



*Commonwealth of Virginia*

**VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY**

NORTHERN REGIONAL OFFICE

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Regional Director

17 June 2021

Via email: [Karen.Pallansch@alexrenew.com](mailto:Karen.Pallansch@alexrenew.com)

**READ RECEIPT REQUESTED**

Ms. Karen Pallansch  
Chief Executive Officer  
Alexandria Renew Enterprises  
1800 Limerick Street  
Alexandria, VA 22314

Re: VPDES Permit No. VA0025160  
AlexRenew Enterprises Water Resource Reclamation Facility  
City of Alexandria

Dear Ms. Pallansch:

The Department of Environmental Quality (DEQ) has approved the enclosed effluent limitations and monitoring requirements for the aforementioned permit. Copies of your permit and fact sheet are enclosed.

The first electronic DMR submittal for the month of July 2021 is due by 10 August 2021. Please reference the effluent limits in your permit and report monitoring results in eDMR to the same number of significant digits as are included in the permit limits for the parameter. The regional contact for eDMR is Rebecca Vice. She may be contacted at 703-583-3922 or via email at [Rebecca.Vice@deq.virginia.gov](mailto:Rebecca.Vice@deq.virginia.gov) should you have any questions.

Please note that compliance with the permit's requirements for use and disposal of sewage sludge does not relieve you of your responsibility to comply with federal requirements set forth in 40 CFR Part 503. Until DEQ seeks and is granted authority to administer the Part 503 regulations by EPA, treatment works treating domestic sewage should continue to work directly with EPA to comply with them. For more information, you can call the EPA Region III office in Philadelphia at 215-814-5735.

Please note that if this permit is to be reissued in five years, there are specific testing requirements associated with the Form 2A reissuance application that are different from the testing requirements in your permit. In order to provide the necessary data for Form 2A you may need to begin additional sampling during the term of this permit prior to receiving a reissuance reminder letter from this agency. Please review Form 2A Tables A, B, C and E for the sampling requirements. Please note that DEQ and EPA will no longer accept waiver requests from the sampling or testing requirements in the application forms.

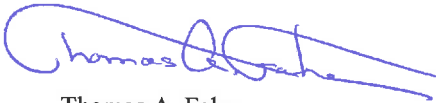
As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.

Alternately, any owner under §§ 62.1-44.16, 62.1-44.17, and 62.1-44.19 of the State Water Control Law aggrieved by any action of the State Water Control Board taken without a formal hearing, or by inaction of the Board, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in §1.23(b) of the Board's Procedural Rule No. 1. In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

A Reliability Class I is assigned to this facility and this facility has Class I licensed operator requirements.

Please contact Douglas Frasier at 703-583-873 or via email at [Douglas.Frasier@deq.virginia.gov](mailto:Douglas.Frasier@deq.virginia.gov), should you have any questions about the permit.

Respectfully,



Thomas A. Faha  
Director, Northern Regional Office

Enc.: Permit for VA0025160  
Fact Sheet for VA0025160

cc: DEQ-Water, OWPP  
EPA-Region III, 3WP12  
Department of Health, Culpeper  
Water Compliance, NRO



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No. **VA0025160**  
Effective Date: **July 1, 2021**  
Expiration Date: **June 30, 2026**

### AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM AND THE VIRGINIA STATE WATER CONTROL LAW, AND TO PRODUCE OR DISTRIBUTE RECLAIMED WATER UNDER THE WATER RECLAMATION AND REUSE REGULATION

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, Part I, Part II, Part III, Part IV and Part V of this permit, as set forth herein.

Owner Name: City of Alexandria, Virginia, Sanitation Authority  
d/b/a Alexandria Renew Enterprises  
Facility Name: Alexandria Renew Enterprises Water Resources Recovery Facility  
City: Alexandria  
Facility Location: 1800 Limerick Street, Alexandria, VA 22314

The owner is authorized to discharge to the following receiving streams:

	Outfall 001 and CSO 020	Outfall 002	CSO 021 and CSO 022	CSO 019
Stream Name:	Hunting Creek	Hooff Run	Hooff Run	Potomac River (Oronoco Bay)
River Basin:	Potomac River	Potomac River	Potomac River	Potomac River
River Subbasin:	Potomac River	Potomac River	Potomac River	Potomac River
Section:	6	6	7	6
Class:	II	II	III	II
Special Standards:	b,y (Not Applicable at CSO 020)	b,y	b (Not Applicable)	b,y (Not Applicable)

Thomas A. Faha  
Director, Northern Regional Office  
Department of Environmental Quality

June 16, 2021  
Date

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VPDES Permit VA0025160

Alexandria Renew Enterprises Water Resources Recovery Facility

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## GLOSSARY OF ACRONYMS AND TERMS

When used within this permit, unless otherwise indicated, the following acronyms and terms shall mean the following:

1. **AlexRenew** refers to the Alexandria Renew Enterprise Water Resources Recovery Facility.
2. **BSMP** refers to the biosolids management plan.
3. **CAT** refers to the corrective action threshold.
4. **cBOD<sub>5</sub>** means carbonaceous-Biochemical Oxygen Demand 5-day.
5. **CFR** means the Code of Federal Regulations.
6. **CIU** refers to categorical industrial users.
7. **CPLR** refers to cumulative pollutant loading rates.
8. **CSS** means a combined sewer system.
9. **CSO** means a combined sewer overflow.
10. **CTC** means a Certificate to Construct.
11. **CTO** means a Certificate to Operate.
12. **Department** refers to the Virginia Department of Environmental Quality.
13. **DEQ-NRO** refers to the Virginia Department of Environmental Quality-Northern Regional Office.
14. **DMR** is the discharge monitoring report.
15. **D.O.** means dissolved oxygen.
16. **E3** refers to the Exemplary Environmental Enterprise level under the Virginia Environmental Excellence Program.
17. **E4** refers to the Extraordinary Environmental Enterprise level under the Virginia Environmental Excellence Program.
18. **EMS** means environmental management system.
19. **EPA** is the Environmental Protection Agency.
20. **ERP** means enforcement response plan.
21. **gpd** means gallons per day.
22. **IU** means industrial user.
23. **kg/day** is kilograms per day.
24. **lb./day** is pounds per day.
25. **LTCPU** refers to the long term control plan update.
26. **mg/L** is milligrams per liter.
27. **mL** refers to milliliter.
28. **NAICS** refers to the North American Industry Classification System numbering system.
29. **NANI** refers to notice and necessary information.
30. **NMC** means the nine minimum controls as identified in the 1994 CSO Control Policy.
31. **NOEC** is the No Observed Effect Concentration.
32. **NSCIU** refers to nonsignificant categorical industrial user.
33. **O&M** means operation and maintenance.
34. **OCP** refers to the odor control plan.

35. **P2** means pollution prevention.
36. **PC** means pollutant concentration.
37. **PCB** refers to polychlorinated biphenyls.
38. **PCCM** refers to post construction compliance monitoring.
39. **PER** means preliminary engineering report.
40. **pg/L** means picogram per liter.
41. **pH** is a measure of hydrogen ion concentration; measurement of the acidity or alkalinity of solution.
42. **PMP** refers to pollutant minimization plan.
43. **POC** refers to the point of compliance.
44. **POTW** refers to a publicly owned treatment works.
45. **ppb** is parts per billion.
46. **PPRE** refers to the Policy for the Potomac River Embayments.
47. **PSRP** means process to significantly reduce pathogens.
48. **PVOTW** refers to a privately owned treatment works.
49. **RWM** refers to reclaimed water management.
50. **QA/QC** means quality assurance/quality control.
51. **QL** means quantification level.
52. **RiverRenew** is the CSO mitigation project.
53. **Section 303(d)** means state's list of impaired and threatened waters.
54. **SIC** refers to the Standard Industrial Classification codes.
55. **SIU** means significant industrial user.
56. **TDPS** refers to the tunnel dewatering pumping station.
57. **TKN** means total Kjeldahl nitrogen.
58. **TMDL** is total maximum daily load.
59. **TN** is total nitrogen.
60. **TP** is total phosphorus.
61. **TRC** means total residual chlorine.
62. **TSS** means total suspended solids.
63. **TU** represents the toxic unit.
64. **UV** means ultraviolet.
65. **VAR** means vector attraction reduction.
66. **VPDES** refers to the Virginia Pollution Discharge Elimination System.
67. **WET** is whole effluent toxicity.
68. **WRRF** refers to the Water Resources Recovery Facility (AlexRenew).
69. **WWPS** is the wet weather pumping station.

PART I - EFFLUENT LIMITATIONS, MONITORING REQUIREMENTS and SPECIAL CONDITIONS

**A. Effluent Limitations and Monitoring Requirements**

1. Outfall 001

- a. During the period beginning with the permit's effective date and lasting until issuance of the CTO for the RiverRenew Program or the permit expiration date; whichever may occur first, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified in Part I of this permit.
- b. This facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010059, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. There shall be no discharge of floating solids or visible foam in other than trace amounts.

Parameter	Discharge Limitations				Monitoring Requirements			
	Monthly Average <sup>(1)</sup>		Weekly Average <sup>(1)</sup>		Minimum	Maximum <sup>(1)</sup>	Frequency	Sample Type
Flow <sup>(2)</sup>	NL MGD		NA		NA	NL MGD	Continuous	TIRE
pH	NA		NA		6.0 S.U.	9.0 S.U.	1/D	Grab
cBOD <sub>5</sub>	5 mg/L	1000 kg/day	8 mg/L	1600 kg/day	NA	NA	1/D	24H-C
TSS	6.0 mg/L	1200 kg/day	9.0 mg/L	1800 kg/day	NA	NA	1/D	24H-C
D.O.	NA		NA		6.0 mg/L	NA	1/D	Grab
TKN	NL mg/L		NL mg/L		NA	NA	3D/W	24H-C
Ammonia, as N (April – October)	1.0 mg/L	200 kg/day	4.4 mg/L	900 kg/day	NA	NA	1/D	24H-C
Ammonia, as N (November – January)	8.4 mg/L		10 mg/L		NA	NA	1/D	24H-C
Ammonia, as N (February – March)	6.9 mg/L		8.5 mg/L		NA	NA	1/D	24H-C
<i>E. coli</i> (Geometric Mean) <sup>(3)</sup>	126 n/100 mL		NA		NA	NA	1/D	Grab
Nitrate+Nitrite, as N	NL mg/L		NA		NA	NA	3D/W	24H-C
Total Nitrogen <sup>(4)(6)</sup>	NL mg/L		NA		NA	NA	3D/W	Calculated
Total Nitrogen – Year to Date <sup>(5)</sup>	NL mg/L		NA		NA	NA	1/M	Calculated
Total Nitrogen – Calendar Year <sup>(5)(7)</sup>	3.0 mg/L		NA		NA	NA	1/YR	Calculated
Total Phosphorus <sup>(7)</sup>	0.18 mg/L	81 lb./day	0.27 mg/L	120 lb./day	NA	NA	1/D	24H-C
Chronic Toxicity – <i>C. dubia</i> <sup>(8)</sup>	NA		NA		NA	NL TU <sub>c</sub>	1/YR	24H-C
Chronic Toxicity – <i>P. promelas</i> <sup>(8)</sup>	NA		NA		NA	NL TU <sub>c</sub>	1/YR	24H-C

<sup>(1)</sup> See Part I.B.

<sup>(2)</sup> The dry-weather design flow for this treatment facility is 54 MGD.  
 The wet-weather design flow to receive full tertiary treatment is 108 MGD.

<sup>(3)</sup> Sampling is to be conducted between 10 AM and 4 PM.

<sup>(4)</sup> Total Nitrogen is the sum of TKN and Nitrate+Nitrite, as N and shall be calculated from the results of those tests.

<sup>(5)</sup> See Part I.B.3. for Nutrient Reporting Calculations.

<sup>(6)</sup> Should the permittee discharge from Outfall 002, the Total Nitrogen effluent data from Outfall 001 and Outfall 002 shall be averaged together for compliance reporting purposes.

