DRAFT

POTABLE REUSE PERMIT

PERMIT NUMBER	***24 - IPR- 01***
NPDES ID NUMBER	***MD2401IPR***
EFFECTIVE DATE	
EXPIRATION DATE	
REAPPLICATION DATE	

Pursuant to the provisions of Title 9 of the Environment Article, Annotated Code of Maryland, and the regulations established thereunder, the Maryland Department of the Environment, hereinafter referred to as the "Department," hereby authorizes:

The City of Westminster
45 W. Main Street
Westminster, Maryland 21157

hereinafter referred to as the "Permittee," to use Purified water from:

Westminster PureWater Facility
1117 Old New Windsor Pike
Westminster, MD 21158

hereinafter referred to as the "Facility," as a source for the:

Cranberry Reservoir located at
Latitude: 39.6026 , Longitude: -76.9641

and the Cranberry Run Water Treatment Plant in accordance with the following special and general conditions, including the attached maps made a part hereof.

I. DEFINITIONS

1. "Annual Average daily flow" means the total flow for a calendar year divided by the total number of days in that year

2. "Bypass" means the intentional diversion of pollutants or contaminants from any portion of the Westminster WRF, the Facility, the Cranberry Reservoir, or the Cranberry WTP.

3. "CFR" means the Code of Federal Regulations.

4. "COMAR" means the Code of Maryland Regulations.

5. "Contaminant" means any physical, chemical, biological, or radioactive substance in water.

6. "Cranberry Reservoir" means the above-ground drinking water storage reservoir that is owned and operated by the City of Westminster with a location shown on Map A. The Cranberry Reservoir is an environmental buffer between the Facility and the Cranberry WTP.

7. "Cranberry WTP" means the Cranberry Run Water Treatment Plant and its associated distribution system that is owned and operated by the City of Westminster. The Cranberry WTP is a component of the Permittee's public water system and is shown on Map A.

8. "Department" means the Maryland Department of the Environment (MDE).

9. "EPA" means the United States Environmental Protection Agency.

10. "Facility" means the PureWater potable reuse treatment plant that is owned and operated by the City of Westminster with a location shown on Map A.

11. "Maximum (or minimum) limit" means the highest or lowest allowable value measured during a time period established in this permit.

12. "NetDMR" means the nationally available electronic reporting tool, initially designed by states and later adapted for national use by EPA, which can be used by NPDES-regulated facilities to submit discharge monitoring reports (DMRs) electronically to EPA through a secure Internet application over the National Environmental Information Exchange Network (NEIEN). EPA can then share this information with authorized states, tribes, and territories.

13. "NPDES (National Pollutant Discharge Elimination System)" means the national system for issuing permits as designated by the Clean Water Act.

14. "Permeate Recovery" means the ratio of the permeate generation rate (PR) from the RO which is defined below and the RO influent flow rate (IR) or PR ÷ IR

15. "Permittee" means the City of Westminster.

16. Purified Water means effluent of the PUREWater Westminster Purification Facility

17. “Quarterly Sample” means a sample taken once per quarter. Samples must be taken at least 2 months apart.
18. “Running annual average” means the sum of the latest consecutive four quarterly sample results divided by 4.

~~19.~~ “Reclaimed water” means any water that enters the Facility from the Westminster WRF.

20. “Reverse Osmosis (RO)” means a water treatment process using pressure to force water through a semi-permeable membrane to remove water contaminants including, but not limited to, microorganisms, total dissolved solids, total organic carbon and PFAS from source water. RO creates a stream of treated water, called “permeate,” and a stream of reject water called “concentrate” or “brine.”

21. “Safe Drinking Water Act” means the Safe Drinking Water Act, as amended, 42 U.S.C. § 300f *et seq*.

22. “Significant Industrial User” means any industrial user (IU) that:

    a. is subject to national categorical standards; or

    b. any other IU that:

        i. discharges an average of 25,000 gallons per day or more of process wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater); or
        ii. contributes a process waste stream that makes up 5% or more of the average dry weather hydraulic or organic capacity of the Westminster WRF; or
        iii. is designated as such by the Permittee on the basis that the IU has a reasonable potential for adversely affecting the Westminster WRF's operation or for violating any pretreatment standard or requirement; or
        iv. is found by the Permittee, the Department, or the EPA to have significant impact either individually or in combination with other contributing industries to the Westminster WRF, on the quality of the sludge, the Westminster WRF's effluent quality, or air emissions generated by the Westminster WRF.

23. "STORET" (short for STOrage and RETrieval) is a widely used repository for water quality data reporting and monitoring.

24. “Ultraviolet (UV)/Advanced Oxidation Process (AOP)” means a water treatment method using UV light and potent oxidizing agents such as hydrogen peroxide or ozone to generating hydroxyl radicals (-OH) to oxidize and break down organic and inorganic contaminants in source water.

25. “Westminster WRF” means the Westminster Water Reclamation Facility -located at 1161 Old New Windsor Pike, Westminster, Carroll County, Maryland 21158, and its associated sewerage system.

II. SPECIAL CONDITIONS

A. Water Quality Limitations

1. The Permittee is authorized to discharge an annually average maximum limit of 0.50 million gallons per day (MGD) of Purified water from the Facility to the Cranberry Reservoir for drinking source water augmentation.

2. Prior to the discharge to the Cranberry Reservoir, the Purified water shall not exceed any maximum (or minimum) limit in **Table 1** as measured in Section II.D.7. A first single sample with measured concentration exceeding the maximum (or minimum) limit is not considered a violation of this permit until the full sampling protocol included in Section II.D.7 verifies the violation has occurred. Treatment for removal of pathogens at the Facility and the Cranberry WTP shall meet or exceed 12-log for enteric virus reduction, 10-log for giardia cyst reduction, and 10-log cryptosporidium oocyst reduction.

   a. The Department reserves the right to modify this permit to include any new maximum (or minimum) limit for drinking water or wastewater established by the EPA or the Department while this permit is in effect. The Department may include any additional requirement or limitation in this permit (including more stringent limitations beyond maximum (or minimum) limits or Action Levels) that the Department deems appropriate.

   b. It is a violation of this permit for any Purified water to enter the Cranberry Reservoir unless it meets the limit for each parameter in Table 1 as measured in Section II.D.7.

Table 1

Parameter Code (STORET Code)	Parameter	Maximum Limit, except as noted (units in mg/L unless stated)	Basis for the Limit	Sampling Frequency/Type (see Section II.D.7. for sampling protocols
50050	Flow	0.50 mgd (annual average daily flow)	Design Capacity of the Facility	Continuous Record
77825	Alachlor	0.002	Primary MCL	Quarterly (grab)
01097	Antimony	0.006	Primary MCL	Quarterly (grab)
01252	Arsenic	0.010	Primary MCL	Quarterly (grab)
34225	Asbestos	7 million fibers per liter (fiber length longer than 10 µm)	Primary MCL	Quarterly (grab)
39033	Atrazine	0.003	Primary MCL	Quarterly (grab)
01007 (as Ba)	Barium	2	Primary MCL	Quarterly (grab)
34030	Benzene	0.005	Primary MCL	Quarterly (grab)
34247	Benzo(a)pyrene	0.0002	Primary MCL	Quarterly (grab)
01012	Beryllium	0.004	Primary MCL	Quarterly (grab)
03530	Beta Photon Emitters	4 millirems per year (yearly running average)	Primary MCL	Quarterly (grab)

Parameter Code (STORET Code)	Parameter	Maximum Limit, except as noted (units in mg/L unless stated)	Basis for the Limit	Sampling Frequency/Type (see Section II.D.7. for sampling protocols
51492	Bromate	0.010	Primary MCL	Quarterly (grab)
01027 (as Cd)	Cadmium	0.005	Primary MCL	Quarterly (grab)
81405	Carbofuran	0.04	Primary MCL	Quarterly (grab)
32102	Carbon tetrachloride	0.005	Primary MCL	Quarterly (grab)
51032	Chlordane	0.002	Primary MCL	Quarterly (grab)
50074	Chlorite	1.0	Primary MCL	Quarterly (grab)
34301	Chlorobenzene	0.1	Primary MCL	Quarterly (grab)
01034	Chromium	0.1	Primary MCL	Quarterly (grab)
46363	cis-1,2-Dichloroethylene	0.07	Primary MCL	Quarterly (grab)
00720	Cyanide (as free cyanide)	0.2	Primary MCL	Quarterly (grab)
39730	2,4 -D	0.07	Primary MCL	Quarterly (grab)
38432	Dalapon	0.2	Primary MCL	Quarterly (grab)
51174	Di(2-ethylhexyl) adipate	0.4	Primary MCL	Quarterly (grab)
51315	Di(2-ethylhexyl) phthalate	0.006	Primary MCL	Quarterly (grab)
82625	Dibromochloropropane	0.0002	Primary MCL	Quarterly (grab)
04150	o-Dichlorobenzene	0.6	Primary MCL	Quarterly (grab)
03612	p-Dichlorobenzene	0.075	Primary MCL	Quarterly (grab)
04157	1,2-Dichloroethane	0.005	Primary MCL	Quarterly (grab)
34501	1,1- Dichloroethylene	0.007	Primary MCL	Quarterly (grab)
03801	Dichloromethane	0.005	Primary MCL	Quarterly (grab)
34541	1-2,-Dichloropropane	0.005	Primary MCL	Quarterly (grab)
30191	Dinoseb	0.007	Primary MCL	Quarterly (grab)
03556	Dioxin (2,3,7,8-TCDD)	$3x10^{-8}$	Primary MCL	Quarterly (grab)
04443	Diquat	0.02	Primary MCL	Quarterly (grab)
31502	E.coli/Total Coliform	see II.D.7.a.ii	Primary MCL	Quarterly (grab)
51200	Endothall	0.1	Primary MCL	Quarterly (grab)
39390	Endrin	0.002	Primary MCL	Quarterly (grab)
34371	Ethylbenzene	0.7	Primary MCL	Quarterly (grab)
77651	Ethylene dibromide	0.00005	Primary MCL	Quarterly (grab)
79743	Glyphosate	0.7	Primary MCL	Quarterly (grab)
04241	Gross alpha particle activity (including radium-226)	15 pCi/L	Primary MCL	Quarterly (grab)
51535	Haloacetic acids (five) (HAA5)	0.060	Primary MCL	Quarterly (grab)
39410	Heptachlor	0.0004	Primary MCL	Quarterly (grab)
39420	Heptachlor epoxide	0.0002	Primary MCL	Quarterly (grab)
34386	Hexachloro-cyclopentadiene	0.05	Primary MCL	Quarterly (grab)
39700	Hexachlorobenzene	0.001	Primary MCL	Quarterly (grab)

Parameter Code (STORET Code)	Parameter	Maximum Limit, except as noted (units in mg/L unless stated)	Basis for the Limit	Sampling Frequency/Type (see Section II.D.7. for sampling protocols
51715	Hexafluoropropylene oxide dimer acid (HFPO-DA)	$1x10^{-8}$	Primary MCL	Quarterly (grab)
01051	Lead	0.015	Action Level	Quarterly (grab)
39782	Lindane	0.0002	Primary MCL	Quarterly (grab)
01260	Mercury	0.002	Primary MCL	Quarterly (grab)
39480	Methoxychlor	0.04	Primary MCL	Quarterly (grab)
34031	Monochlorobenzene	0.1	Primary MCL	Quarterly (grab)
00620	Nitrate (as N)	10	Primary MCL	Quarterly (grab)
00615	Nitrite (as N)	1	Primary MCL	Quarterly (grab)
38865	Oxamyl (vydate)	0.2	Primary MCL	Quarterly (grab)
03612	para-Dichlorobenzene	0.075	Primary MCL	Quarterly (grab)
39032	Pentachlorophenol	0.001	Primary MCL	Quarterly (grab)
51633	Perfluorohexane sulfonic acid (PFHxS)	$1x10^{-8}$	Primary MCL	Quarterly (grab)
51626	Perfluorononanoic acid (PFNA)	$1x10^{-8}$	Primary MCL	Quarterly (grab)
51526	Perfluorooctane sulfonic acid (PFOS)	4.0×10^{-9}	Primary MCL	Quarterly (grab)
51521	Perfluorooctanoic acid (PFOA)	4.0×10^{-9}	Primary MCL	Quarterly (grab)
	PFAS Mixture Hazard Index (HI)*	<1 (standard unit)	Primary MCL	Quarterly (grab)
39720	Picloram	0.5	Primary MCL	Quarterly (grab)
39516	Polychlorinated biphenyls	0.0005	Primary MCL	Quarterly (grab)
11503	Radium-226 and Radium-228 (combined)	5 pCi/L	Primary MCL	Quarterly (grab)
01147	Selenium	0.05	Primary MCL	Quarterly (grab)
39055	Simazine	0.004	Primary MCL	Quarterly (grab)
77128	Styrene	0.1	Primary MCL	Quarterly (grab)
34475	Tetrachloroethylene	0.005	Primary MCL	Quarterly (grab)
01059	Thallium	0.002	Primary MCL	Quarterly (grab)
34010	Toluene	1	Primary MCL	Quarterly (grab)
82080	Total trihalomethanes (TTHM)	0.080	Primary MCL	Quarterly (grab)
39400	Toxaphene	0.003	Primary MCL	Quarterly (grab)
39045	2,4,5-TP (Silvex)	0.05	Primary MCL	Quarterly (grab)
34546	trans-1,2-Dichloroethylene	0.1	Primary MCL	Quarterly (grab)
34551	1,2,4-Trichlorobenzene	0.07	Primary MCL	Quarterly (grab)
34506	1,1,1-Trichloroethane	0.2	Primary MCL	Quarterly (grab)
34511	1,1,2-Trichloroethane	0.005	Primary MCL	Quarterly (grab)
39180	Trichloroethylene	0.005	Primary MCL	Quarterly (grab)
00070	Turbidity	0.3 NTU, 95% time	Treatment Technique	Continuous Record

Parameter Code (STORET Code)	Parameter	Maximum Limit, except as noted (units in mg/L unless stated)	Basis for the Limit	Sampling Frequency/Type (see Section II.D.7. for sampling protocols
		1.0 NTU at all times		
28011	Uranium	0.03	Primary MCL	Quarterly (grab)
39175	Vinyl chloride	0.002	Primary MCL	Quarterly (grab)
81551	Xylenes (total)	10	Primary MCL	Quarterly (grab)
01105	Aluminum	0.2	Secondary MCL	Quarterly (grab)
00940	Chloride	250	Secondary MCL	Quarterly (grab)
00081	Color	15 (color units)	Secondary MCL	Quarterly (grab)
01042	Copper	1.0	Secondary MCL	Quarterly (grab)
51877	Corrosivity	Noncorrosive	Secondary MCL	Quarterly (grab)
00951	Fluoride	2.0	Secondary MCL	Quarterly (grab)
38260	Foaming Agents	0.5	Secondary MCL	Quarterly (grab)
01045	Iron	0.3	Secondary MCL	Quarterly (grab)
01055	Manganese	0.05	Secondary MCL	Quarterly (grab)
00086	Odor	3 threshold odor number	Secondary MCL	Quarterly (grab)
00403	pH	6.5 (minimum value) 8.5 (maximum value) (standard unit)	Secondary MCL	Quarterly (grab)
01077	Silver	0.10	Secondary MCL	Quarterly (grab)
00945	Sulfate	250	Secondary MCL	Quarterly (grab)
70300	Total Dissolved Solids	500	Secondary MCL	Quarterly (grab)
01092	Zinc	5	Secondary MCL	Quarterly (grab)

* Hazard Index Calculation: HI = (HFPO-DA in ppt/10 ppt) + (PFBS in ppt /2000 ppt) + (PFNA in ppt/10 ppt) + (PFHxS in ppt/10 ppt)

B. Facility Treatment Processes Limitations

1. The treatment process shall include reverse osmosis (RO), ultraviolet (UV) disinfection, and advanced oxidation process (AOP) as shown on **Figure 1**.

2. The Permittee shall meet the following performance standards for the RO process and shall perform testing to verify the treatment efficiency of the RO process as provided in this Section.

    a. The RO process shall meet the following performance standards:
        i. A minimum rejection of no less than 99.0% and an average rejection of no less than 99.2% on a continuous monitoring and monthly average basis.

        ii. Permeate recovery of no less than 15%.

    b. The RO process shall be tested to verify compliance with the performance standards as follows:

i. Continuous monitoring of sodium chloride rejection efficiency with a meter or equivalent instrument (conductivity meter) to verify a minimum rejection of no less than 99.0% and an average rejection of no less than 99.2% on a monthly basis.

ii. Continuous monitoring of the permeate recovery test to verify recovery of no less than 15%.

iii. During the first twenty weeks of operation of the RO process, the Permittee shall conduct a weekly total organic carbon (TOC) test and continuously monitor the conductivity at the purified water. If more than five percent (5%) of the sample results have a TOC concentration greater than 0.25 mg/L or a total dissolved solids (TDS) concentration greater than 500 mg/l determined from the conversion of the conductivity data, the Facility shall be shut down and the RO process shall be investigated for the possible causes of limit exceedance. The Facility shall not resume operations until the investigation and correction processes are completed, and the Department has approved.

iv. The Permittee shall submit the results of these tests to the Department in each Monthly Operating Report (MOR) pursuant to Section III.A.2

3. The Permittee shall meet the following performance standards for the UV/AOP process and shall perform testing to verify the treatment efficiency of the UV/AOP process as provided in this Section:

   a. The performance of the UV/AOP process shall achieve a minimum removal efficiency of 0.5 $\log_{10}$ (or 69%) of 1,4-dioxane reduction.

   b. The Permittee shall perform testing at least once per month to determine the treatment efficiency of the UV/AOP (advanced oxidation process) to verify that these processes are working.

4. The Permittee shall submit all results for the tests required in Sections II.B.2 and II.B.3 to the Department in the Monthly Operating Reports (MORs) pursuant to Section III.A.2.

C. Cranberry Reservoir Limitations

1. Except as provided in Section II.C.2., the Purified water shall remain in the Cranberry Reservoir for at least 180 days before entering the Cranberry WTP.

2. The Department may reduce the number of days that the Purified water shall remain in the Cranberry Reservoir from 180 days to no fewer than 60 days following a request from the Permittee if the Department determines that the following conditions are met:
   a. The Permittee reliably and consistently meets the requirements of this permit under varying operating conditions; and
   b. The Permittee demonstrates that a lower residence time sufficiently protects public health.
   c. The Permittee shall not submit the retention time reduction request before completion of the tracer study included in Sections 3and 4 below.

3 Within six months after the Facility begins operating, the Permittee shall submit a tracer study proposal

to the Department for review and approval. The tracer study proposal shall include use of a tracer capable of demonstrating the distribution of the influent flow molecule in the Cranberry Reservoir. The tracer study shall be conducted in a winter month when the temperature difference between the pure water influent and reservoir water is at the predicted highest. The proposal shall include a timeline for completion of the tracer study that does not exceed six months from the date that the Department approves the tracer study proposal. The Permittee shall address any questions or comments from the Department on the tracer study proposal within 30 days of request by the Department unless the Department agrees to a longer timeframe. Following approval by the Department, the Permittee shall initiate and complete the tracer study as approved.

4 Results of the tracer study shall be summarized in a report and submitted to the Department within 90 days after the tracer study is completed. The report should include, but not limited to, a tracer flow line map or pictures to demonstrate the influent distribution in the Cranberry Reservoir. The Permittee shall determine the effective storage volume (V_e) or volume occupied by the tracer in the reservoir based on the tracer flow line map. If the pure water retention time ($t = V_e/Q_6$) in the reservoir is less than 180 days (Q_6 is the past 6 months running average reservoir outlet flow rate), the Permittee shall install, operate, and maintain a reservoir influent uniform flow mixer (such as SolarBee Mixer or equivalent) at the inlet of the Cranberry Reservoir to effectively eliminate the horizontal and vertical short-circuiting influent flow toward the outlet of the reservoir and enhance the V_e value.

5. The Permittee shall maintain at least two mechanical mixers of equal or greater effectiveness in the Cranberry Reservoir and shall operate and maintain the mechanical mixers in accordance with the manufacturer's specifications. The approximate locations of two existing mechanical mixers and the Cranberry WTP intake are shown on **Map B**.

6. The Permittee shall calculate and record the theoretical retention time(t) every 6 months (July and January) to ensure the Cranberry Reservoir meets the minimum retention requirements of Section II.C.1. or Section II.C.2., as applicable. The value of t shall be determined as: $t = V_R/Q_{OF}$. V_R is the total volume of water in the Cranberry Reservoir at the end of the month and Q_{OF} is the total outflow from the Cranberry Reservoir during the corresponding month. Q_{OF} shall include, but not be limited to, all outflows and withdrawals from the Cranberry Reservoir during the corresponding month. The Permittee shall submit these calculations to the Department in each Monthly Operating Report (MOR) pursuant to Section III.A.2.

D. Operational Limitations

1. The Permittee shall operate the Cranberry WTP in accordance with the Safe Drinking Water Act (SDWA), 40 CFR § 141 *et seq*., Title 9, Subtitle 4 of the Environment Article, Annotated Code of Maryland, and COMAR 26.04.01. The Permittee shall also operate the Cranberry WTP to meet all secondary maximum contaminant levels in 40 CFR § 143 *et seq*.

2. No later than 90 days prior to the commencement of discharge from the Facility to the Cranberry Reservoir, the Permittee shall notify the Compliance Program and the Water Supply Program of the Department about the anticipated date of the discharge from the Facility. The notification shall be provided in writing to *mde.wsacompliance@maryland.gov*.

3. The Permittee shall provide an adequate operating staff qualified to carry out the operation, maintenance, and testing functions required to ensure compliance with this permit. The Permittee shall

ensure that the Facility and the Cranberry WTP are operated by operators certified by the State of Maryland in accordance with the provisions of COMAR 26.06.01 and consistent with the "Manual of Operation and Maintenance" (MOM) approved by the Department. To ensure that each operator is proficient in the operation of the treatment processes, the Permittee shall ensure that each operator takes the required number of training courses at a frequency approved by the Maryland Board of Waterworks and Waste Systems Operator (Board). This training shall be specific to the processes in the Facility or the Cranberry WTP, as applicable, in addition to any other training requirements for each operator's class. Upon finalization of applicable standards by the Board to certify operators for the advanced treatment processes at the Facility, the Permittee shall ensure that the Facility's operators achieve certification under that standard within one year following the effective date of the standards.

4. The Permittee shall develop a MOM. The MOM shall clearly state how the Facility, the Cranberry Reservoir, and the Cranberry WTP shall be managed to ensure satisfactory treatment and operation. The MOM shall include:

    a. Operating and maintenance procedures for the Facility, the Cranberry Reservoir, and the Cranberry WTP;

    b. Monitoring and sampling procedures as required in this permit;

    c. Personnel requirements; and

    d. A description of how maintenance, repair, or replacement work at the Facility, the Cranberry Reservoir, or the Cranberry WTP, as applicable, shall be performed to avoid any adverse impact or potential change in the quality of Purified water or drinking water.

    The MOM shall be submitted to the Department for review and approval within 90 days after the effective date of this permit. Any proposed revision of the MOM shall be submitted to the Department for review and approval. Upon approval by the Department, the MOM, and any amendment to the MOM, shall be incorporated into this permit. Noncompliance with the approved MOM is a violation of this permit.

5. The Permittee shall immediately terminate the entry of any reclaimed water to the Facility and divert all Purified water from the Facility to the Westminster WRF with no discharge to the Cranberry Reservoir if any treatment process malfunctions, any exceedance of the limits in **Table 1** occurs as measured in Section II.D.7., or at the direction of the Department.

6. Bypass is prohibited unless the bypass does not cause any violations of the maximum (or minimum) limits specified in **Table 1** and is necessary for essential maintenance to occur, or unless the Permittee can prove that:

    a. The bypass is unavoidable to prevent loss of life, personal injury, or substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources; and

    b. There are no feasible alternatives to the bypass; and

c. The Department receives notification of the bypass pursuant to Section III.B.1.[1]; and

d. The Department authorizes the bypass.

7. If the Total coliform or E. coli sample measured at Sampling Port B and all other samples measured at Sampling Port A (see **Figure 1**) exceeds a maximum (or minimum) limit in **Table 1**, the Permittee shall perform the following corrective actions:

a. For exceedances that are determined by the results of a single sample for nitrate or turbidity, or a Total Coliform or E.coli sample:

i. For Nitrate or Turbidity exceedances:

1. A confirmation sample shall be taken within 72 hours of receiving a result that exceeds the limit in **Table 1**.

2. If the average of the confirmation sample and initial sample exceeds the limit in **Table 1**, or if a confirmation sample is not collected within 72 hours after the initial sample result is received:

i. Notify the Department within 24 hours of receiving the results of the confirmation sample or within 24 hours after the 72-hour deadline passes without collecting a confirmation sample, as applicable; and

ii. Initiate weekly monitoring until 4 consecutive weekly results are below the limit.

1. If at any time a 4-week running average of weekly results exceeds the limit, notify the Department within 24 hours and immediately suspend all discharge of Purified water to the Cranberry Reservoir until the Department authorizes discharges to resume.

3. If the average of the confirmation sample and the initial sample is below the limit, return to routine monitoring as specified in **Table 1** and described in Section II.E.

ii. For Total Coliform or E. coli exceedances:

1. If a sample tests positive for Total Coliform, a confirmation sample shall be taken within 24 hours of receiving the positive result.

a. If the confirmation sample tests positive for E. coli:

i. Notify the Department within 24 hours of receiving the results of the confirmation sample; and

[1] Where the need for a bypass is known (or should have been known) in advance, this notification shall be submitted to the Department for approval at least 10 days before the date of the bypass or at the earliest possible date if the period of advance knowledge is fewer than 10 days from the anticipated bypass.

ii. Upon direction by the Department, suspend all discharge of Purified water to the Cranberry Reservoir until the Department authorizes discharges to resume.

b. If the initial sample was positive for Total Coliform but negative for E. coli and the confirmation sample tests positive for Total Coliform but negative for E. coli, return to routine monitoring.

b. For exceedances based on Running Annual Averages:

i. A confirmation sample shall be taken within 72 hours of receiving a result that exceeds the limit in **Table 1**.

ii. If the average of the confirmation sample and initial sample exceeds the limit or if a confirmation sample is not collected within 72 hours after the initial sample is received:

1. Initiate weekly monitoring for the contaminant until the running 4-week average of results no longer exceeds the limit.

a. If the running 4-week average exceeds the limit:

i. Submit a report no later than 45 days following the exceedance describing the reasons for the exceedance and provide a schedule for the completion of corrective actions.

b. If the running 4-week average exceeds the limit for 16 consecutive weeks:

i. Notify the Department within 48 hours.

ii. Upon direction by the Department, suspend all discharge of Purified water to the Cranberry Reservoir until the Department authorizes discharges to resume.

c. The Permittee shall develop an Emergency Operational Plan (EOP) to resolve problems identified by the Permittee or the Department, address maximum (or minimum) limit exceedances, and ensure the availability of the potable water supply if there is any failure to meet the requirements of this permit. The EOP shall include the following information:

i. Corrective actions to be taken in case of malfunction of any Facility treatment process shown in the schematic diagram of **Figure 1;**

ii. Corrective actions to be taken in case of violation of water quality limitations

iii. The procedures that will be implemented for notifying the Department of the operational changes that may adversely affect the quality of the Purified water delivered to the Cranberry Reservoir.

The Permittee shall submit the EOP to the Department for review and approval within 90 days after the effective date of this permit. Any proposed revision of the EOP shall be submitted to the Department for review and approval. Upon approval by the Department, the EOP, and any amendment to the EOP, shall be incorporated into this permit. Noncompliance with the approved EOP is a violation of this permit.

E. Sampling and Monitoring Requirements

1. The Permittee shall monitor for the contaminants listed in **Table 1** at Sampling Port A shown in **Figure 1 except for Total Coliform or E. coli samples to be collected at Sampling Port B.** Samples shall be

analyzed in accordance with methods indicated in 40 CFR Subpart C.

2. A one-time influent sample shall be taken at the UF Feed Tank shown on **Figure 1** to establish the background quality of the reclaimed water before treatment at the Facility within 3 months after the Facility begins operating. The sample shall be analyzed for all contaminants listed in **Table 1**. Results of the influent water quality analysis shall be included in the MOR.

3. The Permittee shall certify annually, in writing, to the Department (using third-party or manufacturer certification) when acrylamide or epichlorohydrin is used to treat water at the PUREWater Facility or Cranberry Water Treatment Plant. The combination (or product) of dose and monomer level shall not exceed the following levels: Acrylamide = 0.05 percent dosed at 1 mg/L (or equivalent); Epichlorohydrin = 0.01 percent dosed at 20 mg/L (or equivalent).

4. The Permittee may petition the Department to reduce the monitoring frequency if the monitoring data for Sampling Port A and Sampling Port B demonstrate consistent compliance with the limits in **Table 1** during the first 12 months after the Facility begins discharging Purified water to the Cranberry Reservoir.
    a. If the Department grants the Permittee's request and the measured concentration of any contaminant in **Table 1** subsequently exceeds 50% of the applicable limit in **Table 1**, the Permittee shall resume sampling at the frequency required in **Table 1**.

III. GENERAL CONDITIONS

A. Measurements and Reporting Requirements

1. Discharge Monitoring Reports (DMRs)

   The Permittee shall summarize and submit the results for the monitoring parameters shown in **Table 1** electronically to the Department using NetDMR. Results shall be submitted to the Department via NetDMR no later than the 28th day of the month following the end of the reporting month. The Permit Number Space included in the DMR form shall be filled with the NPDES ID number

   If problems arise with NetDMR, the Permittee shall call the Department's Compliance Program at (410) 537-3520 or email *mde.netdmr@maryland.gov* for technical assistance.

2. Monthly Operating Reports (MORs)

   The permittee shall submit monthly operating reports on a form acceptable to the Compliance Program. For each calendar month, the permittee shall submit to the Department a signed original of the MOR as an attachment to Copy of Record (COR) via NetDMR in electronic format concurrently with the Discharge Monitoring Report submission postmarked no later than the 28th day of the month following the reporting month. The laboratory report for each contaminant in Table 1 shall be submitted with MOR.

3. Analysis Methods

   The methods used for analyzing each water sample shall conform to the test procedures specified in 40 CFR 141 – National Primary Drinking Water Regulations. Samples and measurements shall be taken at times that are representative of the quantity and quality of the Purified water, and at evenly spaced intervals.

4. Monitoring Equipment Maintenance

   The Permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation in accordance with the manufacturer's specifications to ensure accuracy of measurements.

5. Data Recording Requirements

   The Permittee shall record the following information for each measurement or sample taken:

   a. The location, date, and time of sampling.

   b. The person(s) who performed the sampling or measurement.

   c. The date(s) the analyses were performed.

   d. The person(s) who performed the analyses;[2]

   e. The analytical techniques or methods used; and

[2] Analysis of alkalinity, disinfectant residual, orthophosphate, pH, silica, temperature, or turbidity may be performed by any person who is acceptable to the Department.

III. GENERAL CONDITIONS

f. The results of such analyses.

6. Additional Monitoring by Permittee

If the Permittee monitors any contaminant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report. The increased frequency shall also be reported. The results of any other monitoring performed by the Permittee shall be made available to the Department upon request

7. Reports and Information

a. Upon request, the Permittee shall provide to the Department, within a reasonable time, copies of records required to be kept by this permit. The Permittee shall also furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists to modify, revoke and reissue, or terminate this permit; or to determine compliance with this permit.

b. All applications, reports, or information submitted to the Department shall be signed and certified as provided in COMAR 26.08.04.01 and 40 CFR 122.22.

c. Environment Article, Section 9-343 provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, shall upon conviction be punished by a fine of not more than $10,000 or by imprisonment for not more than six months or by both.

8. Records Retention

All data used to complete the permit application and all records and information from monitoring activities under this permit, including all records of sampling and analyses performed, calibration and maintenance of instrumentation, and original recordings from continuous monitoring instrumentation, shall be retained for a minimum of 5 years. This period shall be extended during litigation or when requested by the Department.

B. Management Requirements

1. Change in Discharge

All use of Purified water authorized herein shall be consistent with the terms and conditions of this permit. Any anticipated expansion, production increases, or process modifications at the Westminster WRF, the Facility, the Cranberry Reservoir, or the Cranberry WTP shall be reported by the Permittee by submission of a written request to modify this permit at least 180 days prior to the commencement of the changed discharge or, if such changes will not violate the terms of this permit, by written notice to the Department. Any authorization of a new Significant Industrial User or any change(s) at an existing Significant Industrial User that are authorized by the Permittee shall be reported by the Permittee by submission of a written request to modify this permit at least 90 days prior to the commencement of the changed discharge or, if such changes will not violate the terms of this permit, by written notice to the Department. Following such notice, the Department may modify this permit.

III. GENERAL CONDITIONS

Failure to notify the Department as required by this section is a violation of this permit. Any facility expansion, production increase, or process modification that occurs without approval from the Department is a violation of this permit.

2. Presence of Unexpected Contaminants

The presence of a contaminant not identified in this permit or in the application submitted for this permit in any Purified water that enters the Cranberry Reservoir, including any formally submitted application revisions that are not authorized, applied for, or specifically identified in this permit, is a violation of this permit.

3. Noncompliance Notification

All activities authorized herein shall be consistent with the terms and conditions of this permit. If, for any reason, the Permittee does not comply with or will be unable to comply with any permit condition, the Permittee shall, within 24 hours, notify the Department by telephone at (410) 537-3510 during work hours or at (866) 633-4686 during evenings, weekends, and holidays. The Permittee shall provide the Department with the following information in writing to *mde.wsacompliance@maryland.gov* within 5 days of such oral notification:

a. A description of the noncompliance, including its impact on the Cranberry Reservoir, the Cranberry WTP, the quality of the Purified water, and drinking water quality.

b. Cause of noncompliance.

c. Anticipated time the noncompliance is expected to continue or, if such condition has been corrected, the duration of the period of noncompliance.

d. Steps taken by the Permittee to reduce and eliminate noncompliance.

e. Steps to be taken by the Permittee to prevent the recurrence of the condition of noncompliance.

f. A description of the accelerated or additional monitoring by the Permittee to determine the nature and impact of the noncompliance; and

g. The results of the monitoring described in f. above.

4. Facility Operation and Quality Control

The Permittee shall operate and maintain all water treatment, control, monitoring, and storage facilities in good working order at all times as efficiently as possible and in a manner that will minimize upsets and exceedances of the maximum (or minimum) limits in **Table 1**.

5. Adverse Impact

III. GENERAL CONDITIONS

The Permittee shall take all reasonable steps to minimize any adverse impact to drinking water resulting from noncompliance with any limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the adverse impact.

6. Removed Substances

The Permittee shall comply with all State and federal laws and regulations for waste generated from the Facility and the Cranberry WTP. The Permittee shall ensure that its sewage sludge is disposed of or utilized in accordance with the applicable sewage sludge utilization permit issued by the Department.

7. Power Failure

The Permittee shall maintain compliance with the effluent limitations and all other terms and conditions of this permit in the event of a reduction, loss, or failure of the primary source of power to the Westminster WRF, the Facility, the Cranberry Reservoir, or the Cranberry WTP.

A. Responsibility

1. Right of Entry

The Permittee shall allow the Secretary of the Department and the Secretary's authorized representatives, including authorized contractors acting as representatives, upon the presentation of credentials, to:

a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this permit.

b. Access and copy, at reasonable times, any records required to be kept under this permit.

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.

d. Sample or monitor at reasonable times for the purpose of verifying compliance with this permit or as otherwise authorized by State law any substance or parameter at any location;

e. Inspect, at reasonable times, any treatment, water quality management or storage facilities required under this permit.

2. Property Rights/Compliance with Other Requirements

This permit does not convey or create any property rights in real or personal property, or any exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights, or any infringement of federal, State, or local laws or regulations.

3. Availability of Reports

III. GENERAL CONDITIONS

Except for data determined to be confidential under the Maryland Public Information Act, all documents, reports, plans, maps, or other specifications submitted to the Department shall be available for public inspection.

4. Transfer of Ownership or Control

This permit is not transferable to any person except after written notice and written approval from the Department. The Department may modify or revoke and reissue this permit to change the name of the permittee and may incorporate other requirements that the Department deems necessary. At minimum, the Permittee's written notice to the Department shall be submitted to the Department at least 30 days prior to the proposed transfer date and include the following information:

a. The full legal name, address, email, and telephone number of the new owner or operator;

b. A written agreement, signed by authorized representatives of the Permittee and the proposed owner or operator, assigning the responsibilities and liabilities under this permit and indicating that the proposed owner or operator has read, understands, and accepts the terms and conditions of this permit.

c. The date that the new owner or operator takes control or expects to take control of the Facility; and

d. Any other information or documentation requested by the Department.

5. Reapplication for a Permit

At least 180 days before the expiration date of this permit, unless permission for a later date has been granted by the Department in writing, the Permittee shall submit an application for renewal of authorization for the activities authorized herein as a reservoir augmentation permit under Section 9-303.4 of the Environment Article, or, alternatively, notify the Department of the Permittee's intent to cease the activities authorized in this permit by the expiration date of this permit. If a timely and sufficient application has been submitted and the Department is unable, through no fault of the Permittee, to issue a new permit before the expiration date of this permit, the terms and conditions of this permit shall be automatically continued and remain fully effective and enforceable until the Department issues a final determination on the Permittee's application for a new permit under Title 1, Subtitle 6 of the Environment Article.

6. Permit Modification

This permit may be modified by the Department upon written request from the Permittee and after notice and opportunity for a public hearing in accordance with Title 1, Subtitle 6 of the Environment Article.

7. Permit Modification, Suspension, or Revocation

III. GENERAL CONDITIONS

This permit may be modified, suspended, or revoked by the Department in the event of a violation of the terms or conditions of this permit, or federal or State laws or regulations. This permit shall be revoked and reissued or modified to meet any applicable standard or prohibition established under the Environment Article, the Clean Water Act, the Safe Drinking Water Act, or regulations promulgated thereunder by the Department or EPA, as applicable, and the Permittee shall be so notified. This permit may be suspended or revoked upon a final, unreviewable determination that the Permittee lacks, or is in violation of, any federal, State, or local approval necessary to conduct the activities authorized by this permit.

8. Permit Expiration

This permit and all authorizations in this permit shall expire at midnight on the expiration date of this permit unless the Permittee has submitted a timely and complete reapplication pursuant to Section III.C.5.

9. Noncompliance

Nothing in this permit shall be construed to preclude the institution of any legal action for noncompliance with federal, State, or local laws or regulations.

10. Civil and Criminal Liability

Sections 9-342 and 9-343 of the Environment Article, Annotated Code of Maryland, provide that any person who violates any provision of Title 9, Subtitle 3 of the Environment Article or any regulation, order, or permit issued under that subtitle is subject to a civil penalty in an amount not to exceed $10,000 per violation, per day, with each day that each violation occurs constituting a separate offense; and to criminal penalties of a $25,000 fine or imprisonment not exceeding one year or both for a first offense, and a $50,000 fine or imprisonment not exceeding two years or both for subsequent offense.

11. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action against the Permittee or to relieve the Permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the Safe Drinking Water Act, Section 311 of the Clean Water Act, or the Environment Article

12. Waterway Construction and Obstruction

This permit does not authorize the construction or placing of physical structures, facilities, debris, or the undertaking of related activities in any waters of the State, including the 100-year flood plain.

13. Construction Permit

III. GENERAL CONDITIONS

This permit is not a permit to construct. The Permittee shall obtain any necessary construction permit(s) from the Department in conformity with COMAR 26.03.12.03(A) and Environment Article, Section 9-204(d).

14. Stormwater Pollution Prevention

a. The Permittee shall maintain coverage or No Exposure Certification (NEC) under the "General Permit for Discharges from Storm Water Associated with Industrial Activities" in accordance with the State NPDES Permit No. MDR0000; and

b. Discharge of industrial storm water is not authorized under this permit.

15. Severability

If any provision of this permit is held invalid for any reason, the remaining provisions of this permit shall remain in full force and effect, and such invalid provisions shall be considered severed and deleted from this permit.

16. Nuisance and Odor Restrictions

The Facility shall be operated at all times to prevent offensive odors from escaping the Facility boundaries and to prevent the Facility from becoming a public nuisance. If prolonged or excessive odors are noted outside of the Facility property line, the Permittee shall take actions necessary to remedy the problem.

17. Action on Violations

The issuance or reissuance of this permit does not constitute a decision by the Department not to proceed in any administrative, civil, or criminal action for any violations of State law or regulations occurring prior to the issuance or reissuance of this permit, nor a waiver of the Department's right to do so.

18. Discharge of Purified Water

This permit shall not authorize discharges of Purified water except to the Cranberry Reservoir shown on Map A and Map B.

19. Reporting Requirements

Pursuant to Section 9-331.1 of the Environment Article, the Permittee shall report any overflow of Purified water onto the ground surface or into the surface waters or ground waters of the State to the Water and Science Administration's Compliance Program. Concurrently, the Permittee shall also notify the local health department. Such reports must be made via telephone as soon as practicable, but no later than 24 hours after the time that the Permittee became aware of the event. Reportable events

include, but are not limited to, overflows onto the surface of the ground, into waterways, storm drains, ditches or other manmade or natural drainage conveyances to surface or ground waters which are

III. GENERAL CONDITIONS

reasonably likely to reach waters of the State. Overflows that are wholly contained within buildings or on impervious surfaces that do not discharge to waterways or pervious surfaces need not be reported.

