011 *et seq.*)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water... 9 VAC 25-31-10.
12. "Pollution" means such alteration of the physical, chemical, or biological properties of any state waters as will or is likely to create a nuisance or render such waters (a) harmful or detrimental or injurious to the public health, safety, or welfare or to the health of animals, fish, or aquatic life; (b) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (c) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses, provided that (i) an alteration of the physical, chemical, or biological property of state waters or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner which by itself is not sufficient to cause pollution but which, in combination with such alteration of or discharge or deposit to state waters by other owners, is sufficient to cause pollution; (ii) the discharge of untreated sewage by any owner into state waters; and (iii) contributing to the contravention of standards of water quality duly established by the Board, are "pollution." Va. Code § 62.1-44.3.
13. "NRO" means the Northern Regional Office of DEQ, located in Woodbridge, Virginia.
14. "Regulation" means the VPDES Permit Regulation, 9 VAC 25-31-10 *et seq.*
15. "State Water Control Law" means Chapter 3.1 (§ 62.1-44.2 *et seq.*) of Title 62.1 of the Va. Code.

16. "State waters" means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands. Va. Code § 62.1-44.3.
17. "Va. Code" means the Code of Virginia (1950), as amended.
18. "VAC" means the Virginia Administrative Code.
19. "VPDES" means Virginia Pollutant Discharge Elimination System.
20. "Warning Letter" or "WL" means a type of Notice of Alleged Violation under Va. Code § 62.1-44.15.

SECTION C: Findings of Fact and Conclusions of Law

1. Arlington owns and operates the Plant in Arlington, Virginia, which is currently undergoing a large-scale, \$568 million upgrade and expansion in accordance with the terms of a Consent Order issued to Arlington on March 23, 2005, including additional hydraulic capacity, equalization tankage, and state-of-the-art nutrient removal. The Permit allows Arlington to discharge treated sewage and other municipal wastes from the Plant, to Four Mile Run, in strict compliance with the terms and conditions of the Permit.
2. Four Mile Run is located in the Lower Potomac River Basin. Tidal Four Mile Run is listed in DEQ's 303(d) report as impaired for *E. coli* and PCB's in fish tissue.
3. On January 20, 2009, DEQ received notification from Arlington of an unauthorized discharge of approximately 15.5 million gallons of partially treated sewage from the Plant into Four Mile Run. The discharge occurred for 15 hours and 55 minutes starting on January 17, 2009 from 1:00 p.m. through 4:50 p.m. and again on January 18, 2009 from 3:40 p.m. lasting through 3:45 a.m. on January 19, 2009. Arlington provided the notification to DEQ more than 24 hours after the discharge was discovered. Arlington asserts this unauthorized discharge was the result of a power outage at the Plant and an inlet valve to an EQ tank being frozen closed. DEQ notes that per Part I.F.7 of the Permit, the Plant is a Reliability Class I facility. 9 VAC 25-790-490.B states that to meet Class I reliability, two separate and independent sources of power feed, each capable of maintaining continuous treatment works operation at peak design flow during power failures is required.
4. Part II.H of the Permit requires that "[i]f any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department after the discovery of the discharge."
5. On June 8, 2009, DEQ received notification from Arlington of an unauthorized discharge that had begun from the Plant. Arlington later notified that the discharge occurred for 28 hours and 6 minutes starting on June 8, 2009 at 12:06 a.m. and lasting through 4:12 a.m.

on June 9, 2009 and resulted in approximately 23.75 million gallons of partially treated sewage being discharged into Four Mile Run. Arlington asserts that rainfall in the days preceding the discharge and construction work contributed to the unauthorized discharge. DEQ notes that rainfall records indicate that approximately 2.3 inches of rain fell over the 8 day period prior to the discharge.