<sup>(7)</sup> Nutrient wasteload allocations for localities served by combined sewers are based on dry weather design flow capacity (<= 54 MGD).

During wet weather flow events (> 54 MGD), the discharge shall achieve a TN concentration of 4.0 mg/L and TP concentration of 0.18 mg/L (9VAC25-720-50.C).

<sup>(8)</sup> See Part I.D. for Whole Effluent Toxicity Program Requirements.

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2. Outfall 001

- a. During the period beginning with the issuance of the CTO for the RiverRenew Program and lasting until the permit expiration date, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified in Part I of this permit.
- b. This facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010059, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. There shall be no discharge of floating solids or visible foam in other than trace amounts.

Parameter	Discharge Limitations				Monitoring Requirements	
	<u>Monthly Average</u> <sup>(1)</sup>	<u>Weekly Average</u> <sup>(1)</sup>	<u>Minimum</u>	<u>Maximum</u> <sup>(1)</sup>	<u>Frequency</u>	<u>Sample Type</u>
Flow <sup>(2)</sup>	NL MGD	NA	NA	NL MGD	Continuous	TIRE
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/D	Grab
D.O.	NA	NA	6.0 mg/L	NA	1/D	Grab
<i>E. coli</i> (Geometric Mean) <sup>(3)</sup>	126 n/100 mL	NA	NA	NA	1/D	Grab
Chronic Toxicity – <i>C. dubia</i> <sup>(4) (5)</sup>	NA	NA	NA	NL TU <sub>c</sub>	1/YR	24H-C
Chronic Toxicity – <i>P. promelas</i> <sup>(4) (5)</sup>	NA	NA	NA	NL TU <sub>c</sub>	1/YR	24H-C

<sup>(1)</sup> See Part I.B.

<sup>(2)</sup> The dry-weather design flow of this treatment facility is 54 MGD.  
 The wet-weather design flow of this treatment facility is 108 MGD.  
 The combined, wet-weather flow is 148 MGD (Internal Outfall 101 + CSO Outfall 102).

<sup>(3)</sup> Sampling is to be conducted between 10 AM and 4 PM.

<sup>(4)</sup> See Part I.D. for Whole Effluent Toxicity Program Requirements.

<sup>(5)</sup> WET testing shall occur during dry-weather flow as noted above.

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3. Internal Outfall 101 – Post Tertiary Treatment

- a. During the period beginning with the issuance of the CTO for the RiverRenew Program and lasting until the permit expiration date, the permittee is authorized to monitor the discharge at Internal Outfall Number 101. Such discharges shall be limited and monitored by the permittee as specified in Part I of this permit.
- b. This facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010059, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. There shall be no discharge of floating solids or visible foam in other than trace amounts.

Parameter	Discharge Limitations				Monitoring Requirements			
	Monthly Average <sup>(1)</sup>		Weekly Average <sup>(1)</sup>		Minimum	Maximum <sup>(1)</sup>	Frequency	Sample Type
Flow <sup>(2)</sup>	NL MGD		NA		NA	NL MGD	Continuous	TIRE
cBOD <sub>5</sub>	5 mg/L	1000 kg/day	8 mg/L	1600 kg/day	NA	NA	1/D	24H-C
TSS	6.0 mg/L	1200 kg/day	9.0 mg/L	1800 kg/day	NA	NA	1/D	24H-C
TKN	NL mg/L		NL mg/L		NA	NA	3D/W	24H-C
Ammonia, as N (April – October)	1.0 mg/L	200 kg/day	4.4 mg/L	900 kg/day	NA	NA	1/D	24H-C
Ammonia, as N (November – January)	8.4 mg/L		10 mg/L		NA	NA	1/D	24H-C
Ammonia, as N (February – March)	6.9 mg/L		8.5 mg/L		NA	NA	1/D	24H-C
Nitrate+Nitrite, as N	NL mg/L		NA		NA	NA	3D/W	24H-C
Total Nitrogen <sup>(3) (5)</sup>	NL mg/L		NA		NA	NA	3D/W	Calculated
Total Nitrogen – Year to Date <sup>(4)</sup>	NL mg/L		NA		NA	NA	1/M	Calculated
Total Nitrogen – Calendar Year <sup>(4) (6)</sup>	3.0 mg/L		NA		NA	NA	1/YR	Calculated
Total Phosphorus <sup>(6)</sup>	0.18 mg/L	81 lb./day	0.27 mg/L	120 lb./day	NA	NA	1/D	24H-C

<sup>(1)</sup> See Part I.B.

<sup>(2)</sup> The dry-weather design flow for this treatment facility is 54 MGD.  
The wet-weather design flow to receive full tertiary treatment is 108 MGD.

<sup>(3)</sup> Total Nitrogen is the sum of TKN and Nitrate+Nitrite, as N and shall be calculated from the results of those tests.

<sup>(4)</sup> See Part I.B.3. for Nutrient Reporting Calculations.

<sup>(5)</sup> Should the permittee discharge from Outfall 002, the Total Nitrogen effluent data from Outfall 101 and Outfall 002 shall be averaged together for compliance reporting purposes.

<sup>(6)</sup> Nutrient wasteload allocations for localities served by combined sewers are based on dry weather design flow capacity ( $\leq$  54 MGD). During wet weather flow events ( $>$  54 MGD), the discharge shall achieve a TN concentration of 4.0 mg/L and TP concentration of 0.18 mg/L (9VAC25-720-50.C).

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4. Outfall 102 – CSO Outfall / Wet Weather Treatment

- a. During the period beginning with the issuance of the CTO for the RiverRenew Program and lasting until the permit expiration date, the permittee is authorized to discharge at CSO Outfall 102.
- b. Such discharges shall be limited and monitored by the permittee as specified in Part I and Part V of this permit.

PARAMETER	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Frequency</u>	<u>Sample Type</u>
Flow <sup>(1)</sup>	NA	NA	NA	NL MGD	Continuous	Measured
Duration of Discharge	NA	NA	NA	NL hours	Continuous	Measured

<sup>(1)</sup> Design flow is 40 MGD.

FLOW CONDITIONS <sup>(1) (2) (3)</sup>	TIME PERIODS	AUTHORIZATION TO DISCHARGE
Dry Weather Flow (Influent Flow $\leq$ 54 MGD)	At all times	No discharge shall occur from CSO Outfall 102. Complete treatment required for all influent.
Wet Weather Flow (54 MGD $\leq$ Influent Flow $\leq$ 116 MGD)	At all times	No discharge shall occur from CSO Outfall 102. Complete treatment required for all influent.
Wet Weather Flow (Influent Flow $\geq$ 116 MGD)	At all times	Discharge is permissible from CSO Outfall 102. Design flow is 40 MGD.

<sup>(1)</sup> Activation of CSO Outfall 102 may occur only during wet weather events when peak wastewater flow to the facility exceeds the maximum design and operating capacity of the preliminary and primary treatment processes (116 MGD) and when the tunnel system is at capacity as described in the ORP for the RiverRenew Program during normal operating conditions. Refer to Part V.B.4.c. of the permit for the definition of abnormal conditions under which the 116 MGD wet weather flow threshold may be adjusted;

<sup>(2)</sup> CSO Outfall 102 shall: (1) receive preliminary treatment for floatable and solids removal within the TDPS/WWPS Superstructure, distinct from the POTW headworks, and (2) be combined with the fully treated wastestream. The combined flow from CSO Outfall 102 and the fully treated wastestream at Internal Outfall 101 shall be disinfected prior to discharge; and

<sup>(3)</sup> The permittee shall submit a log with each monthly DMR that identifies all instances in which CSO Outfall 102 is activated, volume of each activation and duration of each activation.

*Remainder of page intentionally left blank*

5. Outfall 002 – Emergency Outfall

- a. During the period beginning with the permit’s effective date and lasting until the permit expiration date, the permittee is authorized to discharge from Outfall Number 002. Such discharges shall be limited and monitored by the permittee as specified in Part I of this permit.
- b. This facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010059, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. There shall be no discharge of floating solids or visible foam in other than trace amounts.

Parameter	Discharge Limitations				Monitoring Requirements			
	Monthly Average <sup>(1)</sup>		Weekly Average <sup>(1)</sup>		Minimum	Maximum <sup>(1)</sup>	Frequency	Sample Type
Flow <sup>(2)</sup>	NL MGD		NA		NA	NL MGD	Continuous	TIRE
pH	NA		NA		6.0 S.U.	9.0 S.U.	1/D	Grab
cBOD <sub>5</sub>	5 mg/L	1000 kg/day	8 mg/L	1600 kg/day	NA	NA	1/D	24H-C
TSS	6.0 mg/L	1200 kg/day	9.0 mg/L	1800 kg/day	NA	NA	1/D	24H-C
D.O.	NA		NA		6.0 mg/L	NA	1/D	Grab
TKN	NL mg/L		NL mg/L		NA	NA	3D/W	24H-C
Ammonia, as N (April – October)	1.0 mg/L	200 kg/day	4.4 mg/L	900 kg/day	NA	NA	1/D	24H-C
Ammonia, as N (November – January)	8.4 mg/L		10 mg/L		NA	NA	1/D	24H-C
Ammonia, as N (February – March)	6.9 mg/L		8.5 mg/L		NA	NA	1/D	24H-C
<i>E. coli</i> (Geometric Mean) <sup>(3)</sup>	126 n/100 mL		NA		NA	NA	1/D	Grab
TRC (after dechlorination)	0.009 mg/L		0.010 mg/L		NA	NA	4/D	Grab
Nitrate+Nitrite, as N	NL mg/L		NA		NA	NA	3D/W	24H-C
Total Nitrogen <sup>(4)(7)</sup>	NL mg/L		NA		NA	NA	3D/W	Calculated
Total Nitrogen – Year to Date <sup>(5)</sup>	NL mg/L		NA		NA	NA	1/M	Calculated
Total Nitrogen – Calendar Year <sup>(5)(6)</sup>	3.0 mg/L		NA		NA	NA	1/YR	Calculated
Total Phosphorus <sup>(7)</sup>	0.18 mg/L	81 lb./day	0.27 mg/L	120 lb./day	NA	NA	1/D	24H-C
Chronic Toxicity – <i>C. dubia</i> <sup>(8)</sup>	NA		NA		NA	NL TU <sub>c</sub>	1/YR	24H-C
Chronic Toxicity – <i>P. promelas</i> <sup>(8)</sup>	NA		NA		NA	NL TU <sub>c</sub>	1/YR	24H-C

<sup>(1)</sup> See Part I.B.

<sup>(2)</sup> The dry-weather design flow for this treatment facility is 54 MGD.  
The wet-weather design flow for this treatment facility is 108 MGD.

<sup>(3)</sup> Between 10 AM and 4 PM.

<sup>(4)</sup> Total Nitrogen is the sum of TKN and Nitrate+Nitrite, as N and shall be calculated from the results of those tests.

<sup>(5)</sup> See Part I.B.3. for Nutrient Reporting Calculations.

<sup>(6)</sup> Should the permittee discharge from Outfall 002, the Total Nitrogen effluent data from Outfall 001 (Outfall 101 after issuance of the CTO for RiverRenew) and Outfall 002 shall be averaged together for compliance reporting purposes.

<sup>(7)</sup> Nutrient wasteload allocations for localities served by combined sewers are based on dry weather design flow capacity (≤ 54 MGD). During wet weather flow events (> 54 MGD), the discharge shall achieve a TN concentration of 4.0 mg/L and TP concentration of 0.18 mg/L (9VAC25-720-50.C).

<sup>(8)</sup> See Part I.D. for Whole Effluent Toxicity Program Requirements.

Effluent Limitations and Monitoring Abbreviations/Acronyms for Outfalls 001, 101, 102 and 002, as applicable.

MGD = Million gallons per day.

NA = Not applicable.

NL = No limit; monitor and report.

S.U. = Standard units.

TIRE = Totalizing, indicating and recording equipment.

1/D = Once every day.

4/D = Four times every day.

3D/W = Three times every week.

1/M = Once every month.

1/YR = Once every calendar year.