Bypasses of the Westminster WRF, the Facility, or the Cranberry WTP shall be reported under Section III.B.3 Telephone reports shall be made to (410) 537-3510 on weekdays between 8:00 a.m. and 5:00 p.m. After-hours telephone notification shall be made to the emergency response number at (866) 633-4686. The Permittee shall include the following information when the incident is reported to the Department:

a. The location of the overflow, including city or county,

b. The name of the receiving water, if applicable.

c. An estimate of the volume of Purified water discharged.

d. A description of the Westminster WRF, Facility, Cranberry WTP, or pipeline component from which the overflow was released (such as manhole, crack in pipe, pumping station wet well or constructed overflow pipe);

e. An estimate of the overflow's impact upon public health and to waters of the State;

f. The cause or suspected cause of the overflow.

g. The estimated date and time when the overflow began and stopped or the anticipated time the overflow is expected to continue.

h. If known at the time of reporting, the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps; (if unknown at the time the telephone report is made, the steps must be included in the written reports submitted under Section III.B.3);

i. If known at the time of reporting, measures taken or planned to mitigate the adverse impact of the overflow and a schedule of major milestones for those steps (if unknown at the time the telephone report is made, the steps must be included in the written reports submitted under Section III. B.3.); and

j. Whether there has already been a notification to the public and other City or County Agencies or Departments and how notification was made.

20. Written Reports

Within 5 calendar days following telephone notification of the event, the Permittee shall provide the Department with a written report regarding the incident that includes, at a minimum, the information cited above.

The Permittee shall maintain copies of all overflow records and reports, work orders associated with investigation of overflows, a list and description of complaints from customers or others related to

III. GENERAL CONDITIONS

overflows, and documentation of performance and implementation measures for minimum period of 5 years and shall make this information available to the Department for review upon written request.

21. Other Requirements

The Permittee, as directed by the State or Local Health Department, shall also be responsible for posting notifications in close proximity to the affected area/stream and for conducting appropriate water quality sampling as deemed necessary.

_____

D. Lee Currey, Director
Water and Science Administration

Map A

Locations of the Westminster PureWater Facility, Cranberry WTP and Cranberry Reservoir

Map B

Locations of Mixers in Cranberry Reservoir

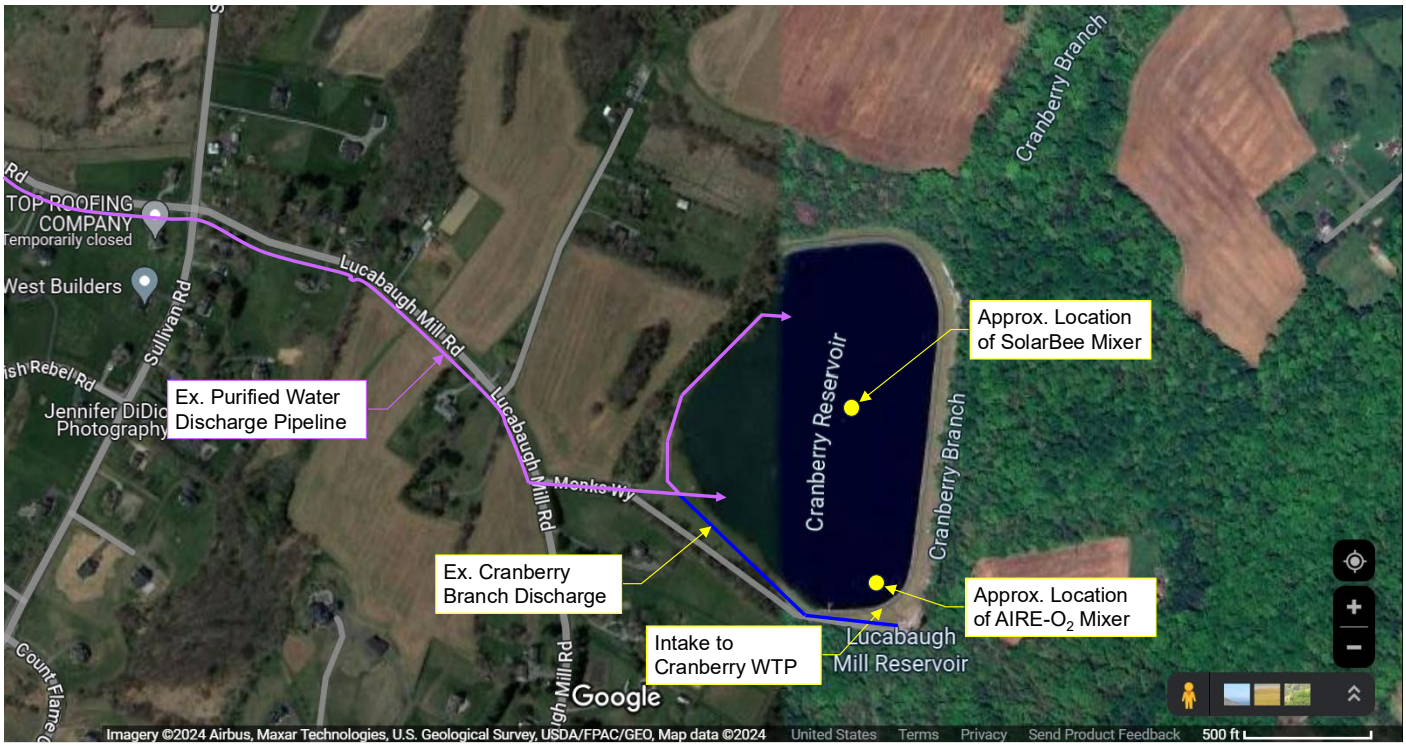

Figure 1

Schematic Diagram of Overall Treatment Processes