6. On June 15, 2009, DEQ received notification from Arlington of an unauthorized discharge that had begun from the Plant. Arlington later notified that the discharge occurred for 21 hours and 25 minutes starting June 15, 2009 at 11:47 am through 9:12 am on June 16, 2009 and resulted in approximately 17.81 million gallons of partially treated sewage being discharged into Four Mile Run. Arlington asserts that the unauthorized discharge resulted after the ASE1 lift station lost power.
7. Arlington failed to report *E. coli* sampling results for the January 2009 monitoring period, exceeded Ammonia as N permit limits during the April 2009 and June 2009 monitoring periods, and failed to meet minimum pH permit limits during the February 2009 monitoring period in violation of Part I.A.1 of the Permit.
8. NRO issued Notices of Violations for the unauthorized discharges, Ammonia as N and pH exceedances, and *E. coli* reporting error, as follows: NOV No. W2009-03-N-0009, issued March 25, 2009; NOV No. W2009-06-N-0008, issued June 12, 2009; NOV No. W2009-08-N-0008, issued August 31, 2009.
9. On November 30, 2009, Arlington reported an unauthorized discharge of approximately 12,800 gallons of sewage from the Windy Run Lift Station into Windy Run. Arlington asserts that the unauthorized discharge stemmed from the combination of a partial loss of power at the lift station and emergency generator firmware safety features preventing the generator from coming online.
10. NRO issued NOV No. 2010-01-N-0010 on January 19, 2010 for the November 30, 2009 unauthorized discharge.
11. During January 2010, Arlington exceeded cBOD monthly concentration and mass load limits. In addition, in January 2010, Arlington reported an annual average Total Nitrogen concentration for 2009 of 8.7 mg/l in excess of the 8.0 mg/l limit. In addition, on January 18, 2010, Arlington reported an unauthorized discharge of approximately 100,000 gallons of sewage and groundwater from a manhole into Doctor's Branch.
12. NRO issued NOV No. 2010-03-N-0001 on March 15, 2010 for the cBOD and Total Nitrogen exceedance and the January 18, 2010 unauthorized discharge.
13. During March 2010, Arlington exceeded the Total Suspended Solids concentration limit, the Total Phosphorus monthly average concentration and mass loading limits; failed to maintain the required Total Residual Chlorine concentration; failed to operate and maintain the sludge pumps in accordance with the O&M manual; and failed to monitor a bypass for BOD.

14. NRO issued NOV No. 2010-05-N-0001 to Arlington on May 11, 2010 for the March 2010 violations.
15. During April 2010, Arlington failed to maintain the required minimum pH level on one day; and failed to monitor for one of the 12 Total Residual Chlorine samples required each day.
16. Va. Code § 62.1-44.5 states that: “[E]xcept in compliance with a certificate issued by the Board, it shall be unlawful for any person to discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances.”
17. The Regulation, at 9 VAC 25-31-50, also states that except in compliance with a VPDES permit, or another permit issued by the Board, it is unlawful to discharge into state waters sewage, industrial wastes or other wastes.
18. Va. Code § 62.1-44.15(5a) states that a VPDES permit is a “certificate” under the statute.
19. The Department has issued no permits or certificates to Arlington for WPCP discharges other than VPDES Permit No. VA0025143.
20. Four Mile Run, Windy Run, and Doctor’s Branch are surface waters located wholly within the Commonwealth and “state water” under State Water Control Law.
21. Based on the foregoing events, the Board concludes that Arlington has violated the Permit and Va. Code § 62.1-44.15 and 9 VAC 25-31-50, by discharging partially treated sewage and municipal wastes from the Plant while concurrently failing to comply with the conditions of the Permit, as described in paragraphs C(3) through C(15), above.
22. Arlington has submitted documentation that verifies that a number of the violations as described below have been corrected as follows:
 - a. E. Coli (C7) – Replaced the bacterial testing system to eliminate false positives associated with the original system;
 - b. pH (C7) – Took appropriate disciplinary action;
 - c. Unauthorized Discharge (C9) – Corrected issue with firmware;
 - d. pH (C16) – Installed caustic metering system upstream of post-aeration facility;
 - e. TRC (C16) – Took appropriate disciplinary action;
 - f. BOD Sampling (C13) - Took appropriate disciplinary action.
23. Arlington asserts that the other violations described above are either temporary construction-related events or are otherwise being addressed through facility improvements consistent with the March 2005 Consent Order. Construction is ongoing and expected to be completed ahead of schedule.

SECTION D: Agreement and Order

Accordingly, by virtue of the authority granted it in Va. Code §§ 62.1-44.15, the Board orders Arlington and Arlington agrees to:

1. Pay a civil charge of \$87,590.00 within 30 days of the effective date of the Order in settlement of the violations cited in this Order.

Payment shall be made by check, certified check, money order or cashier's check payable to the "Treasurer of Virginia," and delivered to:

Receipts Control
Department of Environmental Quality
Post Office Box 1104
Richmond, Virginia 23218

Arlington shall include its Federal Employer Identification Number (FEIN) with the civil charge payment and shall indicate that the payment is being made in accordance with the requirements of this Order for deposit into the Virginia Environmental Emergency Response Fund (VEERF).