24H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

6. Outfalls 003, 005, 007, 009, 011, 013, 015 – Non-contaminated Stormwater Outfalls

- a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge stormwater from Outfall Numbers 003, 005, 007, 009, 011, 013 and 015.
- b. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- c. There shall be no discharge of process wastewaters from these outfalls.

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7. Outfalls 019, 020, 021 and 022 – Collection System CSO Outfalls

- a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from the CSS relief points during wet weather events.
- b. Discharges shall comply with the conditions and requirements found in Part V of the permit.
- c. Dry weather discharges are strictly prohibited.

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**B. Quantification Levels and Compliance Reporting**

1. Quantification Levels

- a. The QLs shall be less than or equal to the following concentrations:

<u>Parameter</u>	<u>Quantification Level</u>
TSS	1.0 mg/L
cBOD <sub>5</sub>	2 mg/L
Ammonia, as N	0.20 mg/L
TRC	0.10 mg/L

- b. The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method. The permittee shall use any method in accordance with Part II.A of this permit.
- c. It is the responsibility of the permittee to ensure that proper QA/QC protocols are followed during the sampling and analytical procedures. QA/QC information shall be documented to confirm that appropriate analytical procedures have been used and the required QLs have been attained.

2. Compliance Reporting for Parameters in Part I.B.

- a. Monthly Average – Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in Part I.B.1.a of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.1.a above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis shall be treated as it is reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the Discharge Monitoring Report as calculated. If all data are below the QL used for the analysis, then the average shall be reported as "< QL". If reporting for quantity is required on the DMR and the reported monthly average concentration is < QL, then report "< QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the monthly average of the calculated daily quantities.
- b. Maximum Weekly Average – Compliance with the weekly average limitations and/or reporting requirements for the parameters listed in Part I.B.1.a of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.1.a above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each complete calendar week and entirely contained within the reporting month. The maximum value of the weekly averages thus determined shall be reported on the DMR. If all data are below the QL used for the analysis, then the weekly average shall be reported as "< QL". If reporting for quantity is required on the DMR and the reported weekly average concentration is < QL, then report "< QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the maximum weekly average of the calculated daily quantities.
- c. Single Datum – Any single datum required shall be reported as "< QL" if it is less than the QL used in the analysis (QL must be less than or equal to the QL listed in Part I.B.1.a above). Otherwise, the numerical value shall be reported.
- d. Significant Digits – The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used (i.e., 5 always rounding up or to the nearest even number) by the permittee, the permittee shall use the convention consistently, and shall ensure that consulting laboratories employed by the permittee use the same convention.

3. Nutrient Reporting Calculation for Part I.B.

- a. For each calendar month, the DMR shall show the calendar year-to-date average concentration (mg/L) calculated in accordance with the following formulae:

$$MC_{avg-YTD} = (\sum_{(Jan-current\ month)} MC_{avg}) \div (\# \text{ of months})$$

where:  $MC_{avg-YTD}$  = calendar year-to-date average concentration (mg/L)  
 $MC_{avg}$  = monthly average concentration (mg/L) as reported on DMR

- b. The total nitrogen and phosphorus average concentrations (mg/L) for each calendar year (AC) shall be shown on the December DMR due January 10<sup>th</sup> of the following year. These values shall be calculated in accordance with the following formulae:

$$AC_{avg} = (\sum_{(Jan-Dec)} MC_{avg}) \div 12$$

where:  $AC_{avg}$  = calendar year average concentration (mg/L)  
 $MC_{avg}$  = monthly average concentration (mg/L) as reported on DMR

- c. For total phosphorus, all daily concentration data below the QL for the analytical method used shall be treated as half the QL. All daily concentration data equal to or above the QL for the analytical method used shall be treated as it is reported.
- d. For total nitrogen, if none of the daily concentration data for the respective species (i.e., nitrates/nitrites, TKN) are equal to or above the QL for the respective analytical methods used, the daily TN concentration value reported shall equal one half of the largest QL used for the respective species. If one of the data is equal to or above the QL, the daily TN concentration value shall be treated as that data point is reported. If more than one of the data is above the QL, the daily TN concentration value shall equal the sum of the data points as reported.

**C. Pretreatment Requirements**

1. General Requirements

- a. The permittee's pretreatment program has been approved. The program is an enforceable part of this permit. The permittee shall:
- 1) Within one year of the effective date of this permit, the permittee shall develop or reevaluate the local limits using current influent, effluent and sludge monitoring data and submit the data and results of the evaluation to DEQ-NRO.
  - 2) Maintain the approved continuous industrial user survey program. Any changes to the program shall be submitted to DEQ-NRO within 90 days.
  - 3) Submit to the DEQ-NRO an annual report that describes the permittee's program activities over the previous year. The annual report shall be submitted no later than January 31 of each year and shall include:
    - a) An updated list of the SIUs, as defined in 9VAC25-31-10, to include CIUs, as defined in subdivision 3.c. of this section, noting all of the following:
      - (1) Facility address and contact name, including email and phone number;
      - (2) Contact information; SIC Codes and NAICS Codes for each SIU/CIU;
      - (3) Explanation of SIUs deleted from the previous year's list;
      - (4) Identify which IUs are subject to Categorical Standards and note which Standard (i.e., metal finishing);
      - (5) Specify which 40 CFR part(s) is/are applicable;

- (6) Indicate which IUs are subject to local standards that are more stringent than Categorical Pretreatment Standards;
  - (7) Indicate which IUs are subject only to local requirements;
  - (8) Identify which IUs are subject to Categorical Pretreatment Standards that are subject to reduced reporting requirements under 9VAC25-31-840.E.3.; and
  - (9) Identify which IUs are non-significant Categorical Industrial Users (NSCIUs).
- b) A summary of the compliance status of each SIU with pretreatment standards and permit requirements.
  - c) A summary of the number and types of SIU sampling and inspections performed by the POTW.
  - d) All information concerning any interference, upset, VPDES permit or Water Quality Standards violations directly attributable to SIUs and enforcement actions taken to alleviate said events.
  - e) A description of all enforcement actions taken against SIUs over the previous 12 months.
  - f) A summary of any changes to the submitted pretreatment program that has not been previously reported to the DEQ-NRO.
  - g) A summary of the permits issued to SIUs since the last annual report.
  - h) POTW and self-monitoring results for SIUs determined to be in significant non-compliance during the reporting period.
  - i) Results of the POTW's influent/effluent/sludge sampling, not previously submitted to the DEQ-NRO.
  - j) Copies of newspaper publications of all SIUs in significant non-compliance during the reporting period.
  - k) Signature of an authorized representative.
- 4) Submit any changes to the approved pretreatment program to the DEQ-NRO within 90 days of changes and obtain approval before implementation of the changes.
  - 5) Ensure all SIU permits are issued and reissued in a timely manner and that the SIU permits issued by the POTW are effective and enforceable.
  - 6) Inspect and sample all SIUs at a minimum of once a year.
    - a) Sampling shall include all regulated parameters and shall be representative of the wastewater discharged.
    - b) Inspection of the SIUs shall cover all areas that could result in wastewater discharge to the treatment works including manufacturing, chemical storage, pretreatment facilities, spill prevention and control procedures, hazardous waste generation and SIU self-monitoring and records.
  - 7) Implement the reporting requirements of Part VII of the VPDES Permit Regulation at 9VAC25-31-840.
  - 8) Review the Legal Authority and Enforcement Response Plan as necessary to ensure they meet state and federal regulatory requirements. The approved Legal Authority and ERP are enforceable parts of this permit and shall be implemented.
  - 9) Ensure that adequate resources are available to implement the approved program.
  - 10) Meet all public participation requirements and annually public notice SIUs in significant non-compliance with pretreatment standards and requirements for the previous 12 months.



## 2. Changes to Pretreatment Program

The DEQ may require the POTW to institute changes to its pretreatment program:

- a. If the approved program is not implemented in a way satisfying the requirements of the Clean Water Act, Water Control Law or State regulations;
- b. If problems such as pass-through, interference, water quality standards violations or sludge contamination develop or continue; and
- c. If federal, state or local requirements change.

## 3. Program Streamlining

- a. The Control Authority may determine that an IU subject to categorical Pretreatment Standards under 9VAC25-31-780 and 40 CFR chapter I, subchapter N is a NSCIU rather than a SIU on a finding that the IU never discharges more than 100 gpd of total categorical wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater, unless specifically included in the Pretreatment Standard) and the following conditions are met:
  - 1) The IU, prior to Control Authority's finding, has consistently complied with all applicable categorical Pretreatment Standards and Requirements;
  - 2) The IU annually submits the certification statement required in 9VAC25-31-840 together with any additional information necessary to support the certification statement; and
  - 3) The IU never discharges any untreated concentrated wastewater.
- b. Upon a finding that an IU, meeting the criteria in subdivision 3.a. above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the control authority may at any time, on its own initiative or in response to a petition received from an IU or POTW and in accordance with Part VII (9VAC25-31-730 et seq.) of this chapter, determine that such IU is not a SIU.

## D. Whole Effluent Toxicity Program Requirements

### 1. Biological Monitoring Requirements

- a. In accordance with the schedule in Part I.D.2. below, the permittee shall conduct annual chronic toxicity tests during this permit term. The permittee shall collect 24-hour flow-proportioned composite samples of final effluent from Outfall 001.

The chronic tests to use are:

Chronic 3-Brood Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia*

Chronic 7-Day Static Renewal Survival and Growth Test using *Pimephales promelas*

These chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions) to determine the NOEC for survival and reproduction or growth. Results which cannot be quantified (i.e., a "less than" NOEC value) are not acceptable and a retest shall be performed. The NOEC, as determined by hypothesis testing, shall be converted to  $TU_c$  for DMR reporting where  $TU_c = 100/NOEC$ . Report the  $LC_{50}$  at 48 hours and the  $IC_{25}$  with the NOEC's in the test report.

- b. The permittee may provide additional samples to address data variability. These data shall be reported. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.
- c. The test dilutions shall be able to determine compliance with the following endpoints:

Chronic NOEC  $\geq$  34%; equivalent to a  $TU_c \leq 2.94$

- d. The test data will be evaluated statistically by DEQ staff to assess the reasonable potential for toxicity of the discharge to surface waters at the conclusion of the test period. The data may be evaluated sooner if requested by the permittee or if toxicity has been noted. Should DEQ determine that a limit is warranted; this permit may be modified, or alternatively revoked and reissued, to incorporate a WET limit and compliance schedule.
- e. The permit may be modified or revoked and reissued to include pollutant specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant specific limitation shall control the toxicity of the effluent.
- f. The results of the test and the test report shall be reported with the DMR for the month following receipt of the testing results. In no case shall this exceed forty-five (45) days from the receipt of the test results.

2. Reporting Schedule

- a. The permittee shall monitor during the specified period; shall report the results on the DMR; and shall supply one copy of the toxicity test report specified in this WET Program in accordance with the following schedule:

Period	Sampling Period
Annual 1	1 October 2022 – 31 December 2022
Annual 2	1 July 2023 – 30 September 2023
Annual 3	1 April 2024 – 30 June 2024
Annual 4	1 January 2025 – 31 March 2025

- b. Should the permit be administratively continued after the permit expiration date, WET testing shall continue until the permit is reissued, in accordance with the requirements as specified in D.1.a. above. Testing shall continue starting the full calendar year following the permit expiration. Sampling periods shall reflect the schedule listed in D.2.a. above (i.e. first test period would be October 2026 – December 2026).

**E. Other Requirements and Special Conditions**

1. 95% Capacity Reopener

A written notice and a plan of action for ensuring continued compliance with the terms of this permit shall be submitted to the DEQ-NRO when the monthly average flow influent to the sewage treatment plant reaches 95% of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at the DEQ-NRO no later than 90 days from the third consecutive month for which the flow reached 95% of the design capacity. The plan shall include the necessary steps and a prompt schedule of implementation for controlling any current or reasonably anticipated problem resulting from high influent flows. Failure to submit an adequate plan in a timely manner shall be deemed a violation of this permit.

2. Indirect Dischargers

The permittee shall provide adequate notice to the Department of the following:

- a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Section 301 or 306 of Clean Water Act and the State Water Control Law if it were directly discharging those pollutants; and
- b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of this permit.
- c. Adequate notice shall include information on (i) the quality and quantity of effluent introduced into the treatment works, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment works.

### 3. Operation and Maintenance Manual Requirement

The permittee shall maintain a current O&M Manual for the treatment works that is in accordance with Virginia Pollutant Discharge Elimination System Regulations at 9VAC25-31 and Sewage Collection and Treatment Regulations at 9VAC25-790.

The O&M Manual and subsequent revisions shall include the manual effective date and meet Part II.K.2 and Part II.K.4 Signatory Requirements of the permit. Any changes in the practices and procedures followed by the permittee shall be documented in the O&M Manual within 90 days of the effective date of the changes. The permittee shall operate the treatment works in accordance with the O&M Manual and shall make the O&M Manual available to Department personnel for review during facility inspections. Within 30 days of a request by DEQ, the current O&M Manual shall be submitted to the DEQ-NRO for review and approval.

The O&M Manual shall detail the practices and procedures that will be followed to ensure compliance with the requirements of this permit. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

- a. Permitted outfall locations and techniques to be employed in the collection, preservation and analysis of effluent and sludge samples;
- b. Procedures for measuring and recording the duration and volume of treated wastewater discharged;
- c. Discussion of Best Management Practices, if applicable;
- d. Procedures for handling, storing and disposing of all wastes, fluids and pollutants that will prevent these materials from reaching state waters. List type and quantity of wastes, fluids and pollutants (e.g. chemicals) stored at this facility;
- e. Discussion of treatment works design, treatment works operation, routine preventative maintenance of units within the treatment works, critical spare parts inventory and record keeping;
- f. Plan for the management and/or disposal of waste solids and residues;
- g. Hours of operation and staffing requirements for the plant to ensure effective operation of the treatment works and maintain permit compliance;
- h. List of facility, local and state emergency contacts; and
- i. Procedures for reporting and responding to any spills/overflows/treatment works upsets.

### 4. CTC/CTO Requirement

In accordance with *Sewage Collection and Treatment* regulation (9VAC25-790), the permittee shall obtain a CTC and a CTO from the Department of Environmental Quality prior to constructing wastewater treatment works and operating the treatment works, respectively. Non-compliance with the CTC or CTO requirement shall be deemed a violation of the permit.

### 5. Licensed Operator Requirement

The permittee shall employ or contract at least one Class I licensed wastewater works operator for this facility. The license shall be issued in accordance with Title 54.1 of the Code of Virginia and Board for Waterworks and Wastewater Works Operators Licensing Regulations at 18VAC160-30 et seq. The permittee shall notify the Department in writing whenever he is not complying, or has grounds for anticipating he will not comply with this requirement. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

### 6. Reliability Class

The permitted treatment works shall meet Reliability Class I.

7. Water Quality Reopener

Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.

8. E3/E4

The annual average concentration limitations for total nitrogen and/or total phosphorus are suspended during any calendar year in which the facility is considered by DEQ to be a participant in the Virginia Environmental Excellence Program in good standing at either the E3 or E4 level, provided that the following conditions have also been met:

- a. The facility has applied for (or renewed) participation, been accepted, maintained a record of sustained compliance and submitted an annual report according to the program guidelines;
- b. The facility has demonstrated that they have in place a fully implemented environmental management system with an alternative compliance method that includes operation of installed nutrient removal technologies to achieve the annual average concentration limitations; and
- c. The E3/E4 designation from DEQ and implementation of the EMS has been in effect for the full calendar year.

The annual average concentration limitations for total nitrogen and/or total phosphorus, as applicable, are not suspended in any calendar year following a year in which the facility failed to achieve the annual average concentration limitations as required by b. above.

9. Nutrient Reopener

This permit may be modified or, alternatively, revoked and reissued:

- a. If any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements;
- b. To incorporate technology-based effluent concentration limitations for nutrients in conjunction with the installation of nutrient control technology, whether by new construction, expansion or upgrade, or
- c. To incorporate alternative nutrient limitations and/or monitoring requirements, should:
  - 1) the State Water Control Board adopt new nutrient standards for the water body receiving the discharge, including the Chesapeake Bay or its tributaries; or
  - 2) a future water quality regulation or statute require new or alternative nutrient control.

10. PCB Pollutant Minimization Plan for Outfalls 001 & 002

The permittee has completed low-detection level, congener specific monitoring of the effluent for PCBs.

a. Pollutant Minimization Plan

The permittee shall submit to DEQ-NRO for review and approval a PMP designed to investigate the location and potential reduction of sources of PCBs in the collection system. The PMP shall be submitted within 180 days of the effective date of this permit.

The PMP shall detail the practices and procedures, which will be followed to investigate the location and potential reduction of sources of PCBs.

This PMP shall include, but not necessarily be limited to, the following items, as appropriate:

- 1) Provide a facility contact for the contents of the PMP and any activities associated with the PMP;

- 2) Provide a proposed implementation schedule for minimization activities and prospective milestones;
- 3) Propose actions for known or probable sources;
- 4) Propose actions to find and control unknown sources;
- 5) Summarize any previous minimization activities;
- 6) Present methods for measuring, demonstrating and reporting progress;
  - (a) May include an evaluation of the total PCBs and/or PCB congener distribution in the initial source intake water to determine the net contributions of PCBs introduced to the treatment works.
  - (b) May include raw influent testing using either grab or composite samples as well as sampling upstream in the collection system. Screening methods may be utilized to target specific areas of interest.
  - (c) Alternative PCB test methods are acceptable provided analytical sensitivity is sufficient for detection and quantification.
  - (d) May perform further monitoring of the final effluent to determine effectiveness of the reduction efforts and to reestablish a new baseline for PCBs in the final effluent.
- 7) Estimate the PCB load reduction provided by treatment; and
- 8) Provide information on continuing assessment of progress, which may include establishment of criteria to evaluate whether the location and potential reduction of PCB sources has been addressed, and whether a more routine follow-up awareness, education, and inspection approach is appropriate.

b. PMP Annual Report

An Annual Report shall be submitted to DEQ-NRO for review and approval by February 10 for the previous year's PMP activities.

The Annual Report shall:

- 1) Summarize PMP Achievement for investigating the location and potential reduction of sources of PCBs in the collection system during the past calendar year;
- 2) Address any revisions needed for the PMP for the coming year;
- 3) Address material and process modifications, if applicable;
- 4) Summarize measures taken to address known, probable and potential sources; and
- 5) Discuss incremental and cumulative changes from the baseline loading.

11. Internal Outfall 101 Sampling Location

The permittee shall submit to DEQ-NRO for review and approval six (6) months prior to the application for the CTO for the RiverRenew Program, the proposed location for Internal Outfall 101. The location for the outfall shall demonstrate that full tertiary treatment, except disinfection, is maintained at dry- and wet-weather design flows.

12. TMDL Reopener

This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements.

## PART II - CONDITIONS APPLICABLE TO ALL VPDES PERMITS

### A. Monitoring

1. Samples and measurements required by this permit shall be taken at the permit designated or approved location and be representative of the monitored activity.
  - a. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.
  - b. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.
  - c. Samples taken shall be analyzed in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories.
2. Any pollutant specifically addressed by this permit that is sampled or measured at the permit designated or approved location more frequently than required by this permit shall meet the requirements in Part II A.1.a. through c. above and the results of this monitoring shall be included in the calculations and reporting required by this permit.
3. Operational or process control samples or measurements shall not be taken at the designated permit sampling or measurement locations. Operational or process control samples or measurements do not need to follow procedures approved under Title 40 Code of Federal Regulations Part 136 or be analyzed in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories.

### B. Records

1. Records of monitoring information shall include:
  - a. The date, exact place, and time of sampling or measurements;
  - b. The individual(s) who performed the sampling or measurements;
  - c. The date(s) and time(s) analyses were performed;
  - d. The individual(s) who performed the analyses;
  - e. The analytical techniques or methods used; and
  - f. The results of such analyses.
2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

### C. Reporting Monitoring Results

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit.

Monitoring results shall be submitted to:

Department of Environmental Quality – Northern Regional Office  
13901 Crown Court  
Woodbridge, VA 22193

2. Monitoring results shall be reported on a Discharge Monitoring Report or on forms provided, approved or specified by the Department.
3. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

**D. Duty to Provide Information**

The permittee shall furnish to the Department, within a reasonable time, any information which the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from this discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

**E. Compliance Schedule Reports**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

**F. Unauthorized Discharges**

Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or
2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.

**G. Reports of Unauthorized Discharges**

Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II.F.; or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II.F., shall notify the Department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department, within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and

8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

#### **H. Reports of Unusual or Extraordinary Discharges**

If 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 by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II.I.2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

#### **I. Reports of Noncompliance**

The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:
  - a. Any unanticipated bypass; and
  - b. Any upset which causes a discharge to surface waters.
2. A written report shall be submitted within 5 days and shall contain:
  - a. A description of the noncompliance and its cause;
  - b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
  - c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Board may waive the written report on a case-by-case basis for reports of noncompliance under Part II.I. if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Parts II, I.1.or I.2., in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II.I.2.

NOTE: The immediate (within 24 hours) reports required in Parts II, G., H. and I. may be made to the Department's Northern Regional Office at (703) 583-3800 (voice) or online at <https://portal.deq.virginia.gov/prep/Report/Create>. For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.



## **J. Notice of Planned Changes**

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
  - a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:
    - 1) After promulgation of standards of performance under Section 306 of Clean Water Act which are applicable to such source; or
    - 2) After proposal of standards of performance in accordance with Section 306 of Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;
  - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or
  - c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
2. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

## **K. Signatory Requirements**

1. Applications. All permit applications shall be signed as follows:
  - a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
    - 1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
    - 2) The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
  - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
  - c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes:
    - 1) The chief executive officer of the agency, or
    - 2) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
2. Reports, etc. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II.K.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described in Part II.K.1.;
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
  - c. The written authorization is submitted to the Department.
3. Changes to authorization. If an authorization under Part II.K.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II.K.2. shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.
  4. Certification. Any person signing a document under Parts II, K.1. or K.2. shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

#### **L. Duty to Comply**

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

#### **M. Duty to Reapply**

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board. The Board shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

#### **N. Effect of a Permit**

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

#### **O. State Law**

Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II.U.), and "upset" (Part II.V.) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

**P. Oil and Hazardous Substance Liability**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

**Q. Proper Operation and Maintenance**

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

**R. Disposal of Solids or Sludges**

Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

**S. Duty to Mitigate**

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

**T. Need to Halt or Reduce Activity not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**U. Bypass**

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II, U.2. and U.3.
2. Notice
  - a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.
  - b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II.I.
3. Prohibition of bypass.
  - a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:
    - 1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
    - 2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
    - 3) The permittee submitted notices as required under Part II.U.2.

- b. The Board may approve an anticipated bypass, after considering its adverse effects, if the Board determines that it will meet the three conditions listed above in Part II.U.3.a.

#### **V. Upset**

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part II.V.2. are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.
2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
  - b. The permitted facility was at the time being properly operated;
  - c. The permittee submitted notice of the upset as required in Part II.I.; and
  - d. The permittee complied with any remedial measures required under Part II.S.
3. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

#### **W. Inspection and Entry**

The permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

#### **X. Permit Actions**

Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

#### **Y. Transfer of Permits**

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II.Y.2., a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.
2. As an alternative to transfers under Part II.Y.1., this permit may be automatically transferred to a new permittee if:
  - a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;

- b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
- c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II.Y.2.b.

**Z. Severability**

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

*Remainder of this page intentionally left blank*

PART III - RECLAMATION AND REUSE CONDITIONS AND REQUIREMENTS

**A. Standards and Monitoring Requirements**

**Level 1 Reclaimed Water (Outfall 650).**

During the period beginning with the permit’s effective date and ending with the permit expiration date, the permittee is required to monitor pollutants in the Level 1 reclaimed water as described below for reuses specified in the Reclaimed Water Management Plan:

Parameter	Standard <sup>(1)</sup>	Units	Frequency	Sample Type
<i>E. coli</i> <sup>(2) (3) (4)</sup>	Monthly Geometric mean: $\leq 11$	Colonies/100 mL	1/D	Grab
	CAT: $> 35$	Colonies/100 mL	NA	Grab
pH <sup>(5)</sup>	6.0 – 9.0	Standard Units	1/D	Grab
cBOD <sub>5</sub>	Monthly average: $\leq 8$	mg/L	5D/W	24-HC
Turbidity <sup>(6) (7) (8)</sup>	Daily average: $\leq 2$	NTU	Continuous	Recorded
	CAT: $> 5$	NTU	Continuous	Recorded
Reclamation System Flow <sup>(9)</sup>	Monthly average: NL	MGD	Continuous	TIRE
	Monthly maximum: NL	MGD	Continuous	TIRE

*CAT* = Corrective action threshold.      *NA* = Not applicable.      *1/D* = Once every day.  
*MGD* = Million gallons per day.      *NL* = No limit; monitor and report.      *5D/W* = Five times every week.  
*NTU* = Nephelometric turbidity unit.      *TIRE* = Totalizing, indicating and recording equipment.

*24-HC* = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

*Grab* = An individual sample collected over a period of time not to exceed 15-minutes.

- <sup>(1)</sup> Level 1 standards must be met at the POC designated as internal outfall 650.
- <sup>(2)</sup> After disinfection.
- <sup>(3)</sup> For the purpose of calculating the geometric mean, bacterial analytical results below the detection level of the analytical method used shall be reported as values equal to the detection level.
- <sup>(4)</sup> Bacterial samples shall be collected between 10 AM and 4 PM to coincide with peak flows to the reclamation system.
- <sup>(5)</sup> A properly calibrated pH meter shall be used for all pH analysis of reclaimed water.
- <sup>(6)</sup> Turbidity analysis shall be performed by a continuous, online turbidity meter equipped with an automated data logging or recording device and an alarm to notify the operator when the CAT for turbidity in the standard for Level 1 has been reached. Compliance with the average turbidity standard shall be determined daily, based on the arithmetic mean of hourly or more frequent discrete measurements recorded during a 24-hour period. See Part III.B.5 for additional information regarding turbidity monitoring.
- <sup>(7)</sup> Daily average is the arithmetic mean of hourly or more frequent discrete turbidity measurements recorded during a 24-hour period.
- <sup>(8)</sup> The POC shall be prior to disinfection.
- <sup>(9)</sup> The designated design capacity for the reclamation system is 2 MGD.

Results for the above parameters shall be included in the monthly monitoring report submitted to DEQ-NRO by the 10th of each month for the preceding month's performance.

*Remainder of this page intentionally left blank*

## **B. Special Conditions for Water Reclamation and Reuse**

### 1. Prohibitions for Reclamation and Reuse

The following are prohibited:

- a. Direct potable reuse;
- b. The reuse of reclaimed water distributed to one-family or two-family dwellings. This prohibition does not apply to reuses of reclaimed water outside of and on the same property as one-family or two-family dwellings where the reclaimed water is not distributed to such reuses by way of plumbing within the dwellings;
- c. The reuse of reclaimed water to fill residential swimming pools, hot tubs or wading pools;
- d. The reuse of reclaimed water for food preparation or incorporation as an ingredient into food or beverage for human consumption;
- e. Bypass of untreated or partially treated wastewater from the reclamation system or any intermediate unit process to the point of reuse unless the bypass complies with standards and requirements specified in this permit and is for essential maintenance to assure efficient operation;
- f. The return of reclaimed water to the reclaimed water distribution system after the reclaimed water has been delivered to an end user; and
- g. Reduction of the discharge from a VPDES permitted treatment works due to diversion of source water flow for reclamation and reuse such that the physical, chemical or biological properties of the receiving state waters are affected in a manner that would cause a significant adverse impact to other beneficial uses.

### 2. Nuisance Conditions

There shall be no nuisance conditions (e.g. ponded water that attracts mosquitoes or other vectors; strong odors that the Department determines are the subject of frequent and wide spread complaints from the surrounding community; any condition determined by a court of law to be a nuisance condition) resulting from the distribution, storage or use of reclaimed water. All end users shall be responsible for enforcement of the special condition per the signed reuse agreements with AlexRenew.

### 3. Reclamation and Reuse Reopener

The Board may modify or revoke and reissue this permit if any applicable standards or requirements for water reclamation and reuse promulgated under State Water Control Law or regulations promulgated there under, including the *Water Reclamation and Reuse Regulation* (9VAC25-740 et seq.), are more stringent than or are in addition to any standards or requirements for water reclamation and reuse contained in this permit.

### 4. Submittal of Monitoring Reports

Discharge of reclaimed water from the reclamation system and system storage facility to a reclaimed water distribution system, a non-system storage facility or directly to a reuse of the reclaimed water at any time for any duration within a monthly reporting period, shall require monitoring in accordance with Part III.A. and submittal of a monthly monitoring report for the discharge.

### 5. Corrective Action Threshold for Turbidity

Should reclaimed water reach the CAT for turbidity specified in Part III.A. of this permit, the operator of the reclamation system shall immediately initiate a review of treatment operations and data to identify the cause of the CAT monitoring results to bring the reclaimed water back into compliance with the standards. Resampling or diversion shall occur within one hour of first reaching the CAT. Procedures for resampling, operational review and diversion shall be as described in the approved operations and maintenance manual for the reclamation system.

If subsequent monitoring results of the resamples collected within one hour of the first CAT monitoring results for turbidity continue to reach the CAT, the reclaimed water shall be considered substandard or reject water and shall be diverted to either storage for subsequent additional treatment or retreatment or discharged to a VPDES permitted effluent disposal system provided the reject water meets applicable effluent limits. If the reclamation system is unattended, the diversion of reject water shall be initiated and performed with automatic equipment. There shall be no automatic restarts of distribution to reuse until the treatment problem is corrected. Failure to divert the substandard or reject water after one hour of CAT monitoring results shall be considered a violation of this permit.

Upon resuming discharge of reclaimed water to the reclaimed water distribution system for which the CAT was reached, resampling for turbidity shall occur within one hour to verify proper treatment.

6. Corrective Action Threshold for Bacteria

Should the reclaimed water reach the CAT for *E. coli* specified in Part III.A. of this permit, the operator of the reclamation system shall immediately initiate a review of treatment operations and data to identify the cause of the CAT monitoring results to bring the reclaimed water back into compliance with the standards. Procedures for operational review shall be as described in the approved O&M Manual for the reclamation system. Two consecutive bacterial monitoring results that reach the CAT of the standards shall be considered a violation of this permit.

7. Failure to Resample

Failure to resample after determination that monitoring results are not in compliance with the CAT standards for reclaimed water in Part III.A, or to divert or discharge substandard or reject water in accordance with Part III.B.5. shall be deemed a violation of this permit.

8. Online Turbidity Meter

Should the online turbidity meter for the reclamation system go out of service for either planned or unplanned repair, samples shall be manually collected for turbidity analysis at four-hour intervals up to a maximum of five days. Following the period of repair (not to exceed five days), continuous, online monitoring with a turbidity meter shall resume.

9. Class Operator

The classification of the operator for the reclamation system is Class I. The permittee shall employ or contract at least one operator who holds a current Class I license and the license shall be issued in accordance with Title 54.1 of the Code of Virginia and Board for Waterworks and Wastewater Works Operators Licensing Regulations at 18VAC160-30 et seq. The permittee shall notify DEQ-NRO in writing when compliance with this requirement is not being achieved or it is anticipated that compliance with this requirement will not be achieved. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

The reclamation system shall be manned while in operation and under the supervision of the Class I operator unless the system is equipped with remote monitoring and, as applicable, automated diversion of substandard or reject water in accordance with Part III.B.5. of this permit.

10. Operational and Maintenance Manual

The permittee shall maintain an O&M Manual for AlexRenew addressing the operation and maintenance of the reclamation system. These changes shall reflect the practices and procedures followed by the permittee to ensure compliance with the permit. Upon approval, these changes to the O&M Manual shall be incorporated into the existing document and be an enforceable part of the permit. The O&M Manual shall be maintained on site and shall, at a minimum, contain the following related to the operations and maintenance of the reclamation system:

- a. A description of unit treatment processes within the reclamation system and step-by-step instructions for the operation of these processes;
- b. A description of all appurtenances associated with the reclamation system (i.e., storage facilities, distribution system etc.), step-by-step instructions for their operation and a description of their maintenance;



- c. Routine maintenance and schedules of maintenance for each unit treatment process in the system and components of the distribution system. Maintenance shall include, but is not be limited to, initial and routine flushing of the distribution system, measures to prevent or minimize corrosion, fouling and clogging of distribution lines; and detection and repair of broken distribution lines, flow meters or pumping equipment;
- d. The design dose and procedures for monitoring the operational dose of the UV disinfection system for the reclamation system;
- e. The criteria and equipment used to make continuous determinations of the acceptability of the reclaimed water being produced and alarm set points for parameters measured by continuous on-line monitoring equipment;
- f. Descriptions of the following that shall comply with the standard and conditions of this permit:
  - 1) Reclaimed water sampling and monitoring procedures and equipment. This shall include, but is not limited to, a description of sample handling, preservation and chemical analyses; and calibration and schedules of calibration for monitoring equipment;
  - 2) The sampling location[s] for the point[s] of compliance; and
  - 3) Control system, alarm functions, record keeping and reports;
- g. Hours of reclamation system operation, hours that the system will be staffed, procedures to be followed by the staff during a period when an operator is not present at the system and training of the staff regarding operation and maintenance of the system;
- h. The physical steps and procedures to be followed by the operator when substandard water is being produced, including resampling and operational review required in accordance with Part III.B.5 and 6. of this permit;
- i. The physical steps and procedures to be followed by the operator when the treatment works returns to normal operation and acceptable quality reclaimed water is again being produced;
- j. Responsible officials and their duties, roles and contact information;
- k. Information necessary for the proper management of sludge or residuals from reclamation treatment;
- l. A contingency plan to eliminate or minimize the potential for untreated or inadequately treated water to be delivered to reuse areas. The plan shall, among other things:
  - 1) Identifying persons responsible for implementing the contingency plan and their contact information;
  - 2) Reference the education and notification program contained within the approved Reclaimed Water Management plan for any release of untreated or inadequately treated water to the reclaimed water distribution system;
  - 3) Describe for the UV disinfection system action to be taken in response to:
    - a) Lamp breakage and possibly mercury release;
    - b) Low operational UV dose, low UV intensity or high turbidity alarms;
    - c) Failure of the upstream treatment processes or the UV disinfection system; and
    - d) Power supply interruptions where an uninterruptable power supply is not provided for the UV disinfection system.
  - 4) Describe activation of standby UV equipment to include either a standby reactor for each reactor train or a standby reactor train or activation of an alternative to standby UV equipment, such as adequate storage or other contingency arrangements, which shall manage the substandard water flow during UV disinfection failure.
- m. Location of back up or replacement parts critical to the operation of unit treatment processes within the reclamation system;

- n. A list of chemicals and materials in storage areas and the location of storage areas;
- o. Routine and unplanned inspection of the distribution system, including required inspections for the cross-connection and backflow prevention program contained in the approved RWM plan;
- p. Procedures to handle and dispose of any wastes or wastewater generated by maintenance of the distribution system in a manner protective of the environment; and
- q. A plan for inactivation or closure of the reclaimed water distribution system specifying what steps will be taken to protect the environment and public health.

#### 11. Tank Trucks Requirements

Tank trucks used to distribute reclaimed water shall:

- a. Be clearly labeled to identify the contents of the truck as non-potable water;
- b. Not transport potable water used for drinking water or food preparation;
- c. Not transport reclaimed water that does not meet the standards specified in Part III.A of this permit unless the truck has been evacuated and properly cleaned prior to the addition of the reclaimed water; and
- d. Not be filled through on-board piping or removable hoses that may subsequently be used to fill tanks with water from a potable water supply.

#### 12. Minimizing Losses

The reclaimed water distribution system shall be maintained to minimize losses and to ensure safe and reliable conveyance of reclaimed water, such that the reclaimed water in the distribution system will not be degraded to a quality that violates the standards in this permit for the intended reuse of the reclaimed water specified in the approved RWM plan.

#### 13. Design

All reclamation water distribution systems authorized by this permit shall be designed in accordance with criteria as set forth in the *Water Reclamation and Reuse Regulations* (9VAC25-740 et seq.).

#### 14. Preliminary Engineer Report

A PER shall be submitted for new reclamation system, satellite reclamation system or reclaimed water distribution system; or for the modification or expansion of the same facilities where they already exist. At the request of the permittee, the DEQ-NRO may waive the need for a PER or portions of a PER for modification or expansion of an existing reclamation system, satellite reclamation system or reclaimed water distribution system as determined by the scope of the proposed project.

#### 15. CTC/CTO

The permittee shall not cause or allow the construction, expansion or modification of the reclamation system except in compliance with a CTC and shall not cause or allow the operation of the same facility except in compliance with a CTO issued by the DEQ.

#### 16. Public Access

There shall be no uncontrolled public access to the reclamation system.

17. Advisory Signs

For all reuses of reclaimed water treated to Level 1, advisory signs or placards shall be posted within and at the boundaries of reuse areas and shall display a non-potable water warning statement and symbol and other necessary information as described in 9VAC25-740-160.

18. Placement of Advisory Signs

Advisory signs shall be posted adjacent to impoundments or ponds, including landscape impoundments.

19. Advisory Signs for Industrial Sites

For industrial reuses, advisory signs shall be posted around those areas of the industrial site where reclaimed water is used and at the main entrances to the industrial site to notify employees and the visiting public of the reclaimed water reuse. Access control beyond what is normally provided by the industry is not required.

20. Construction and Unrestricted Irrigation Reuse Requirements

For all construction and unrestricted irrigation reuses of reclaimed water, the following shall be required:

- a. There shall be no application of reclaimed water to the ground when it is saturated, frozen or covered with ice or snow and during periods of rainfall.
- b. The chosen method of application shall minimize human contact with the reclaimed water.
- c. Reclaimed water shall be prevented from coming into contact with drinking fountains, water coolers or eating surfaces.

21. Setback Distance for Reuse

A setback distance of 100 feet horizontally shall be maintained from indoor aesthetic features (i.e. decorative waterfalls or fountains) that use reclaimed water treated to Level 1, to adjacent indoor public eating and drinking facilities where the aesthetic features have the potential to create aerosols and eating and drinking facilities are within the same room or building space.

22. Reclaimed Water Failure

Where treatment of the reclaimed water fails more than once during a seven-day period to comply with Level 1 disinfection contained in Part III.A. of this permit for the protection of human health, and the non-compliant reclaimed water has been discharged to the reclaimed water distribution system, the permittee shall notify the end user in accordance with the permittee's approved education and notification program of the treatment failures and advise the end user of precautions to be taken to protect public health when using the reclaimed water in areas accessible to the public or where human contact with the reclaimed water is likely. These precautions shall be implemented for a minimum of seven days. Where reclaimed water service to end users will be interrupted due to planned causes, such as scheduled repairs, the permittee shall provide advance notice to end users of the anticipated date and duration of the interrupted service. Where reclaimed water service to end users is disrupted by unplanned causes, such as an upset at the reclamation system, the permittee shall notify end users and the affected public of the disrupted service if it cannot or will not be restored within eight hours of discovery.

The permittee shall also describe and report all notifications of end users and the affected public for causes described above.

23. New End Users or Reuses

For the addition of new end users or new reuses not contained in the original RWM plan submitted with the permit application, the permittee shall submit to DEQ-NRO an amendment to the RWM plan identifying new end users or new reuses not less than 90 days prior to connection and reclaimed water service to the new users or initiating the new reuses.

For each new end user or new reuse, the permittee shall also provide all applicable information required by the *Water Reclamation and Reuse Application Addendum*. Should the addition of new end users or new reuses to the RWM plan require the incorporation of additional or different reclaimed water standards, monitoring requirements or special conditions into this permit, modification of the permit may be necessary to authorize distribution of reclaimed water to the new users or to authorize the new reuses.

#### 24. Interruption of Reclaimed Water Supply

For each interruption or loss of reclaimed water supply, the permittee shall report to DEQ-NRO in writing the following information at the time the next reclamation and reuse monthly monitoring report is submitted:

- a. The service area affected by the interruption or loss of reclaimed water supply;
- b. The initial date and time of the interruption or loss of reclaimed water supply and duration;
- c. The cause of interruption or loss of reclaimed water supply, additionally indicating whether the cause was planned or unplanned; and
- d. If the interruption was unplanned, describe the steps taken to correct the problem and to prevent the problem from recurring.

This report shall also contain a description of any notification provided in accordance with the education and notification program of the approved RWM plan.

#### 25. Noncompliance Notification

Each discharge of any untreated or partially treated water to the service area of intended reuse that fails to comply with reclaimed water standards contained in Part III.A. shall be reported by the permittee to DEQ-NRO as a noncompliance in accordance with Part II.I. of this permit.

This report shall also contain a description of any notification provided in accordance with the education and notification program of the approved RWM plan.

#### 26. System Integrity

All leaks and main breaks of the reclaimed water distribution system shall be reported by the permittee upon discovery as follows:

- a. Where the leak of main break discharges, causes or allows a discharge of reclaimed water that may reasonably be expected to enter state waters, the incident shall be reported by the permittee to DEQ-NRO as an unauthorized discharge in accordance with Part II.G. of this permit.
- b. Where the leak of main break does not discharge, cause or allow a discharge of reclaimed water that may reasonably be expected to enter state waters, but may adversely affect state waters or may endanger public health, the incident shall be reported by the permittee to DEQ-NRO as a noncompliance in accordance with Part II.I. of this permit.

#### 27. Recordkeeping

In addition to records specified in Part II.B. of this permit, the permittee shall maintain the following at the reclamation system for the period specified in Part II.B.:

- a. Water reclamation and reuse operating records to include all analyses required for reclaimed water in Part III.A. of this permit, records of operational problems, alarm failures, unit process and equipment breakdowns, diversions to reject storage or emergency storage, discharge to another permitted reuse system requiring a lower level of treatment, or disposal via a permitted effluent discharge; and all corrective or preventive action taken.
- b. A monthly summary of the operating records specified in a. of this condition.

28. Annual Water Reclamation and Reuse Report

The permittee shall submit an annual report for the reclaimed water distribution system covering a 12-month period from January 1 through December 31 to DEQ-NRO on or before February 10 of the following year.

The annual report shall, at a minimum include:

- a. The estimated volume of reclaimed water distributed to the service area of the RWM plan, reported as monthly totals.
- b. A summary of ongoing education and notification program activities. The summary shall include, at a minimum:
  - 1) Copies of educational materials,
  - 2) The number and duration of notifications to end users per month for the following causes:
    - a) More than one treatment failure within a 7-day period at the reclamation system with subsequent discharge to the reclaimed water distribution system,
    - b) Planned disruption of reclaimed water service to end users, and
    - c) Unplanned disruption of reclaimed water service to end users.

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PART IV - BIOSOLIDS CONDITIONS AND REQUIREMENTS

**A. Biosolids Limitations and Monitoring Requirements**

During the period beginning with the permit’s effective date and lasting until the permit expiration date, the permittee is authorized to manage biosolids in accordance with 9VAC25-31-420 through 720 and 9VAC25-32-303 through 358, the limitations, conditions and requirements set forth in this permit and the approved Biosolids Management Plan.

All biosolids samples shall be collected and analyzed in accordance with Title 40 of the Code of Federal Regulations, Part 503 and 136, and the approved Biosolids Management Plan. The permittee shall ensure that all biosolids generated under authority of this permit and distributed for the purpose of land application, blending or further treatment are monitored in accordance with the monitoring requirements as specified herein.

1. Class A, Exceptional Quality Biosolids

a. Biosolids Annual Production Monitoring (SP1)

The permittee shall report the annual total amount of biosolids produced (in dry metric tons) and annual amount of Class A biosolids (in dry metric tons) distributed for the purpose of blending or land application.

Data shall be reported on the DMR for discharge number SP1.

b. Biosolids Chemical Limitations and Monitoring Requirement (S01)

Pollutants in Class A biosolids that are generated under the authority of this permit and provided to a person who blends biosolids with other materials for distribution or a person who land applies biosolids, shall be monitored and limited as specified below. Only Class A biosolids that meet the PC limitations shall be provided to a person who blends. Biosolids shall not be distributed to a blender or a person who applies to the land if the concentration of any pollutant in the biosolids exceeds the ceiling limitation of that pollutant.

Biosolids Characteristic <sup>(1)</sup>	PC / CPLR Limitations <sup>(1)</sup>	Ceiling Limitations	Monitoring Requirements	
	Monthly Average <sup>(2)</sup>	Concentration Maximum <sup>(2)</sup>	Frequency	Sample Type
Percent Solids (%)	NL	NA	6/YR	Composite
Arsenic, Sludge	41 mg/kg	75 mg/kg	6/YR	Composite
Cadmium, Sludge	39 mg/kg	85 mg/kg	6/YR	Composite
Copper, Sludge	1500 mg/kg	4300 mg/kg	6/YR	Composite
Lead, Sludge	300 mg/kg	840 mg/kg	6/YR	Composite
Mercury, Sludge	17 mg/kg	57 mg/kg	6/YR	Composite
Molybdenum, Sludge	NL	75 mg/kg	6/YR	Composite
Nickel, Sludge	420 mg/kg	420 mg/kg	6/YR	Composite
Selenium, Sludge	100 mg/kg	100 mg/kg	6/YR	Composite
Zinc, Sludge	2800 mg/kg	7500 mg/kg	6/YR	Composite

NA = Not applicable. 6/YR = Six times a year (once every 60 days).  
 NL = No limit; monitor and report. mg/kg = Milligrams per kilogram, dry weight.

<sup>(1)</sup> All parameters are subject to pollutant concentrations, cumulative pollutant loading rates and ceiling limits. PC biosolids contain the constituents identified above at concentrations below the monthly average specified herein. CPLR biosolids contain the constituents identified above at concentrations above the monthly average and each sample must be below the maximum concentration specified herein.

<sup>(2)</sup> All limits and criteria are expressed on a dry weight basis.

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c. Pathogen Reduction Requirements (S01)

Biosolids shall be treated to meet Class A Pathogen Reduction standards and the vector attraction reduction standards and monitored to verify class A pathogen reduction prior to delivery to a person for the purposes of blending Class A biosolids for distribution and marketing or land applying biosolids. The biosolids shall be monitored and limited in accordance with the treatment option selected and used by the permittee as identified below:

Treatment Option	Class A Pathogen Reduction Treatment Standards	Monitoring Requirements
Class A Pathogen Reduction Alternative 1 or 5: Processes To Further Reduce Pathogens: Option 7	Either the density of fecal coliform in the sewage sludge shall be less than 1,000 Most Probable Number per gram of total solids (dry weight basis), or the density of Salmonella, sp. Bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; or at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in 9VAC25-31-510 B, C, E or F.	6/YR <sup>(1)</sup>
	Pasteurization. The temperature of the sewage sludge is maintained at 70° C or higher for 30 minutes or longer (9VAC25-31-710.E.7).	(2)
VAR Option 1	The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%, calculated according to the method in 9VAC25-31-490.B.8.	6/YR <sup>(1)</sup>

6/YR = Six times per year (once every 60 days).

<sup>(1)</sup> Between sampling events, operating records shall demonstrate that the WRRF is operating at a performance level known to meet pathogen reduction and VAR standards.

<sup>(2)</sup> Process monitoring shall be sufficient to demonstrate compliance with PFRP and VAR treatment requirements.

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2. Class B Biosolids

a. Biosolids Annual Production Monitoring (SP2)

The permittee shall report the annual total amount of biosolids produced (in dry metric tons) and annual amount of Class B biosolids (in dry metric tons) distributed for land application.

Data shall be reported on the DMR for discharge number SP2.

b. Biosolids Chemical Limitations and Monitoring Requirement (S02)

Pollutants in Class B biosolids that are generated and provided to a land applier under the authority of this permit shall be monitored and limited as specified below. Biosolids shall not be provided for land application if the concentration of any pollutant in the biosolids exceeds the ceiling limitation of that pollutant.

Biosolids Characteristic <sup>(1)</sup>	PC / CPLR Limitations <sup>(1)</sup>		Monitoring Requirements	
	<u>Monthly Average</u> <sup>(2)</sup>	<u>Ceiling Limitations</u>	<u>Frequency</u>	<u>Sample Type</u>
Percent Solids (%)	NL	NA	6/YR	Composite
Arsenic, Sludge	41 mg/kg	75 mg/kg	6/YR	Composite
Cadmium, Sludge	39 mg/kg	85 mg/kg	6/YR	Composite
Copper, Sludge	1500 mg/kg	4300 mg/kg	6/YR	Composite
Lead, Sludge	300 mg/kg	840 mg/kg	6/YR	Composite
Mercury, Sludge	17 mg/kg	57 mg/kg	6/YR	Composite
Molybdenum, Sludge	NL	75 mg/kg	6/YR	Composite
Nickel, Sludge	420 mg/kg	420 mg/kg	6/YR	Composite
Selenium, Sludge	100 mg/kg	100 mg/kg	6/YR	Composite
Zinc, Sludge	2800 mg/kg	7500 mg/kg	6/YR	Composite

NA = Not applicable.

NL = No limit; monitor and report.

6/YR = Six times every year (once every 60 days).

mg/kg = Milligrams per kilogram, dry weight.

<sup>(1)</sup> All parameters are subject to pollutant concentrations, cumulative pollutant loading rates, and ceiling limits. PC biosolids contain the constituents identified above at concentrations below the monthly average specified herein. CPLR biosolids contain the constituents identified above at concentrations above the monthly average and each sample must be below the maximum concentration specified herein.

<sup>(2)</sup> All limits and criteria are expressed on a dry weight basis.

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c. Pathogen Reduction and Vector Attraction Reduction Requirements (S02)

Biosolids generated and provided to a land applier under this permit shall be treated to meet a Class B Pathogen Reduction Alternative and one VAR Option 1 - 8 prior to delivery to the land application site. The Class B Biosolids shall be monitored and limited in accordance with the treatment options selected and used by the generator, as identified in the table below. The permittee will have a system in place to verify that all Class B Biosolids generated and provided to a land applier under this permit meet these pathogen reduction and VAR standards and treatment requirements.

Treatment Option			
Pathogen Reduction Alternative	Process to Significantly Reduce Pathogens Option	Class B Pathogen Reduction & Vector Attraction Reduction Treatment and Standards	Monitoring Requirements
2	3	PSRP: Anaerobic digestion for a mean cell residence time between 15 days at 35° C – 55° C up to 60 days at 20° C. (9VAC25-31-710.D.3.)	6/YR <sup>(1) (2)</sup>
VAR Option 1		The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%, calculated according to the method in 9VAC25-31-490.B.8.	6/YR <sup>(1) (2)</sup>

6/YR = Six times per year (once every 60 days).

<sup>(1)</sup> Between sampling events, operating records must demonstrate that the WRRF is operating at a performance level known to meet pathogen reduction and VAR standards.

<sup>(2)</sup> Process monitoring must be sufficient to demonstrate compliance with PSRP and VAR treatment requirements.

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## **B. Biosolids Management and Reporting Requirements**

### 1. Approved Biosolids Source Requirement

Only biosolids from a source that has been approved by the DEQ, as identified on the DEQ's *Sources of Biosolids, Industrial Sludges, WTP Residuals* list and treated to meet metals limits, pathogen reduction and VAR standards as set forth in Part IV of this permit, shall be given to any person for the purpose of blending or land application.

### 2. Biosolids Monitoring Frequency and Reporting Requirements

#### a. Monitoring Frequency

The monitoring frequency shall be six times per year (once every 60 days). The monitoring frequency may be increased during this permit term upon written notification by DEQ if deemed necessary.

#### b. Annual Report

The permittee shall submit an Annual Report no later than February 19 of each year to the DEQ-NRO. Each report is for the previous calendar year's activity. If no biosolids were generated and provided to a land applier under this permit during the reporting year, a report shall be submitted stating that no biosolids were generated or delivered during the year.

The report shall include at minimum:

- 1) Part IV.A.1.a and Part IV.A.2.a Sewage Sludge Annual Production Monitoring;
- 2) Biosolids Monitoring Data:
  - a) Part IV.A.1.b and Part IV.A.2.b Biosolids – Metals Limitations;
  - b) Part IV.A.1.c and Part IV.A.2.c Biosolids – Pathogen Reduction and VAR Requirements; and
  - c) Supporting documentation, including laboratory chain of custody forms and certificates of analyses, shall be submitted with the report;
- 3) A summary of biosolids disposal contracts, if any, currently held with other generators, as well as any other biosolids or sludges currently being handled through subcontracts or other agreements. Include biosolids or sludges given to other generators, contractors or land filled and biosolids or sludges accepted from other generators for treatment or land application;
- 4) Identify other methods used to dispose of or use biosolids or sludge produced during the previous calendar year. Report the annual total amount of biosolids or sludge (in dry metric tons) disposed of or used by each method identified; and
- 5) The annual report shall be certified and signed in accordance with Part II.K.

### 3. Record Keeping

The permittee shall retain the following information for at least five years:

- a. The concentrations of each pollutant in Parts IV.A.1.b and IV.A.2.b;
- b. A description of how the pathogen reduction requirements in Parts IV.A.1.c and IV.A.2.c are met;
- c. A description of how the vector attraction reduction requirements in Parts IV.A.1.c and IV.A.2.c are met;
- d. A description of how the management practices specified in the approved Biosolids Management Plan and this permit are met;

- e. The Notice and Necessary Information required in Part IV.B.4; and
- f. The following certification statement:

*"I certify, under penalty of law, that the information that will be used to determine compliance with the Class A pathogen requirements in 9VAC25-31-710.A, the Class B pathogen requirements in 9VAC25-31-710.B.6 and the vector attraction reduction requirements in 9VAC25-31-720.B.6 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment".*

#### 4. Notice and Necessary Information

A NANI shall be provided to any person to whom biosolids are provided for the purpose of further treatment, blending or land application. The NANI shall be provided at the time the biosolids are provided if available, but no later than 45 days after the last day of the month in which biosolids were provided. The NANI shall represent the most recent monitoring period.

The NANI shall include at a minimum:

- a. A statement that Class A or Class B pathogen requirements in 9VAC25-31-710.A – B were met and the alternative used;
- b. A statement that one of the VAR requirements in 9VAC25-31-720.B.1 through B.8 was met and the alternative used; or
- c. A statement that one of the VAR requirements in 9VAC25-31-720.B.1 through B.8 was not met and incorporation or injection was required;
- d. The notice(s) provided to the land applier when biosolids provided did not meet VAR and required incorporation or injection;
- e. The concentration of total nitrogen (as N on a dry weight basis) of the biosolids; and
- f. The following certification statement:

*"I certify, under penalty of law, that the information that will be used to determine compliance with the Class B pathogen requirements in 9VAC25-31-710.B or Class A pathogen requirements in 9VAC25-31-710.A and the VAR requirement in 9VAC25-31-720.B.6 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment".*

#### 5. Biosolids Management Plan

- a. The permittee shall conduct all biosolids/sewage sludge use or disposal activities in accordance with the BSMP approved with the issuance of this permit. The permittee shall maintain the BSMP which consists of the following components:
  - 1) The materials developed and submitted at the time of permit application or permit modification in accordance with 9VAC25-31-100.Q;
  - 2) The O&M Manual (sections regarding solids handling and biosolids production and management, etc.); and
  - 3) The Odor Control Plan. The OCP shall include at a minimum:
    - a) Methods used to minimize odor in producing biosolids;

- b) Methods used to identify malodorous biosolids before delivery to the land applier (at the generating facility);
- c) Methods used to identify and abate malodorous biosolids if delivered to the field, prior to land application; and
- d) Methods used to abate malodor from biosolids if land applied.

b. The BSMP and all of its components shall be incorporated by reference and is an enforceable part of this permit.

#### 6. Biosolids/Sludge Reopener

The Board may promptly modify or revoke and reissue this permit if any applicable standard for biosolids and/or sewage sludge use or disposal promulgated under Section 405(d) of the Clean Water Act is more stringent than any requirements for biosolids/sludge use or disposal in this permit, or controls a pollutant or practice not limited within this permit.

#### 7. Biosolids Use and Disposal

The permittee shall conduct all biosolids use or disposal activities in accordance with the Biosolids Management Plan approved with the issuance of this permit. Any proposed changes in the biosolids use or disposal practices or procedures followed by the permittee shall be documented and submitted for DEQ-NRO approval 90 days prior to the effective date of the changes. Upon approval, the revised BSMP shall be incorporated by reference and becomes an enforceable part of the permit. The permit may be modified or alternatively revoked and reissued to incorporate limitations or conditions necessitated by substantive changes in biosolids use or disposal practices.

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## PART V - COMBINED SEWER SYSTEM CONDITIONS AND REQUIREMENTS

### A. General Requirements

#### CSS Outfalls 019, 020, 021 and 022

- a. During the period beginning with the permit's effective date and lasting until the permit expiration date, the permittee is authorized to discharge from the CSS at Outfall Numbers 019, 020, 021 and 022 during wet weather events.
- b. Per Part V.B.6., the permittee shall minimize the discharge of floating solids.
- c. There shall be no dry weather discharges from these outfalls.

### B. Nine Minimum Controls

The permittee shall continue implementation of the NMCs as set forth in the CSO Control Policy:

#### 1. Conduct Proper Operations and Regular Maintenance Programs

The permittee shall continue to implement the current O&M plan for the CSS that includes the elements listed below. The permittee shall update the plan to incorporate any changes to the system and shall operate and maintain the system accordingly. The permittee shall maintain records documenting implementation of the plan.

##### a. Designation of a Manager for the CSS.

The permittee shall designate a person to be responsible for the wastewater collection system, outfalls and outfall appurtenances. The CSS manager shall also serve as the contact person.

##### b. Inspection and Maintenance of CSS.

The permittee shall inspect and maintain all CSO structures, regulators and tide gates to ensure proper working condition, adjusted to minimize CSOs and tidal inflow. The permittee shall inspect each CSO outfall at an appropriate frequency to ensure no dry weather overflows are occurring. The inspection may include, but is not limited to, entering the regulator structure if accessible, determining the extent of debris and grit buildup and removing any debris that may constrict flow, cause blockage or result in a dry weather overflow. For CSO outfalls that are inaccessible, the permittee may perform a visual check of the overflow pipe to determine whether the CSO is occurring during dry weather flow conditions.

The permittee shall record in a maintenance logbook the results of all inspections conducted.

##### c. Provision for Trained Staff.

The permittee shall continue to ensure the availability of trained staff to complete the operation, maintenance, repair and testing functions required to comply with the terms and conditions of this permit. Each staff member shall receive appropriate training and all training shall be documented and updated annually.

##### d. Allocation of funds for O&M.

The permittee shall allocate adequate funds specifically for O&M activities. The permittee shall ensure the necessary funds, equipment and personnel have been committed to carry out the O&M plan for the next fiscal year.

#### 2. Maximize Use of the Collection System for Storage

The permittee shall maximize the inline storage capacity of the CSS. The permittee shall maintain records to document implementation. Until issuance of the CTO for the RiverRenew Program, the permittee shall:

- a. Maintain all dams or diversion structures at their current heights, as of the effective date of this permit, or greater;

- b. Minimize discharges from the CSS outfalls by maximizing the storage capacity provided by the dams and diversion structures; allowing for later treatment at AlexRenew; and
- c. Maintain maintenance records for the dams or diversion structures and activities dealing with sewer blockages.

Upon issuance of the CTO for the RiverRenew Program, the permittee shall maximize conveyance and storage within the Hooffs Run and Waterfront Tunnel set forth within the approved ORP required in Part V.G., below.

3. Control of Non-domestic Discharges

The permittee shall continue to implement selected CSO controls to minimize the impact of nondomestic discharges. Control of nondomestic users shall, at minimum, include the following:

- a. Maintain records documenting this evaluation and implementation of the selected CSO controls to minimize CSO impacts resulting from nondomestic discharges;
- b. Educating SIUs discharging to the CSS to minimize, to the extent practicable, batch discharges during wet weather conditions; and
- c. Continued control of illicit dischargers and/or improper disposal to the CSS via detection and elimination.

4. Maximize Flow to POTW

- a. The permittee shall maximize all wet weather flows to AlexRenew and operate to the maximum extent and duration practicable to provide treatment of flow rates up to 108 MGD during normal conditions until such time the CTO is issued for the RiverRenew Program.
- b. Upon issuance of the CTO for the RiverRenew Program, the permittee shall maximize flow to AlexRenew as follows:
  - 1) To maximize treatment during wet weather conditions, the permittee shall operate to the maximum extent and duration practicable to provide treatment of flow rates up to and including 116 MGD during normal conditions until the available WRRF internal storage is at capacity. Once the available WRRF internal storage is maximized, operate to the maximum extent and duration practicable to provide treatment of flows up to 108 MGD during normal conditions.
  - 2) When there is wastewater stored in the Waterfront Tunnel and the WRRF has capacity, the permittee shall dewater at a rate of no less than 20 MGD until the Waterfront Tunnel is empty.
- c. The following abnormal conditions may exist due to previous wet weather events at the WRRF:
  - 1) process facilities are out of service;
  - 2) the secondary sedimentation tank has effluent solids greater than the value identified in the Operation and Reporting Plan, limiting maximum treatment during CSO conditions at the WRRF; or
  - 3) a plant upset occurs as demonstrated by the permittee in accordance with Part II.V.2. of this permit.

The permittee shall operate the WRRF in accordance with the approved ORP in Part V.G. of this permit when abnormal conditions exist. Subsequently, the permittee shall report to DEQ-NRO when abnormal conditions exist in accordance with the approved ORP.

5. Prohibit Combined Sewer Overflows during Dry Weather

Dry weather overflows from CSS outfalls are prohibited. Dry weather flow conditions shall mean the flow in a combined sewer that results from sanitary sewage, industrial wastewater and infiltration/inflow; with no contribution from stormwater runoff or stormwater induced infiltration. Wet weather flow condition shall mean the flow in a combined sewer including stormwater runoff and/or stormwater induced infiltration.

Documentation required during dry weather CSO events are as follows:

- a. All dry weather overflows must be reported to DEQ-NRO and the local health department within 24 hours of when the permittee becomes aware of any dry weather overflows (Part II.G.);
- b. Upon becoming aware of an overflow, the permittee shall begin corrective action immediately. The permittee shall monitor the dry weather overflow until the overflow has been eliminated; and
- c. The permittee shall record, in the inspection logbook, an estimate of the beginning and ending times of the discharge, discharge volume and corrective measures taken.

6. Control Solid and Floatable Materials

The permittee shall continue to implement measures to control solid and floatable materials in the CSS. Such measures shall include, but not limited to:

- a. Regular catch basin and street cleaning within the CSS sewershed;
- b. Cleaning of the trunk lines and structures to prevent accumulation of solids; and
- c. Consideration of entrapment and baffling devices to reduce discharges of solids and floatable materials.

7. Develop and Implement Pollution Prevention Program

The permittee shall continue to implement the P2 program to reduce the impact of CSOs on receiving waters. The permittee shall maintain records to document the P2 implementation activities. Specific P2 measures include, but not limited to:

- a. Street sweeping and catch basin cleaning at an appropriate frequency to prevent large accumulations of pollutants and debris;
- b. A public education program that informs the public of the City's household hazard waste recycling program; and
- c. A waste oil and antifreeze recycling/referral service program.

8. Public Notification

- a. The permittee shall continue to implement a public notification plan; informing citizens of when and where CSOs occur. The process shall include, but not limited to:
  - 1) A notice to alert persons using all affected receiving water bodies. The permittee shall ensure that identification signs at all CSS outfalls are maintained and easily readable by the public.
  - 2) Permittee shall maintain a public website to provide information and updates concerning the RiverRenew Program for citizens, posting annual reports and for future posting of CSO activations, once the RiverRenew Program is commissioned.
  - 3) The permittee shall maintain records documenting public notification.
- b. The permittee shall publish all reports related to the CSS of a publicly accessible website, notify citizens of CSO conditions semiannually either by mail, website postings or both and ensure that the universal pictograms at each outfall are maintained and updated as warranted.

9. CSO Monitoring

The permittee shall inspect and maintain each CSS outfall during construction to ensure that current CSO controls are maintained to minimize CSO impacts to the receiving streams.

**C. Continuation of Modeled Overflow Events**

The permittee shall continue to model and report predicted annual overflow events until such time the CTO is issued for the RiverRenew Program, and the PCCM commences. The permittee shall summarize the model results within each annual report as required by Part V.I.4. of this permit.

**D. Implementation of the LTCPU**

The permittee shall continue implementing the approved LTCPU, dated 4 May 2018, supporting technical memoranda, the approved PER and associated PER amendments to ensure compliance with the 2017 Virginia Acts of Assembly Chapters 826 and 827. Construction activities shall commence no later than 1 July 2023; and compliance with Virginia law, the federal Clean Water Act, and the Presumption Approach described in the EPA CSO Control Policy shall be achieved by 1 July 2025. Construction updates are to be included with the submitted annual reports required under Part V.I.4 and 5. of this permit. The approved LTCPU, supporting technical memoranda, approved PER and associated PER amendments are hereby incorporated by reference and become enforceable under this permit. All changes shall be submitted to DEQ for review and approval prior to implementation. The approved changes shall become incorporated by reference and enforceable under this permit.

**E. Construction Schedule**

The permittee shall submit any changes/modifications to the construction schedule to DEQ-NRO for review, comment and approval. Any approved changes/modifications to the schedule will be incorporated by reference and become enforceable under this permit. Proposed changes/modifications shall not extend beyond the 1 July 2023 initiate construction or the 1 July 2025 system commission deadlines established by the Virginia General Assembly unless future legislative action allows.

**F. Waterfront Tunnel Maintenance**

Once the Waterfront Tunnel is operational and it is necessary to isolate any portion of the tunnels and/or associated appurtenances from the sewer system for maintenance, the permittee shall submit a request to DEQ-NRO. The request shall be submitted sixty (60) days prior to the maintenance operations. The request shall include, at a minimum:

1. Proposed start date;
2. Description of maintenance being performed; and
3. Estimated total time the system will be isolated.

Every effort shall be made to select a maintenance period to minimize potential bypass of the system to the fullest extent practicable.

AlexRenew shall notify DEQ-NRO in the event a bypass should occur during the maintenance operation.

AlexRenew shall notify DEQ-NRO upon completion of the maintenance activity and the tunnel and/or appurtenances are back online and operational.

**G. Operation and Reporting Plan for Maximizing Treatment during CSO Conditions**

The permittee shall develop an Operation and Reporting Plan detailing the operations at the WRRF in concert with the RiverRenew tunnel system during wet weather events. The plan shall set forth details related to the operations at the WRRF and at a minimum address:

1. Maximizing wet weather event internal storage at the WRRF;
2. Maximizing wet weather event treatment at the WRRF;
3. Maximizing conveyance and storage within the Hooffs Run and Waterfront Tunnels during wet weather events;
4. Activation of Outfall 102;



5. Disinfection protocols for the combined waste streams of Internal Outfall 101 and Outfall 102 as needed; and
6. Abnormal WRRF conditions explanation, subsequent operational changes and reporting procedures.

A draft ORP shall be submitted to DEQ-NRO for review and comment on or before 1 July 2024. The final ORP shall be submitted for review and approval within six (6) months of the CTO for the RiverRenew tunnel system. Once approved, the ORP shall become incorporated by reference and enforceable under this permit.

#### **H. RiverRenew Performance Standards for Water Quality-Based Requirements**

The RiverRenew Program shall be operated and maintained in such a manner as to achieve the following level of performance:

1. Shall have, on average, no more than four (4) activations at CSO Outfall 019, per year;
2. Shall be consistent with the bacteria loadings as denoted in the Hunting Creek Bacteria TMDL for the discharges into Hooff Run and Hunting Creek for CSO Outfalls 020,021, 022 and the AlexRenew WRRF; and
3. Ensure that all captured combined sewage, not to include Outfall 102, receive full tertiary treatment and disinfection after each wet weather event.

The PCCM Plan required in Part V.I.3. shall include procedures to measure the performance of the system, commencing the first calendar year after issuance of the CTO for the RiverRenew Program. Results from the monitoring shall be used to assess the performance of the River Renew controls, and shall include consideration of the performance against the average, climate period and projections established within the approved LTCPU. A summary shall be included with each annual report, thereafter, as required in Part V.I.4. If it is determined that the system is not performing as expected, the permittee shall submit a supplemental report detailing probable causes and proposed corrective actions.

#### **I. Other Requirements and Special Conditions**

1. No New Combined Sewers Requirement

No new combined sewers shall be built outside the existing combined sewer system service areas of the City of Alexandria. This requirement shall not be construed to prevent the connection of new sanitary sewers to the combined sewers within the existing combined sewer service area for the purpose of conveying sewage to the AlexRenew WRRF. No new connections shall be made to the combined sewers where those connections would cause overflows during dry weather flow conditions or exacerbate CSO events.

2. Reopener Clause

This permit may be modified or revoked and reissued, as provided pursuant to 40 CFR 122.62 and 124.5, for the following reasons:

- a. To include new or revised conditions developed to comply with any State or Federal law or regulation that addresses CSOs that is adopted or promulgated subsequent to the effective date of this permit;
- b. To include new or revised conditions if new information, not available at the time of permit reissuance, becomes available that would lead to the attainment of Virginia Water Quality Standards; or
- c. To include new or revised conditions based on new information resulting from planning, design and implementation of the LTCPU.

### 3. PCCM Plan

The permittee shall develop a PCCM Plan that will demonstrate the RiverRenew facilities achieve the assumptions of the approved LTCPU. The PCCM Plan shall include, at a minimum, monitoring of the number of overflow events at each CSO outfall and include duration, volume and pollutant characterization of the overflow events. The Plan shall also consider the performance evaluation of the AlexRenew facilities consistent with Part V.H, including a comparison to the average climate period of 2000-2016, as used in the LTCPU, PER and PER Amendment simulations. The PCCM Plan shall also verify that the combined flows from the internal outfalls achieve a monthly geometric mean of 126 N/100 mL for *E. coli* at Outfall 001 after disinfection. The PCCM Plan shall be submitted to DEQ-NRO for review, comment and approval on or before 1 July 2024. The approved PCCM Plan shall become incorporated by reference and enforceable under this permit. Any future updates or revisions to the approved PCCM Plan shall be submitted to DEQ-NRO for review and approval prior to incorporating the changes and shall become enforceable under this permit once approved.

### 4. Annual Reports

The permittee shall submit to DEQ for review and comment annual reports for the previous calendar year. These reports shall be submitted on or before March 31 of every year detailing, at a minimum, continued implementation of NMCs, inspections, maintenance records, predicted overflow events and construction updates for the combined sewer system and RiverRenew Program.

### 5. General Assembly Report

The permittee shall submit to DEQ-NRO a report detailing the implementation status of the approved LTCPU. The report shall include, at a minimum, construction schedule status for the RiverRenew Program, any significant changes to the schedule, estimated completion of future milestones and completion status target date.

This report shall be submitted to DEQ-NRO on or before November 1 of each year.