SECTION E: Administrative Provisions

1. The Board may modify, rewrite, or amend this Order, with the consent of Arlington for good cause shown by Arlington, or on its own motion pursuant to the Administrative Process Act, Va. Code § 2.2-4000 *et seq.*, after notice and opportunity to be heard.
2. This Order addresses and resolves only those violations specifically identified in Section C of this Order. This Order shall not preclude the Board or the Director from taking any action authorized by law, including but not limited to: (1) taking any action authorized by law regarding any additional, subsequent, or subsequently discovered violations; (2) seeking subsequent remediation of the Facility; or (3) taking subsequent action to enforce the Order.
3. For purposes of this Order and subsequent actions with respect to this Order only, Arlington admits the jurisdictional allegations, but neither admits nor denies the findings of fact, and conclusions of law contained herein.
4. Arlington consents to venue in the Circuit Court of the County of Arlington for any civil action taken to enforce the terms of this Order.
5. Arlington declares it has received fair and due process under the Administrative Process Act and the State Water Control Law and it waives the right to any hearing or other administrative proceeding authorized or required by law or regulation, and to any judicial review of any issue of fact or law contained herein. Nothing herein shall be construed as

a waiver of the right to any administrative proceeding for, or to judicial review of, any action taken by the Board to modify, rewrite, amend, or enforce this Order.

6. Failure by Arlington to comply with any of the terms of this Order shall constitute a violation of an order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Board or the Director as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.
7. If any provision of this Order is found to be unenforceable for any reason, the remainder of the Order shall remain in full force and effect.
8. Arlington shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or such other occurrence. Arlington shall show that such circumstances were beyond its control and not due to a lack of good faith or diligence on its part. Arlington shall notify the DEQ Regional Director verbally within 24 hours and in writing within three business days when circumstances are anticipated to occur, are occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of the Order. Such notice shall set forth:
 - a. the reasons for the delay or noncompliance;
 - b. the projected duration of any such delay or noncompliance;
 - c. the measures taken and to be taken to prevent or minimize such delay or noncompliance; and
 - d. the timetable by which such measures will be implemented and the date full compliance will be achieved.

Failure to so notify the Regional Director verbally within 24 hours and in writing within three business days, of learning of any condition above, which Arlington intends to assert will result in the impossibility of compliance, shall constitute a waiver of any claim to inability to comply with a requirement of this Order.

9. This Order is binding on the parties hereto, their successors in interest, designees and assigns, jointly and severally.
10. This Order shall become effective upon execution by both the Director or his designee and Arlington. Nevertheless, Arlington agrees to be bound by any compliance date which precedes the effective date of this Order.
11. This Order shall continue in effect until:

- a. Arlington petitions the Director or his designee to terminate the Order after it has completed all of the requirements of the Order and the Director or his designee approves the termination of the Order; or
- b. the Director or Board terminates the Order in his or its sole discretion upon 30 days' written notice to Arlington.

Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve Arlington from its obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

12. Any plans, reports, schedules or specifications attached hereto or submitted by Arlington and approved by the Department pursuant to this Order are incorporated into this Order. Any non-compliance with such approved documents shall be considered a violation of this Order.
13. The undersigned representative of Arlington certifies that he or she is a responsible official authorized to enter into the terms and conditions of this Order and to execute and legally bind Arlington to this document. Any documents to be submitted pursuant to this Order shall also be submitted by a responsible official of Arlington.
14. This Order constitutes the entire agreement and understanding of the parties concerning settlement of the violations identified in Section C of this Order, and there are no representations, warranties, covenants, terms or conditions agreed upon between the parties other than those expressed in this Order.
15. By its signature below, Arlington voluntarily agrees to the issuance of this Order.

And it is so ORDERED this _____ day of _____, 2010.

Thomas A. Faha, Regional Director
Department of Environmental Quality

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Arlington County Board voluntarily agrees to the issuance of this Order.

Date: _____ By: _____, _____
(Person) (Title)

Commonwealth of Virginia

City/County of _____

The foregoing document was signed and acknowledged before me this _____ day of _____, 2010, by _____ who is _____ of Arlington County on behalf of the Arlington County Board.

Notary Public

Registration No.

My commission expires: _____

Notary seal: