

FAUQUIER COUNTY  
WATER & SANITATION AUTHORITY  
7172 Kennedy Road • Vint Hill Farms Warrenton,  
Virginia 20187-3907  
Phone (540) 349-2092 • Fax (540) 347-7689



DATE: 01/18/2023

TO: Ms. Alison Thompson  
Department of Environmental Quality  
Northern Virginia Regional Office 13901  
Crown Court  
Woodbridge, VA 22193

SUBJECT: Remington WWTP Permit Renewal Application

REFERENCE: Remington WWTP

Permit # VA0076805

Dear Ms. Thompson:

Enclosed is the completed permit renewal application for the Remington WWTP.

If you have any questions or concerns, don't hesitate to contact me at (540) 347-7689 ex 114.

*Milas Smith*  
Best,

Milas E. Smith  
Operations Director  
FCWSA

Cc: Benjamin Shoemaker, Executive Director  
Troy Willingham, Remington Chief Operator  
File Location: S:\Operations\Permits\Wastewater Permits\02\_Remington Permit  
\01\_Remington WWTP Permit Renewal exp 2028 VA00768805

PUBLIC NOTICE BILLING AUTHORIZATION FORM

VPDES Permit No. VA00 \_\_\_\_\_

Facility Name: \_\_\_\_\_

I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in \_\_\_\_\_ in accordance with 9 VAC 25-31-290.C.2.

Agent/Department to be billed: \_\_\_\_\_

Owner: \_\_\_\_\_

Agent/Department Address: \_\_\_\_\_

Address \_\_\_\_\_

City, State Zip \_\_\_\_\_

Agent's Telephone No.: \_\_\_\_\_

**I am also authorizing the above listed newspaper to send the publication verification to:**

DEQ \_\_\_\_\_ Regional Office

Water Permits – ATTN: \_\_\_\_\_

\_\_\_\_\_

Authorizing Agent - Printed Name: \_\_\_\_\_

Authorizing Agent – Signature: Milas Smith

Date: \_\_\_\_\_

**ONLY APPLICABLE FOR INDUSTRIAL MINOR PERMIT ACTIONS**

For industrial minor permit actions, DEQ may publish abbreviated public notices in newspapers of local circulation and provide the complete public notice content on DEQ's public website. Please indicate your preference by checking the appropriate box below.

Applicant or permittee agrees to utilize the abbreviated public notice content in the newspaper noted above, with the complete public notice provided for publication on DEQ's public website.

Applicant or permittee declines to utilize the abbreviated public notice and prefers to publish the full notice in the newspaper noted above.

**RETURN THIS COMPLETED FORM TO:**

DEQ \_\_\_\_\_ Regional Office

Water Permits – ATTN: \_\_\_\_\_

\_\_\_\_\_

## VPDES Permit Application Addendum

- 1. Entity to whom the permit is to be issued:** \_\_\_\_\_  
*Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.*
- 2. State Corporation Commission (SCC) Entity Identification No.:** \_\_\_\_\_  
*If the owner is required to obtain an entity identification number by law (e.g. Incorporated (Inc.), Limited Liability Companies (LLCs), Limited Partnerships (LPs) and certificates of authority). If not applicable to the owner, please indicate "NA" as your answer.*
- 3. Facility Design Average Flow:** \_\_\_\_\_ MGD  
**Industrial Facilities - Maximum 30-day Average Production Level (include units)?**  
\_\_\_\_\_

**In addition to the above design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels?**  YES  NO

**If "Yes", please specify the other flow tiers (in MGD) or production levels:** \_\_\_\_\_

- 4. Nature of operations generating wastewater:**  
\_\_\_\_\_

\_\_\_\_\_ % of flow from domestic connections/sources

Number of private residences to be served by the wastewater treatment facility:  0  1-49  50 or more

\_\_\_\_\_ % of flow from non-domestic connections/sources

- 5. Consent to receive electronic mail**

The Department of Environmental Quality (DEQ) may deliver permits, certifications and plan approvals to recipients, including applicants or permittees, by electronically certified mail where the recipients notify DEQ of their consent to receive mail electronically (§ 10.1-1183). Check *only one* of the following to consent to or decline receipt of electronic mail from DEQ as follows:

Applicant or permittee agrees to receive by electronic mail the permit and any plan approvals associated with the permit that may be issued for the proposed pollutant management activity, and to certify receipt of such electronic mail when requested by the DEQ.

Please provide email: \_\_\_\_\_

Applicant or permittee declines to receive by electronic mail the permit and any plan approvals associated with the permit that may be issued for the proposed pollutant management activity.

- 6. Financial Assurance/Closure**

The Financial Assurance Regulation, 9VAC25-650 applies to all privately owned sewerage systems that treat sewage generated by private residences and discharge more than 1,000 gallons per day and less than 40,000 gallons per day. A private residence is defined as any building, buildings or part of a building owned by a private entity which serves as a permanent residence where sewage is generated. It does not apply to hotels, motels, seasonal camps and industrial facilities that do not serve as permanent residences. The regulation requires that a closure plan, a cost estimate and a financial assurance mechanism be in place. Is financial assurance/cost estimate/closure plan requirement applicable to this facility?  YES  NO





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Water Permits Division

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# Application Form 2A

## New and Existing Publicly Owned Treatment Works

### NPDES Permitting Program

**Note:** Complete this form if your facility is a new or existing publicly owned treatment works.

<b>Form 2A NPDES</b>		<b>U.S. Environmental Protection Agency</b> <b>Application for NPDES Permit to Discharge Wastewater</b> <b>NEW AND EXISTING PUBLICLY OWNED TREATMENT WORKS</b>
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**SECTION 1. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS (40 CFR 122.21(j)(1) and (9))**

<b>Facility Information</b>	1.1	Facility name				
		Mailing address (street or P.O. box)				
		City or town		State	ZIP code	
		Contact name (first and last)	Title	Phone number	Email address	
		Location address (street, route number, or other specific identifier) <input type="checkbox"/> Same as mailing address				
		City or town		State	ZIP code	
<b>Applicant Information</b>	1.2	Is this application for a facility that has yet to commence discharge?				
		<input type="checkbox"/> Yes → See instructions on data submission requirements for new dischargers. <input type="checkbox"/> No				
		1.3	Is applicant different from entity listed under Item 1.1 above?			
			<input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 1.4.			
			Applicant name			
			Applicant address (street or P.O. box)			
City or town			State	ZIP code		
Contact name (first and last)	Title		Phone number	Email address		
<b>Existing Environmental Permits</b>	1.4	Is the applicant the facility's owner, operator, or both? (Check only one response.)				
		<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Both				
		1.5	To which entity should the NPDES permitting authority send correspondence? (Check only one response.)			
<input type="checkbox"/> Facility <input type="checkbox"/> Applicant <input type="checkbox"/> Facility and applicant (they are one and the same)						
1.6	Indicate below any existing environmental permits. (Check all that apply and print or type the corresponding permit number for each.)					
	<b>Existing Environmental Permits</b>					
	<input type="checkbox"/> NPDES (discharges to surface water)	<input type="checkbox"/> RCRA (hazardous waste)	<input type="checkbox"/> UIC (underground injection control)			
<input type="checkbox"/> PSD (air emissions)	<input type="checkbox"/> Nonattainment program (CAA)	<input type="checkbox"/> NESHAPs (CAA)				
<input type="checkbox"/> Ocean dumping (MPRSA)	<input type="checkbox"/> Dredge or fill (CWA Section 404)	<input type="checkbox"/> Other (specify)				



Outfalls and Other Discharge or Disposal Methods

**Outfalls Other Than to Waters of the United States**

1.12 Does the POTW discharge wastewater to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the United States?  
 Yes  No → SKIP to Item 1.14.

1.13 Provide the location of each surface impoundment and associated discharge information in the table below.

**Surface Impoundment Location and Discharge Data**

Location	Average Daily Volume Discharged to Surface Impoundment	Continuous or Intermittent (check one)
	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent

1.14 Is wastewater applied to land?  
 Yes  No → SKIP to Item 1.16.

1.15 Provide the land application site and discharge data requested below.

**Land Application Site and Discharge Data**

Location	Size	Average Daily Volume Applied	Continuous or Intermittent (check one)
	acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent

1.16 Is effluent transported to another facility for treatment prior to discharge?  
 Yes  No → SKIP to Item 1.21.

1.17 Describe the means by which the effluent is transported (e.g., tank truck, pipe).

1.18 Is the effluent transported by a party other than the applicant?  
 Yes  No → SKIP to Item 1.20.

1.19 Provide information on the transporter below.

**Transporter Data**

Entity name		Mailing address (street or P.O. box)	
City or town		State	ZIP code
Contact name (first and last)		Title	
Phone number		Email address	

<b>Outfalls and Other Discharge or Disposal Methods Continued</b>	1.20	In the table below, indicate the name, address, contact information, NPDES number, and average daily flow rate of the receiving facility.			
	<b>Receiving Facility Data</b>				
	Facility name		Mailing address (street or P.O. box)		
	City or town		State	ZIP code	
	Contact name (first and last)		Title		
	Phone number		Email address		
NPDES number of receiving facility (if any)		<input type="checkbox"/> None	Average daily flow rate		
VA0076805		1.040 mgd			
1.21		Is the wastewater disposed of in a manner other than those already mentioned in Items 1.14 through 1.21 that do not have outlets to waters of the United States (e.g., underground percolation, underground injection)?			
<input type="checkbox"/> Yes		<input type="checkbox"/> No → SKIP to Item 1.23.			
1.22		Provide information in the table below on these other disposal methods.			
<b>Information on Other Disposal Methods</b>					
<b>Disposal Method Description</b>	<b>Location of Disposal Site</b>	<b>Size of Disposal Site</b>	<b>Annual Average Daily Discharge Volume</b>	<b>Continuous or Intermittent (check one)</b>	
		acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	
		acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	
		acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	
<b>Variance Requests</b>	1.23	Do you intend to request or renew one or more of the variances authorized at 40 CFR 122.21(n)? (Check all that apply. Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)			
	<input type="checkbox"/> Discharges into marine waters (CWA Section 301(h))		<input type="checkbox"/> Water quality related effluent limitation (CWA Section 302(b)(2))		
<input type="checkbox"/> Not applicable					
<b>Contractor Information</b>	1.24	Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor?			
	<input type="checkbox"/> Yes		<input type="checkbox"/> No → SKIP to Section 2.		
	1.25	Provide location and contact information for each contractor in addition to a description of the contractor's operational and maintenance responsibilities.			
	<b>Contractor Information</b>				
		<b>Contractor 1</b>	<b>Contractor 2</b>	<b>Contractor 3</b>	
	Contractor name (company name)				
	Mailing address (street or P.O. box)				
	City, state, and ZIP code				
	Contact name (first and last)				
Phone number					
Email address					
Operational and maintenance responsibilities of contractor					

**SECTION 2. ADDITIONAL INFORMATION (40 CFR 122.21(j)(1) and (2))**

<b>Design Flow</b>	<b>Outfalls to Waters of the United States</b>						
	2.1	Does the treatment works have a design flow greater than or equal to 0.1 mgd? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 3.					
<b>Inflow and Infiltration</b>	2.2	Provide the treatment works' current average daily volume of inflow and infiltration.	<b>Average Daily Volume of Inflow and Infiltration</b>				
			gpd				
	Indicate the steps the facility is taking to minimize inflow and infiltration.						
<b>Topographic Map</b>	2.3	Have you attached a topographic map to this application that contains all the required information? (See instructions for specific requirements.) <input type="checkbox"/> Yes <input type="checkbox"/> No					
<b>Flow Diagram</b>	2.4	Have you attached a process flow diagram or schematic to this application that contains all the required information? (See instructions for specific requirements.) <input type="checkbox"/> Yes <input type="checkbox"/> No					
<b>Scheduled Improvements and Schedules of Implementation</b>	2.5	Are improvements to the facility scheduled? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 3.					
		Briefly list and describe the scheduled improvements.					
		1.					
		2.					
		3.					
		4.					
	2.6	Provide scheduled or actual dates of completion for improvements.					
		<b>Scheduled or Actual Dates of Completion for Improvements</b>					
		<b>Scheduled Improvement (from above)</b>	<b>Affected Outfalls (list outfall number)</b>	<b>Begin Construction (MM/DD/YYYY)</b>	<b>End Construction (MM/DD/YYYY)</b>	<b>Begin Discharge (MM/DD/YYYY)</b>	<b>Attainment of Operational Level (MM/DD/YYYY)</b>
		1.					
	2.						
	3.						
	4.						
	2.7	Have appropriate permits/clearances concerning other federal/state requirements been obtained? Briefly explain your response. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None required or applicable					
	Explanation:						

**SECTION 3. INFORMATION ON EFFLUENT DISCHARGES (40 CFR 122.21(j)(3) to (5))**

<b>Description of Outfalls</b>	3.1	Provide the following information for each outfall. (Attach additional sheets if you have more than three outfalls.)		
		<b>Outfall Number</b> _____	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____
	State			
	County			
	City or town			
	Distance from shore	ft.	ft.	ft.
	Depth below surface	ft.	ft.	ft.
	Average daily flow rate	mgd	mgd	mgd
	Latitude	° ' "	° ' "	° ' "
	Longitude	° ' "	° ' "	° ' "
<b>Seasonal or Periodic Discharge Data</b>	3.2	Do any of the outfalls described under Item 3.1 have seasonal or periodic discharges? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.4.		
	3.3	If so, provide the following information for each applicable outfall.		
		<b>Outfall Number</b> _____	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____
	Number of times per year discharge occurs			
	Average duration of each discharge (specify units)			
	Average flow of each discharge	mgd	mgd	mgd
Months in which discharge occurs				
<b>Diffuser Type</b>	3.4	Are any of the outfalls listed under Item 3.1 equipped with a diffuser? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.6.		
	3.5	Briefly describe the diffuser type at each applicable outfall.		
		<b>Outfall Number</b> _____	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____
<b>Waters of the U.S.</b>	3.6	Does the treatment works discharge or plan to discharge wastewater to waters of the United States from one or more discharge points? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 6.		

<b>Receiving Water Description</b>	3.7	Provide the receiving water and related information (if known) for each outfall.		
		<b>Outfall Number</b> _____	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____
	Receiving water name			
	Name of watershed, river, or stream system			
	U.S. Soil Conservation Service 14-digit watershed code			
	Name of state management/river basin			
	U.S. Geological Survey 8-digit hydrologic cataloging unit code			
	Critical low flow (acute)	cfs	cfs	cfs
	Critical low flow (chronic)	cfs	cfs	cfs
Total hardness at critical low flow	mg/L of CaCO <sub>3</sub>	mg/L of CaCO <sub>3</sub>	mg/L of CaCO <sub>3</sub>	
<b>Treatment Description</b>	3.8	Provide the following information describing the treatment provided for discharges from each outfall.		
		<b>Outfall Number</b> _____	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____
	<b>Highest Level of Treatment</b> (check all that apply per outfall)	<input type="checkbox"/> Primary <input type="checkbox"/> Equivalent to secondary <input type="checkbox"/> Secondary <input type="checkbox"/> Advanced <input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Primary <input type="checkbox"/> Equivalent to secondary <input type="checkbox"/> Secondary <input type="checkbox"/> Advanced <input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Primary <input type="checkbox"/> Equivalent to secondary <input type="checkbox"/> Secondary <input type="checkbox"/> Advanced <input type="checkbox"/> Other (specify) _____
	<b>Design Removal Rates by Outfall</b>			
	BOD <sub>5</sub> or CBOD <sub>5</sub>	%	%	%
	TSS	%	%	%
	Phosphorus	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %
	Nitrogen	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %
Other (specify) _____	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	<input type="checkbox"/> Not applicable %	



<b>Treatment Description Continued</b>	3.9	Describe the type of disinfection used for the effluent from each outfall in the table below. If disinfection varies by season, describe below.					
			<b>Outfall Number</b> _____	<b>Outfall Number</b> _____	<b>Outfall Number</b> _____		
		Disinfection type					
		Seasons used					
		Dechlorination used?	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Effluent Testing Data</b>	3.10	Have you completed monitoring for all Table A parameters and attached the results to the application package? <input type="checkbox"/> Yes <input type="checkbox"/> No					
	3.11	Have you conducted any WET tests during the 4.5 years prior to the date of the application on any of the facility's discharges or on any receiving water near the discharge points? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.13.					
	3.12	Indicate the number of acute and chronic WET tests conducted since the last permit reissuance of the facility's discharges by outfall number or of the receiving water near the discharge points.					
			<b>Outfall Number</b> _____		<b>Outfall Number</b> _____		<b>Outfall Number</b> _____
			<b>Acute</b>	<b>Chronic</b>	<b>Acute</b>	<b>Chronic</b>	<b>Acute</b> <b>Chronic</b>
		Number of tests of discharge water					
		Number of tests of receiving water					
	3.13	Does the treatment works have a design flow greater than or equal to 0.1 mgd? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.16.					
	3.14	Does the POTW use chlorine for disinfection, use chlorine elsewhere in the treatment process, or otherwise have reasonable potential to discharge chlorine in its effluent? <input type="checkbox"/> Yes → Complete Table B, including chlorine. <input type="checkbox"/> No → Complete Table B, omitting chlorine.					
	3.15	Have you completed monitoring for all applicable Table B pollutants and attached the results to this application package? <input type="checkbox"/> Yes <input type="checkbox"/> No					
3.16	Does one or more of the following conditions apply? <ul style="list-style-type: none"> <li>The facility has a design flow greater than or equal to 1 mgd.</li> <li>The POTW has an approved pretreatment program or is required to develop such a program.</li> <li>The NPDES permitting authority has informed the POTW that it must sample for the parameters in Table C, must sample other additional parameters (Table D), or submit the results of WET tests for acute or chronic toxicity for each of its discharge outfalls (Table E).</li> </ul> <input type="checkbox"/> Yes → Complete Tables C, D, and E as applicable. <input type="checkbox"/> No → SKIP to Section 4.						
3.17	Have you completed monitoring for all applicable Table C pollutants and attached the results to this application package? <input type="checkbox"/> Yes <input type="checkbox"/> No						
3.18	Have you completed monitoring for all applicable Table D pollutants required by your NPDES permitting authority and attached the results to this application package? <input type="checkbox"/> Yes <input type="checkbox"/> No additional sampling required by NPDES permitting authority.						

Effluent Testing Data Continued

3.19	Has the POTW conducted either (1) minimum of four quarterly WET tests for one year preceding this permit application or (2) at least four annual WET tests in the past 4.5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No → Complete tests and Table E and SKIP to Item 3.26.				
3.20	Have you previously submitted the results of the above tests to your NPDES permitting authority? <input type="checkbox"/> Yes <input type="checkbox"/> No → Provide results in Table E and SKIP to Item 3.26.				
3.21	Indicate the dates the data were submitted to your NPDES permitting authority and provide a summary of the results.				
	<table border="1"> <thead> <tr> <th style="width: 50%;">Date(s) Submitted (MM/DD/YYYY)</th> <th style="width: 50%;">Summary of Results</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Date(s) Submitted (MM/DD/YYYY)	Summary of Results		
Date(s) Submitted (MM/DD/YYYY)	Summary of Results				
3.22	Regardless of how you provided your WET testing data to the NPDES permitting authority, did any of the tests result in toxicity? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.26.				
3.23	Describe the cause(s) of the toxicity:				
3.24	Has the treatment works conducted a toxicity reduction evaluation? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.26.				
3.25	Provide details of any toxicity reduction evaluations conducted.				
3.26	Have you completed Table E for all applicable outfalls and attached the results to the application package? <input type="checkbox"/> Yes <input type="checkbox"/> Not applicable because previously submitted information to the NPDES permitting authority.				

**SECTION 4. INDUSTRIAL DISCHARGES AND HAZARDOUS WASTES (40 CFR 122.21(j)(6) and (7))**

Industrial Discharges and Hazardous Wastes

4.1	Does the POTW receive discharges from SIUs or NSCIUs? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 4.7.				
4.2	Indicate the number of SIUs and NSCIUs that discharge to the POTW.				
	<table border="1"> <thead> <tr> <th style="width: 50%;">Number of SIUs</th> <th style="width: 50%;">Number of NSCIUs</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Number of SIUs	Number of NSCIUs		
Number of SIUs	Number of NSCIUs				
4.3	Does the POTW have an approved pretreatment program? <input type="checkbox"/> Yes <input type="checkbox"/> No				
4.4	Have you submitted either of the following to the NPDES permitting authority that contains information substantially identical to that required in Table F: (1) a pretreatment program annual report submitted within one year of the application or (2) a pretreatment program? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 4.6.				
4.5	Identify the title and date of the annual report or pretreatment program referenced in Item 4.4. SKIP to Item 4.7.				
4.6	Have you completed and attached Table F to this application package? <input type="checkbox"/> Yes <input type="checkbox"/> No				

Industrial Discharges and Hazardous Wastes Continued

4.7	Does the POTW receive, or has it been notified that it will receive, by truck, rail, or dedicated pipe, any wastes that are regulated as RCRA hazardous wastes pursuant to 40 CFR 261? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 4.9.			
4.8	If yes, provide the following information:			
	<b>Hazardous Waste Number</b>	<b>Waste Transport Method</b> (check all that apply)		<b>Annual Amount of Waste Received</b>
		<input type="checkbox"/> Truck	<input type="checkbox"/> Rail	
		<input type="checkbox"/> Dedicated pipe	<input type="checkbox"/> Other (specify) _____	
		<input type="checkbox"/> Truck	<input type="checkbox"/> Rail	
		<input checked="" type="checkbox"/> Dedicated pipe	<input type="checkbox"/> Other (specify) _____	
		<input type="checkbox"/> Truck	<input checked="" type="checkbox"/> Rail	
		<input type="checkbox"/> Dedicated pipe	<input type="checkbox"/> Other (specify) _____	
4.9	Does the POTW receive, or has it been notified that it will receive, wastewaters that originate from remedial activities, including those undertaken pursuant to CERCLA and Sections 3004(7) or 3008(h) of RCRA? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 5.			
4.10	Does the POTW receive (or expect to receive) less than 15 kilograms per month of non-acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e)? <input type="checkbox"/> Yes → SKIP to Section 5. <input checked="" type="checkbox"/> No			
4.11	Have you reported the following information in an attachment to this application: identification and description of the site(s) or facility(ies) at which the wastewater originates; the identities of the wastewater's hazardous constituents; and the extent of treatment, if any, the wastewater receives or will receive before entering the POTW? <input type="checkbox"/> Yes <input type="checkbox"/> No			

**SECTION 5. COMBINED SEWER OVERFLOWS (40 CFR 122.21(j)(3))**

CSO Map and Diagram

5.1	Does the treatment works have a combined sewer system? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 6.			
5.2	Have you attached a CSO system map to this application? (See instructions for map requirements.) <input type="checkbox"/> Yes <input type="checkbox"/> No			
5.3	Have you attached a CSO system diagram to this application? (See instructions for diagram requirements.) <input type="checkbox"/> Yes <input type="checkbox"/> No			

5.4		For each CSO outfall, provide the following information. (Attach additional sheets as necessary.)		
		CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
<b>CSO Outfall Description</b>	City or town			
	State and ZIP code			
	County			
	Latitude	° ' "	° ' "	° ' "
	Longitude	° ' "	° ' "	° ' "
	Distance from shore	ft.	ft.	ft.
	Depth below surface	ft.	ft.	ft.
	5.5		Did the POTW monitor any of the following items in the past year for its CSO outfalls?	
		CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
<b>CSO Monitoring</b>	Rainfall	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	CSO flow volume	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	CSO pollutant concentrations	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Receiving water quality	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	CSO frequency	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Number of storm events	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	5.6		Provide the following information for each of your CSO outfalls.	
		CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
<b>CSO Events in Past Year</b>	Number of CSO events in the past year	events	events	events
	Average duration per event	hours <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	hours <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	hours <input checked="" type="checkbox"/> Actual or <input type="checkbox"/> Estimated
	Average volume per event	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated
	Minimum rainfall causing a CSO event in last year	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated

<b>CSO Receiving Waters</b>	5.7	Provide the information in the table below for each of your CSO outfalls.			
		<b>CSO Outfall Number</b> ____	<b>CSO Outfall Number</b> ____	<b>CSO Outfall Number</b> ____	
		Receiving water name			
		Name of watershed/ stream system			
		U.S. Soil Conservation Service 14-digit watershed code (if known)	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown
		Name of state management/river basin			
		U.S. Geological Survey 8-Digit Hydrologic Unit Code (if known)	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown
		Description of known water quality impacts on receiving stream by CSO (see instructions for examples)			

**SECTION 6. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))**

<b>Checklist and Certification Statement</b>	6.1	In Column 1 below, mark the sections of Form 2A that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.	
		<b>Column 1</b>	<b>Column 2</b>
		<input type="checkbox"/> Section 1: Basic Application Information for All Applicants	<input type="checkbox"/> w/ variance request(s) <input type="checkbox"/> w/ additional attachments
		<input type="checkbox"/> Section 2: Additional Information	<input type="checkbox"/> w/ topographic map <input type="checkbox"/> w/ process flow diagram <input type="checkbox"/> w/ additional attachments
		<input type="checkbox"/> Section 3: Information on Effluent Discharges	<input type="checkbox"/> w/ Table A <input type="checkbox"/> w/ Table D <input type="checkbox"/> w/ Table B <input type="checkbox"/> w/ Table E <input type="checkbox"/> w/ Table C <input type="checkbox"/> w/ additional attachments
		<input type="checkbox"/> Section 4: Industrial Discharges and Hazardous Wastes	<input type="checkbox"/> w/ SIU and NSCIU attachments <input type="checkbox"/> w/ Table F <input type="checkbox"/> w/ additional attachments
		<input type="checkbox"/> Section 5: Combined Sewer Overflows	<input type="checkbox"/> w/ CSO map <input type="checkbox"/> w/ additional attachments <input type="checkbox"/> w/ CSO system diagram
		<input type="checkbox"/> Section 6: Checklist and Certification Statement	<input type="checkbox"/> w/ attachments
	6.2	<b>Certification Statement</b>	
		<i>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.</i>	
		Name (print or type first and last name)	Official title
		Signature <i>Milas Smith</i>	Date signed

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
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**TABLE A. EFFLUENT PARAMETERS FOR ALL POTWS**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Biochemical oxygen demand <input type="checkbox"/> BOD <sub>5</sub> or <input type="checkbox"/> CBOD <sub>5</sub> (report one)							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Fecal coliform							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Design flow rate							
pH (minimum)							
pH (maximum)							
Temperature (winter)							
Temperature (summer)							
Total suspended solids (TSS)							<input type="checkbox"/> ML <input type="checkbox"/> MDL

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

**TABLE B. EFFLUENT PARAMETERS FOR ALL POTWS WITH A FLOW EQUAL TO OR GREATER THAN 0.1 MGD**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Ammonia (as N)							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chlorine (total residual, TRC) <sup>2</sup>							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Dissolved oxygen							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Nitrate/nitrite							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Kjeldahl nitrogen							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Oil and grease							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Phosphorus							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Total dissolved solids							<input type="checkbox"/> ML <input type="checkbox"/> MDL

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

<sup>2</sup> Facilities that do not use chlorine for disinfection, do not use chlorine elsewhere in the treatment process, and have no reasonable potential to discharge chlorine in their effluent are not required to report data for chlorine.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
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**TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
<b>Metals, Cyanide, and Total Phenols</b>							
Hardness (as CaCO <sub>3</sub> )							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Antimony, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Arsenic, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Beryllium, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Cadmium, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chromium, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Copper, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Lead, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Mercury, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Nickel, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Selenium, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Silver, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Thallium, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Zinc, total recoverable							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Cyanide							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Total phenolic compounds							<input type="checkbox"/> ML <input type="checkbox"/> MDL
<b>Volatile Organic Compounds</b>							
Acrolein							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Acrylonitrile							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Benzene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Bromoform							<input type="checkbox"/> ML <input type="checkbox"/> MDL



**TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Carbon tetrachloride							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chlorobenzene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chlorodibromomethane							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chloroethane							<input type="checkbox"/> ML <input type="checkbox"/> MDL
2-chloroethylvinyl ether							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chloroform							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Dichlorobromomethane							<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,1-dichloroethane							<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,2-dichloroethane							<input type="checkbox"/> ML <input type="checkbox"/> MDL
trans-1,2-dichloroethylene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,1-dichloroethylene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,2-dichloropropane							<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,3-dichloropropylene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Ethylbenzene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Methyl bromide							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Methyl chloride							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Methylene chloride							<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,1,1,2-tetrachloroethane							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Tetrachloroethylene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Toluene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,1,1-trichloroethane							<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,1,2-trichloroethane							<input type="checkbox"/> ML <input type="checkbox"/> MDL

EPA Identification Number

NPDES Permit Number

Facility Name

Outfall Number

Form Approved 03/05/19

OMB No. 2040-0004

**TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Trichloroethylene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Vinyl chloride							<input type="checkbox"/> ML <input type="checkbox"/> MDL
<b>Acid-Extractable Compounds</b>							
p-chloro-m-cresol							<input type="checkbox"/> ML <input type="checkbox"/> MDL
2-chlorophenol							<input type="checkbox"/> ML <input type="checkbox"/> MDL
2,4-dichlorophenol							<input type="checkbox"/> ML <input type="checkbox"/> MDL
2,4-dimethylphenol							<input type="checkbox"/> ML <input type="checkbox"/> MDL
4,6-dinitro-o-cresol							<input type="checkbox"/> ML <input type="checkbox"/> MDL
2,4-dinitrophenol							<input type="checkbox"/> ML <input type="checkbox"/> MDL
2-nitrophenol							<input type="checkbox"/> ML <input type="checkbox"/> MDL
4-nitrophenol							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Pentachlorophenol							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Phenol							<input type="checkbox"/> ML <input type="checkbox"/> MDL
2,4,6-trichlorophenol							<input type="checkbox"/> ML <input type="checkbox"/> MDL
<b>Base-Neutral Compounds</b>							
Acenaphthene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Acenaphthylene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Anthracene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Benzidine							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Benzo(a)anthracene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Benzo(a)pyrene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
3,4-benzofluoranthene							<input type="checkbox"/> ML <input type="checkbox"/> MDL

**TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Benzo(ghi)perylene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Benzo(k)fluoranthene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Bis (2-chloroethoxy) methane							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Bis (2-chloroethyl) ether							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Bis (2-chloroisopropyl) ether							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Bis (2-ethylhexyl) phthalate							<input type="checkbox"/> ML <input type="checkbox"/> MDL
4-bromophenyl phenyl ether							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Butyl benzyl phthalate							<input type="checkbox"/> ML <input type="checkbox"/> MDL
2-chloronaphthalene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
4-chlorophenyl phenyl ether							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chrysene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
di-n-butyl phthalate							<input type="checkbox"/> ML <input type="checkbox"/> MDL
di-n-octyl phthalate							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Dibenzo(a,h)anthracene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,2-dichlorobenzene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,3-dichlorobenzene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,4-dichlorobenzene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
3,3-dichlorobenzidine							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Diethyl phthalate							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Dimethyl phthalate							<input type="checkbox"/> ML <input type="checkbox"/> MDL
2,4-dinitrotoluene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
2,6-dinitrotoluene							<input type="checkbox"/> ML <input type="checkbox"/> MDL

**TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS**

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
1,2-diphenylhydrazine							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Fluoranthene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Fluorene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachlorobenzene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachlorobutadiene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachlorocyclo-pentadiene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachloroethane							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Indeno(1,2,3-cd)pyrene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Isophorone							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Naphthalene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Nitrobenzene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
N-nitrosodi-n-propylamine							<input type="checkbox"/> ML <input type="checkbox"/> MDL
N-nitrosodimethylamine							<input type="checkbox"/> ML <input type="checkbox"/> MDL
N-nitrosodiphenylamine							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Phenanthrene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Pyrene							<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,2,4-trichlorobenzene							<input type="checkbox"/> ML <input type="checkbox"/> MDL

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

**TABLE D. ADDITIONAL POLLUTANTS AS REQUIRED BY NPDES PERMITTING AUTHORITY**

Pollutant (list)	Maximum Daily Discharge		Average Daily Discharge			Analytical Method <sup>1</sup>	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
<input type="checkbox"/> No additional sampling is required by NPDES permitting authority.							
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
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							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL

<sup>1</sup> Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

**TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY**

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

**Test Information**

	Test Number _____	Test Number _____	Test Number _____
Test species			
Age at initiation of test			
Outfall number			
Date sample collected			
Date test started			
Duration			

**Toxicity Test Methods**

Test method number			
Manual title			
Edition number and year of publication			
Page number(s)			

**Sample Type**

Check one:	<input type="checkbox"/> Grab <input type="checkbox"/> 24-hour composite	<input type="checkbox"/> Grab <input type="checkbox"/> 24-hour composite	<input type="checkbox"/> Grab <input type="checkbox"/> 24-hour composite
------------	---	---	---

**Sample Location**

Check one:	<input type="checkbox"/> Before Disinfection <input type="checkbox"/> After Disinfection <input type="checkbox"/> After Dechlorination	<input type="checkbox"/> Before Disinfection <input type="checkbox"/> After Disinfection <input type="checkbox"/> After Dechlorination	<input type="checkbox"/> Before disinfection <input type="checkbox"/> After disinfection <input type="checkbox"/> After dechlorination
------------	--	--	--

**Point in Treatment Process**

Describe the point in the treatment process at which the sample was collected for each test.			
--	--	--	--

**Toxicity Type**

Indicate for each test whether the test was performed to assess acute or chronic toxicity, or both. (Check one response.)	<input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both	<input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both	<input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both
---	---	---	---

**TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY**

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number _____	Test Number _____	Test Number _____
<b>Test Type</b>			
Indicate the type of test performed. (Check one response.)	<input type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through	<input type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through	<input type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through
<b>Source of Dilution Water</b>			
Indicate the source of dilution water. (Check one response.)	<input type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water
If laboratory water, specify type.			
If receiving water, specify source.			
<b>Type of Dilution Water</b>			
Indicate the type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.	<input type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)	<input type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)	<input type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)
<b>Percentage Effluent Used</b>			
Specify the percentage effluent used for all concentrations in the test series.			
<b>Parameters Tested</b>			
Check the parameters tested.	<input type="checkbox"/> pH <input type="checkbox"/> Salinity <input type="checkbox"/> Temperature	<input type="checkbox"/> Ammonia <input type="checkbox"/> Dissolved oxygen	<input type="checkbox"/> pH <input type="checkbox"/> Salinity <input type="checkbox"/> Temperature
		<input type="checkbox"/> Ammonia <input type="checkbox"/> Dissolved oxygen	<input type="checkbox"/> Ammonia <input type="checkbox"/> Dissolved oxygen
<b>Acute Test Results</b>			
Percent survival in 100% effluent	%	%	%
LC <sub>50</sub>			
95% confidence interval	%	%	%
Control percent survival	%	%	%

**TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY**

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number _____	Test Number _____	Test Number _____
<b>Acute Test Results Continued</b>			
Other (describe)			
<b>Chronic Test Results</b>			
NOEC	%	%	%
IC <sub>25</sub>	%	%	%
Control percent survival	%	%	%
Other (describe)			
<b>Quality Control/Quality Assurance</b>			
Is reference toxicant data available?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Was reference toxicant test within acceptable bounds?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (describe)			



EPA Identification Number

NPDES Permit Number

Facility Name

Form Approved 03/05/19  
OMB No. 2040-0004**TABLE F. INDUSTRIAL DISCHARGE INFORMATION**

Response space is provided for three SIUs. Copy the table to report information for additional SIUs.

	SIU ____	SIU ____	SIU ____
Name of SIU			
Mailing address (street or P.O. box)			
City, state, and ZIP code			
Description of all industrial processes that affect or contribute to the discharge.			
List the principal products and raw materials that affect or contribute to the SIU's discharge.			
Indicate the average daily volume of wastewater discharged by the SIU.			
	gpd	gpd	gpd
How much of the average daily volume is attributable to process flow?			
	gpd	gpd	gpd
How much of the average daily volume is attributable to non-process flow?			
	gpd	gpd	gpd
Is the SIU subject to local limits?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the SIU subject to categorical standards?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

**TABLE F. INDUSTRIAL DISCHARGE INFORMATION**

Response space is provided for three SIUs. Copy the table to report information for additional SIUs.

	SIU ____	SIU ____	SIU ____
Under what categories and subcategories is the SIU subject?			
Has the POTW experienced problems (e.g., upsets, pass-through interferences) in the past 4.5 years that are attributable to the SIU? If yes, describe.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

What follows is  
the sewage  
sludge long form

**VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM****SCREENING INFORMATION**

This application is divided into sections. Sections A pertain to all applicants. The applicability of Sections B, C and D depend on your facility's sewage sludge use or disposal practices. The information provided on this page will help you determine which sections to fill out.

1. All applicants must complete Section A (General Information).

2. Will this facility generate sewage sludge?  Yes  No

Will this facility derive a material from sewage sludge?  Yes  No

If you answered Yes to either, complete Section B (Generation Of Sewage Sludge Or Preparation Of A Material Derived From Sewage Sludge).

3. Will this facility apply sewage sludge to the land?  Yes  No

Will sewage sludge from this facility be applied to the land?  Yes  No

If you answered No to both questions above, skip Section C.

If you answered Yes to either, answer the following three questions:

a. Will the sewage sludge from this facility meet the ceiling concentrations, pollutant concentrations, Class A pathogen reduction requirements and one of the vector attraction reduction requirements 1-8, as identified in the instructions?

Yes  No

b. Will sewage sludge from this facility be placed in a bag or other container for sale or give-away for application to the land?  Yes  No

c. Will sewage sludge from this facility be sent to another facility for treatment or blending?  Yes  No

If you answered No to all three, complete Section C (Land Application Of Bulk Sewage Sludge).

If you answered Yes to a, b or c, skip Section C.

4. Do you own or operate a surface disposal site?  Yes  No

If Yes, complete Section D (Surface Disposal).

SECTION A. GENERAL INFORMATION

All applicants must complete this section.

1. Facility Information.

- a. Facility name: Remington WWTP
- b. Contact person: Troy Willingham  
Title: Chief Operator  
Phone: ( 540 ) 439-2225
- c. Mailing address: 12523 Lucky Hill Road  
Street or P.O. Box:  
City or Town: Remington State: VA Zip: 22734
- d. Facility location:  
Street or Route #: Rt. 655  
County: Fauquier  
City or Town: Remington State: VA Zip: 22734
- e. Is this facility a Class I sludge management facility?  Yes  No
- f. Facility design flow rate: 2.0 mgd
- g. Total population served: 2734
- h. Indicate the type of facility:  
 Publicly owned treatment works (POTW)  
 Privately owned treatment works  
 Federally owned treatment works  
 Blending or treatment operation  
 Surface disposal site  
 Other (describe):

2. Applicant Information. If the applicant is different from the above, provide the following:

- a. Applicant name: Fauquier County Water and Sanitation Authority
- b. Mailing address: 7172 Kennedy Road  
Street or P.O. Box:  
City or Town: Warrenton State: VA Zip: 20187
- c. Contact person: Milas Smith  
Title: Director of Operations  
Phone: ( 540 ) 349-2092
- d. Is the applicant the owner or operator (or both) of this facility?  
 owner  operator
- e. Should correspondence regarding this permit be directed to the facility or the applicant? (Check one)  
 facility  applicant

3. Permit Information.

- a. Facility's VPDES permit number (if applicable): VA 0076805
- b. List on this form or an attachment, all other federal, state or local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:  
Permit Number: Type of Permit:  
N/A

4. Indian Country. Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country?  Yes  No If yes, describe:

5. Topographic Map. Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility:
- a. Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed.
  - b. Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.

**SEE ATTACHMENT A**

6. Line Drawing. Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction.

**SEE ATTACHMENT B**

7. Contractor Information. Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor?  Yes  No  
If yes, provide the following for each contractor (attach additional pages if necessary).

Name: Recyc Systems Inc.

Mailing address:

Street or P.O. Box: P.O. Box 562

City or Town: Remington State: VA Zip: 22734

Phone: ( 540) 547-3300

Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge:

**VA 00054**

If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s).

**HAUL AND LAND APPLICATION**

8. Pollutant Concentrations. Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. **All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old.**

POLLUTANT	CONCENTRATION (mg/kg dry weight)	SAMPLE DATE	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
Arsenic	21.625	2019-2022	SW-846 6010B	4.0 mg/kg
Cadmium	14.903	2019-2022	SW-846 6010B	2.0 mg/kg
Chromium	N/A	N/A	N/A	N/A
Copper	1068	2019-2022	SW-846 6010B	2.0 mg/kg
Lead	26.75	2019-2022	SW-846 6010B	4.0 mg/kg
Mercury	0.61575	2019-2022	SW-846 7471A	0.0250 mg/kg
Molybdenum	12.075	2019-2022	SW-846 6010B	4.0 mg/kg
Nickel	49.875	2019-2022	SW-846 6010B	4.0 mg/kg
Selenium	<QL	2019-2022	SW-846 6010B	4.0 mg/kg
Zinc	1570	2019-2022	SW-846 6010B	4.0 mg/kg

9. Certification. Read and submit the following certification statement with this application. Refer to the instructions to determine who is an officer for purposes of this certification. Indicate which parts of the application you have completed and are submitting:

- Section A (General Information)
- Section B (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)
- Section C (Land Application of Bulk Sewage Sludge)
- Section D (Surface Disposal)

**FACILITY NAME:** Remington

**VPDES PERMIT NUMBER:** VA0076805

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 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.

Name and official title Milas Smith, Director of Operations

Signature Milas Smith Date Signed 1/18/2023

Telephone number 540-349-2092

Upon request of the department, you must submit any other information necessary to assess sewage sludge use or disposal practices at your facility or identify appropriate permitting requirements.

**SECTION B. GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE**

Complete this section if your facility generates sewage sludge or derives a material from sewage sludge

1. Amount Generated On Site.  
Total dry metric tons per 365-day period generated at your facility: \_\_\_\_\_ dry metric tons
  
2. Amount Received from Off Site. If your facility receives sewage sludge from another facility for treatment, use or disposal, provide the following information for each facility from which sewage sludge is received. If you receive sewage sludge from more than one facility, attach additional pages as necessary.
  - a. Facility name: Vint Hill WWTP
  - b. Contact Person: Griffin Golesorkhi  
Title: Chief Operator  
Phone (540) 905 - 3683
  - c. Mailing address:  
Street or P.O. Box: 7000 Kennedy Road  
City or Town: Warrenton State: VA Zip: 20187
  - d. Facility Address: 7000 Kennedy Road, Warrenton, VA 20187  
(not P.O. Box)
  - e. Total dry metric tons per 365-day period received from this facility: approx. 150 dry metric tons
  - f. Describe, on this form or on another sheet of paper, any treatment processes known to occur at the off-site facility, including blending activities and treatment to reduce pathogens or vector attraction characteristics:  
Aerobic Digestion and belt filter press
  
3. Treatment Provided at Your Facility.
  - a. Which class of pathogen reduction is achieved for the sewage sludge at your facility?  
\_\_\_ Class A    X Class B    \_\_\_ Neither or unknown
  - b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge:
  
  - c. Which vector attraction reduction option is met for the sewage sludge at your facility?  
\_\_\_ Option 1 (Minimum 38 percent reduction in volatile solids)  
X Option 2 (Anaerobic process, with bench-scale demonstration)  
\_\_\_ Option 3 (Aerobic process, with bench-scale demonstration)  
\_\_\_ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)  
\_\_\_ Option 5 (Aerobic processes plus raised temperature)  
\_\_\_ Option 6 (Raise pH to 12 and retain at 11.5)  
\_\_\_ Option 7 (75 percent solids with no unstabilized solids)  
\_\_\_ Option 8 (90 percent solids with unstabilized solids)  
\_\_\_ None or unknown
  - d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge: Aerobic Digestion
  
  - e. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities, including blending, not identified in a - d above: In addition to aerobic digestion the sludge is dewatered by a centrifuge.
  
4. Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements and One of Vector Attraction Reduction Options 1-8 (EQ Sludge).  
(If sewage sludge from your facility does not meet all of these criteria, skip Question 4.)
  - a. Total dry metric tons per 365-day period of sewage sludge subject to this section that is applied to the land:  
N/A dry metric tons
  - b. Is sewage sludge subject to this section placed in bags or other containers for sale or give-away?  
\_\_\_ Yes X No



5. Sale or Give-Away in a Bag or Other Container for Application to the Land.  
 (Complete this question if you place sewage sludge in a bag or other container for sale or give-away prior to land application. Skip this question if sewage sludge is covered in Question 4.)
- a. Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land: N/A dry metric tons
  - b. Attach, with this application, a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land.
6. Shipment Off Site for Treatment or Blending.  
 (Complete this question if sewage sludge from your facility is sent to another facility that provides treatment or blending. This question does not apply to sewage sludge sent directly to a land application or surface disposal site. Skip this question if the sewage sludge is covered in Questions 4 or 5. If you send sewage sludge to more than one facility, attach additional sheets as necessary.)
- a. Receiving facility name: N/A
  - b. Facility contact: N/A  
 Title: N/A  
 Phone: ( )
  - c. Mailing address: N/A  
 Street or P.O. Box:  
 City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
  - d. Total dry metric tons per 365-day period of sewage sludge provided to receiving facility: \_\_\_\_\_ dry metric tons
  - e. List, on this form or an attachment, the receiving facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the receiving facility's sewage sludge use or disposal practices:  

<u>Permit Number:</u>	<u>Type of Permit:</u>
<u>N/A</u>	<u>N/A</u>
  - f. Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility?  Yes  No N/A  
 Which class of pathogen reduction is achieved for the sewage sludge at the receiving facility? N/A  
 Class A  Class B  Neither or unknown  
 Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce pathogens in sewage sludge: N/A
  - g. Does the receiving facility provide additional treatment to reduce vector attraction characteristics of the sewage sludge?  Yes  No N/A  
 Which vector attraction reduction option is met for the sewage sludge at the receiving facility?  
 Option 1 (Minimum 38 percent reduction in volatile solids)  
 Option 2 (Anaerobic process, with bench-scale demonstration)  
 Option 3 (Aerobic process, with bench-scale demonstration)  
 Option 4 (Specific oxygen uptake rate for aerobically digested sludge)  
 Option 5 (Aerobic processes plus raised temperature)  
 Option 6 (Raise pH to 12 and retain at 11.5)  
 Option 7 (75 percent solids with no unstabilized solids)  
 Option 8 (90 percent solids with unstabilized solids)  
 None unknown  
 Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge: N/A
  - h. Does the receiving facility provide any additional treatment or blending not identified in f or g above?  
 Yes  No N/A  
 If yes, describe, on this form or another sheet of paper, the treatment processes not identified in f or g above
  - i. If you answered yes to f., g or h above, attach a copy of any information you provide to the receiving facility to comply with the "notice and necessary information" requirement of 9 VAC 25-31-530.G.

j Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land?  Yes  No  N/A

If yes, provide a copy of all labels or notices that accompany the product being sold or given away.

k. Will the sewage sludge be transported to the receiving facility in a truck-mounted watertight tank normally used for such purposes?  Yes  No. If no, provide description and specification on the vehicle used to transport the sewage sludge to the receiving facility.  N/A

Show the haul route(s) on a location map or briefly describe the haul route below and indicate the days of the week and the times of the day sewage sludge will be transported.

\_\_\_\_\_  N/A

7. Land Application of Bulk Sewage Sludge.

(Complete Question 7.a if sewage sludge from your facility is applied to the land, unless the sewage sludge is covered in Questions 4, 5 or 6; complete Question 7.b, c & d only if you are responsible for land application of sewage sludge.)

a. Total dry metric tons per 365-day period of sewage sludge applied to all land application sites: 435 dry metric tons

b. Do you identify all land application sites in Section C of this application?  Yes  No  
If no, submit a copy of the Land Application Plan (LAP) with this application (LAP should be prepared in accordance with the instructions).

c. Are any land application sites located in States other than Virginia?  Yes  No  
If yes, describe, on this form or on another sheet of paper, how you notify the permitting authority for the States where the land application sites are located. Provide a copy of the notification.

d. Attach a copy of any information you provide to the owner or lease holder of the land application sites to comply with the "notice and necessary" information requirement of 9 VAC 25-31-530 F and/or H (Examples may be obtained in Appendix IV).

8. Surface Disposal. -  N/A

(Complete Question 8 if sewage sludge from your facility is placed on a surface disposal site.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility placed on all surface disposal sites: N/A dry metric tons

b. Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?  Yes  No  N/A

If no, answer questions c - g for each surface disposal site that you do not own or operate. If you send sewage sludge to more than one surface disposal site, attach additional pages as necessary.

c. Site name or number:

d. Contact person:

Title:

Phone: ( )

Contact is:  Site Owner  Site operator

e. Mailing address.

Street or P.O. Box:

City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip:

f. Total dry metric tons per 365-day period of sewage sludge from your facility placed on this surface disposal site: \_\_\_\_\_ dry metric tons

g. List, on this form or an attachment, the surface disposal site VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the sewage sludge use or disposal practices at the surface disposal site:

Permit Number:

Type of Permit:

\_\_\_\_\_

\_\_\_\_\_

9. Incineration. -  N/A

(Complete Question 9 if sewage sludge from your facility is fired in a sewage sludge incinerator.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility fired in a sewage sludge

incinerator: N/A dry metric tons

- b. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired?  
 Yes  No  N/A

If no, answer questions c - g for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one sewage sludge incinerator, attach additional pages as necessary.

- c. Incinerator name or number:
- d. Contact person:  
 Title:  
 Phone: ( )  
 Contact is:  Incinerator Owner  Incinerator Operator

- e. Mailing address.  
 Street or P.O. Box:  
 City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip:

- f. Total dry metric tons per 365-day period of sewage sludge from your facility fired in this sewage sludge incinerator: \_\_\_\_\_ dry metric tons

- g. List on this form or an attachment the numbers of all other federal, state or local permits that regulate the firing of sewage sludge at this incinerator:

Permit Number: \_\_\_\_\_ Type of Permit: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

- 10. Disposal in a Municipal Solid Waste Landfill. - N/A

(Complete Question 10 if sewage sludge from your facility is placed on a municipal solid waste landfill. Provide the following information for each municipal solid waste landfill on which sewage sludge from your facility is placed. If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.)

- a. Landfill name: N/A
- b. Contact person:  
 Title:  
 Phone: ( )  
 Contact is:  Landfill Owner  Landfill Operator

- c. Mailing address.  
 Street or P.O. Box:  
 City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip:

- d. Landfill location.  
 Street or Route #:  
 County:  
 City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip:

- e. Total dry metric tons per 365-day period of sewage sludge placed in this municipal solid waste landfill:  
 \_\_\_\_\_ dry metric tons

- f. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the operation of this municipal solid waste landfill:

Permit Number: \_\_\_\_\_ Type of Permit: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

- g. Does sewage sludge meet applicable requirements in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq., concerning the quality of materials disposed in a municipal solid waste landfill?  
 Yes  No

- h. Does the municipal solid waste landfill comply with all applicable criteria set forth in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq.?  Yes  No

- i. Will the vehicle bed or other container used to transport sewage sludge to the municipal solid waste landfill be watertight and covered?  Yes  No

Show the haul route(s) on a location map or briefly describe the route below and indicate the days of the week and time of the day sewage sludge will be transported.

SECTION C. LAND APPLICATION OF BULK SEWAGE SLUDGE

N/A

Complete this section for sewage sludge that is land applied unless any of the following conditions apply:

The sewage sludge meets the Table 1 ceiling concentrations, the Table 3 pollutant concentrations, Class A pathogen requirements and one of the vector attraction reduction options 1-8 (fill out B.4 instead) (EQ Sludge); or

The sewage sludge is sold or given away in a bag or other container for application to the land (fill out B.5 instead); or

You provide the sewage sludge to another facility for treatment or blending (fill out B.6 instead).

Complete Section C for every site on which the sewage sludge that you reported in B.7 is land applied.

1. Identification of Land Application Site. **Contracted to Recyc, Attachment 3A provides amounts and locations.**

a. Site name or number:

b. Site location (Complete i and ii)

i. Street or Route#:

County:

City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip:

ii. Latitude: \_\_\_\_\_ Longitude:

Method of latitude/longitude determination

\_\_\_\_\_ USGS map \_\_\_\_\_ Filed survey \_\_\_\_\_ Other

c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

2. Owner Information.

a. Are you the owner of this land application site? \_\_\_Yes \_\_\_No

b. If no, provide the following information about the owner:

Name:

Street or P.O. Box:

City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip:

Phone: ( )

3. Applier Information:

a. Are you the person who applies, or who is responsible for application of, sewage sludge to this land application site? \_\_\_Yes \_\_\_No

b. If no, provide the following information for the person who applies the sewage sludge:

Name:

Street or P.O. Box:

City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip:

Phone: ( )

c. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the person who applies sewage sludge to this land application site:

Permit Number: \_\_\_\_\_ Type of Permit: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Site Type. Identify the type of land application site from among the following:

\_\_\_Agricultural land \_\_\_\_\_Reclamation site \_\_\_\_\_Forest

\_\_\_Public contact site \_\_\_\_\_Other. Describe

5. Vector Attraction Reduction.

Are any vector attraction reduction requirements met when sewage sludge is applied to the land application site?

\_\_\_Yes \_\_\_No If yes, answer a and b.

a. Indicate which vector attraction reduction option is met:

\_\_\_ Option 9 (Injection below land surface)

\_\_\_ Option 10 (Incorporation into soil within 6 hours)

b. Describe, on this form or on another sheet of paper, any treatment processes used at the land application site to reduce the vector attraction properties of sewage sludge:

6. Cumulative Loadings and Remaining Allotments.

(Complete Question 6 only if the sewage sludge applied to this site since July 20, 1993 is subject to the cumulative pollutant loading rates (CPLRs) - see instructions.)

a. Have you contacted DEQ or the permitting authority in the state where the sewage sludge subject to the CPLRs will be applied to ascertain whether bulk sewage sludge subject to the CPLRs has been applied to this site since July 20, 1993?  Yes  No  
 If no, sewage sludge subject to the CPLRs may not be applied to this site.

If yes, provide the following information:

Permitting authority:

Contact person:

Phone:( )

b. Based upon this inquiry, has bulk sewage sludge subject to the CPLRs been applied to this site since July 20, 1993?  Yes  No If no, skip the rest of Question 6. If yes, answer questions c - e.

c. Site size, in hectares: \_\_\_\_\_ (one hectare = 2.471 acres)

d. Provide the following information for every facility other than yours that is sending or has sent sewage sludge subject to the CPLRs to this site since July 20, 1993. If more than one such facility sends sewage sludge to this site, attach additional pages as necessary.

Facility name:

Facility contact:

Title:

Phone: ( )

Mailing address.

Street or P.O. Box:

City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip:

e. Provide the total loading and allotment remaining, in kg/hectare, for each of the following pollutants:

	<u>Cumulative loading</u>	<u>Allotment remaining</u>
Arsenic	_____	_____
Cadmium	_____	_____
Copper	_____	_____
Lead	_____	_____
Mercury	_____	_____
Nickel	_____	_____
Selenium	_____	_____
Zinc	_____	_____

Complete Questions 7-12 below only if you apply sewage sludge, or you are responsible for land application of sewage sludge. Information required by these questions may be prepared as attachments to this form. Skip the following questions if you contract land application to someone else (as indicated under Section A.7) who is responsible for the operation.

7. Sludge Characterization. Use the table below or a separate attachment, provide at least one analysis for each parameter.

- PCBs (mg/kg)
- pH (S. U.)
- Percent Solids (%)
- Ammonium Nitrogen (mg/kg)
- Nitrate Nitrogen (mg/kg)
- Total Kjeldahl Nitrogen (mg/kg)
- Total Phosphorus (mg/kg)
- Total Potassium (mg/kg)
- Alkalinity as CaCO<sub>3</sub>\* (mg/kg)

\* Lime treated sludge (10% or more lime by dry weight) should be analyzed for percent CaCO<sub>3</sub>.

## 8. Storage Requirements.

Existing and proposed sludge storage facilities must provide an estimated annual sludge balance on a monthly basis incorporating such factors as storage capacity, sludge production and land application schedule. Include pertinent calculations justifying storage requirements.

Proposed sludge storage facilities must also provide the following information:

- a. A sludge storage site layout on a 7.5 minute topographic quadrangle or other appropriate scaled map to show the following topographic features of the surrounding landscape to a distance of 0.25 mile. Clearly mark the property line.
  - 1) Water wells, abandoned or operating
  - 2) Surface waters
  - 3) Springs
  - 4) Public water supply(s)
  - 5) Sinkholes
  - 6) Underground and/or surface mines
  - 7) Mine pool (or other) surface water discharge points
  - 8) Mining spoil piles and mine dumps
  - 9) Quarry(s)
  - 10) Sand and gravel pits
  - 11) Gas and oil wells
  - 12) Diversion ditch(s)
  - 13) Agricultural drainage ditch(s)
  - 14) Occupied dwellings, including industrial and commercial establishments
  - 15) Landfills or dumps
  - 16) Other unlined impoundments
  - 17) Septic tanks and drainfields
  - 18) Injection wells
  - 19) Rock outcrops
- b. A topographic map of sufficient detail to clearly show the following information:
  - 1) Maximum and minimum percent slopes
  - 2) Depressions on the site that may collect water
  - 3) Drainageways that may attribute to rainfall run-on to or runoff from this site
  - 4) Portions of the site (if any) which are located with the 100-year floodplain and how the storage facility will be protected from flooding
- c. Data and specifications for the storage facility lining material.
- d. Plan and cross-sectional views of the storage facility.
- e. Depth from the bottom of the storage facility to the seasonal high water table and separation distance to the permanent water table.

9. Land Area Requirements. Provide calculations justifying the land area requirements for land application of sewage sludge taking into consideration average soil productivity group, crop(s) to be grown and most limiting factor(s) of the sewage sludge, specifically Plant Available Nitrogen (PAN), Calcium Carbonate Equivalence (CCE), and metal loadings (CPLR sewage sludge only), where applicable. Relate PAN, CCE, and metal loadings to demonstrate the most limiting factor for land application.

10. Landowner Agreement Forms. Provide a properly completed Sewage Sludge Application Agreement Form (attached) for each landowner if sewage sludge is to be applied onto land not owned by the applicant.

## 11. Ground Water Monitoring.

Are any ground water monitoring data available for this land application site?  Yes  No

If yes, submit the ground water monitoring data with this permit application. Also submit a written description of the well locations, approximate depth to ground water, and the ground water monitoring procedures used to obtain these data.

## 12. Land Application Site Information.

(Complete Items a-d for sites receiving infrequent application - land application of sewage sludge up to the agronomic rate at a frequency of once in a 3 year period; complete Items a-h for sites receiving frequent application - land application of sewage sludge in excess of 70% the agronomic rate at a frequency greater than once in a 3 year period)

- a. Provide a general location map for each county which clearly indicates the location of all the land application sites.
- b. For each land application site provide a site plan of sufficient detail to clearly show the concerned landscape features and associated buffer zones (See instructions). Provide a legend for each landscape feature and the net acreage for each field taking into account the proposed buffer zones.
- c. In order to ensure that land application of bulk sewage sludge will not impact federally listed threatened or endangered species or federally designated critical habitat, the applicant must notify the field office of the U. S. Department of the Interior, Fish and Wildlife Service (FWS), by a letter, the proposed land application activities with the identification of the land application sites. The address and phone number of FWS are provided below.

U. S. Fish and Wildlife Service  
Virginia Field Office  
P. O. Box 480  
White Marsh, VA 23183  
TEL: (804)693-6694

Provide a copy of the notification letter with this application form.

- d. Provide a soil survey map, preferably photographically based, with the field boundaries clearly marked. (A USDA-SCS soil survey map should be provided, if available.)  
Provide a detailed legend for each soil survey map which uses accepted USDA-SCS descriptions of the typifying pedon for each soil series (soil type). Complex associations may be described as a range of characteristics. Soil descriptions shall include as a minimum the following information.
  - 1) Soil symbol
  - 2) Soil series, textural phase and slope range
  - 3) Depth to seasonal high water table
  - 4) Depth to bedrock
  - 5) Estimated soil productivity group (for the proposed crop rotation)

**Item e - h are required for sites receiving frequent application of sewage sludge**

- e. In order to verify the information provided in item d, characterize the soil at each land application site. Representative soil borings or test pits to a depth of five feet or to bedrock if shallower, are to be coordinated for the typifying pedon of each soil series (soil type). Soil descriptions shall include as a minimum the following information:
  - 1). Soil symbol
  - 2). Soil series, textural phase and slope range
  - 3). Depth to seasonal high water table
  - 4). Depth to bedrock
  - 5). Estimated soil productivity group (for the proposed crop rotation)

- f. Collect and analyze soil samples from each field, weighted to best represent each of the soil borings performed for Item e. Using the table below or a separate attachment, provide at least one analysis per sample for each of the following parameters.

- Soil Organic Matter (%)
- Soil pH (std. units)
- Cation Exchange Capacity (meq/100g)
- Total Nitrogen (ppm)
- Organic Nitrogen (ppm)
- Ammonia Nitrogen (ppm)
- Nitrate Nitrogen (ppm)
- Available Phosphorus (ppm)
- Exchangeable Potassium (mg/100g)
- Exchangeable Sodium (mg/100g)
- Exchangeable Calcium (mg/100g)
- Exchangeable Magnesium (mg/100g)
- Arsenic (ppm)
- Cadmium (ppm)
- Copper (ppm)
- Lead (ppm)
- Mercury (ppm)
- Molybdenum (ppm)
- Nickel (ppm)
- Selenium (ppm)
- Zinc (ppm)
- Manganese (ppm)
- Particle Size Analysis or  
USDA Textural Estimate (%)

- g. Relate the crop nutrient needs to anticipated yields, soil productivity rating and the various fertilizer or nutrient sources from sludge and chemical fertilizers. Describe any specialized agronomic management practices which may be required as a result of high soil pH. If the sludge is expected to possess an unusually high CCE or other unusual properties, provide a description of any plant tissue testing, supplemental fertilization or intensive agronomic management practices which may be necessary.
- h. Using a narrative format and referencing any related charts, describe the proposed cropping system. Show how the crop rotation and management will be coordinated with the design of the land application system. Include any supplemental fertilization program, soil testing and the coordination of tillage practices, planting and harvesting schedules and timing of land application.



**SEWAGE SLUDGE APPLICATION AGREEMENT**

This sewage sludge application agreement is made on this date \_\_\_\_\_ between \_\_\_\_\_, referred to here as "landowner", and \_\_\_\_\_, referred to here as the "Permittee".

Landowner is the owner of agricultural land shown on the map attached as Exhibit A and designated there as \_\_\_\_\_ ("landowner's land"). Permittee agrees to apply and landowner agrees to comply with certain permit requirements following application of sewage sludge on landowner's land in amounts and in a manner authorized by VPDES permit number \_\_\_\_\_ which is held by the Permittee.

Landowner acknowledges that the appropriate application of sewage sludge will be beneficial in providing fertilizer and soil conditioning to the property. Moreover, landowner acknowledges having been expressly advised that, in order to protect public health, the following site restrictions must be adhered to when sewage sludge receives Class B treatment for pathogen reduction:

1. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge;
2. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil;
3. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil;
4. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge;
5. Animals shall not be grazed on the land for 30 days after application of sewage sludge;
6. Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the State Water Control Board;
7. Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge;
8. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
9. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of sewage sludge borne cadmium equal to or exceeding 0.5 kilograms/hectare (0.45 pounds/acre).

Permittee agrees to notify landowner or landowner's designee of the proposed schedule for sewage sludge application and specifically prior to any particular application to landowner's land. This agreement may be terminated by either party upon written notice to the address specified below.

Landowner:  
 \_\_\_\_\_  
 Signature  
 \_\_\_\_\_  
 Mailing Address

Permittee:  
 \_\_\_\_\_  
 Signature  
 \_\_\_\_\_  
 Mailing Address

SECTION D. SURFACE DISPOSAL - **N/A**

Complete this section only if you own or operate a surface disposal site. Provide the information for each active sewage sludge unit.

1. Information on Active Sewage Sludge Units.

- a. Unit name or number:
- b. Unit location
  - i. Street or Route#:  
County:  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
  - ii. Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_  
Method of latitude/longitude determination  
\_\_\_\_\_ USGS map \_\_\_\_\_ Filed survey \_\_\_\_\_ Other \_\_\_\_\_
- c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.
- d. Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period:  
\_\_\_\_\_ dry metric tons.
- e. Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit:  
\_\_\_\_\_ dry metric tons.
- f. Does the active sewage sludge unit have a liner with a minimum hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec?  Yes  No If yes, describe the liner or attach a description.
- g. Does the active sewage sludge unit have a leachate collection system?  Yes  No  
If yes, describe the leachate collection system or attach a description. Also, describe the method used for leachate disposal and provide the numbers of any federal, state or local permits for leachate disposal:
- h. If you answered no to either f or g, answer the following:  
Is the boundary of the active sewage sludge unit less than 150 meters from the property line of the surface disposal site?  Yes  No If yes, provide the actual distance in meters:
- i. Remaining capacity of active sewage sludge unit, in dry metric tons: \_\_\_\_\_ dry metric tons  
Anticipated closure date for active sewage sludge unit, if known: \_\_\_\_\_ (MM/DD/YYYY)  
Provide with this application a copy of any closure plan developed for this active sewage sludge unit.

2. Sewage Sludge from Other Facilities.

Is sewage sludge sent to this active sewage sludge unit from any facilities other than yours?  Yes  No  
If yes, provide the following information for each such facility, attach additional sheets as necessary.

- a. Facility name:
- b. Facility contact:  
Title:  
Phone: ( )
- c. Mailing address.  
Street or P.O. Box:  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- d. List, on this form or an attachment, the facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the facility's sewage sludge management practices:  
Permit Number: \_\_\_\_\_ Type of Permit: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- e. Which class of pathogen reduction is achieved before sewage sludge leaves the other facility?  
 Class A  Class B  Neither or unknown
- f. Describe, on this form or on another sheet of paper, any treatment processes used at the other facility to reduce pathogens in sewage sludge:

- g. Which vector attraction reduction option is achieved before sewage sludge leaves the other facility?
  - Option 1 (Minimum 38 percent reduction in volatile solids)
  - Option 2 (Anaerobic process, with bench-scale demonstration)
  - Option 3 (Aerobic process, with bench-scale demonstration)
  - Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
  - Option 5 (Aerobic processes plus raised temperature)
  - Option 6 (Raise pH to 12 and retain at 11.5)
  - Option 7 (75 percent solids with no unstabilized solids)
  - Option 8 (90 percent solids with unstabilized solids)
  - None or unknown
- h. Describe, on this form or another sheet of paper, any treatment processes used at the other facility to reduce vector attraction properties of sewage sludge:
- i. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities performed by the other facility that are not identified in e - h above:

3. Vector Attraction Reduction.

- a. Which vector attraction reduction option, if any, is met when sewage sludge is placed on this active sewage sludge unit?
  - Option 9 (Injection below land surface)
  - Option 10 (Incorporation into soil within 6 hours)
  - Option 11 (Covering active sewage sludge unit daily)
- b. Describe, on this form or another sheet of paper, any treatment processes used at the active sewage sludge unit to reduce vector attraction properties of sewage sludge:

4. Ground Water Monitoring.

- a. Is ground water monitoring currently conducted at this active sewage sludge unit or are ground water monitoring data otherwise available for this active sewage sludge unit?  Yes  No  
If yes, provide a copy of available ground water monitoring data. Also provide a written description of the well locations, the approximate depth to ground water, and the ground water monitoring procedures used to obtain these data.
- b. Has a ground water monitoring program been prepared for this active sewage sludge unit?  
 Yes  No If yes, submit a copy of the ground water monitoring program with this application.
- c. Have you obtained a certification from a qualified ground water scientist that the aquifer below the active sewage sludge unit has not been contaminated?  Yes  No  
If yes, submit a copy of the certification with this application.

5. Site-Specific Limits.

Are you seeking site-specific pollutant limits for the sewage sludge placed on the active sewage sludge unit?  
 Yes  No If yes, submit information to support the request for site-specific pollutant limits with this application.



Annual Tonnage Report  
January 1, 2022 to December 31, 2022

**Remington WWTP**

Total Wet Tons Land Applied	2487.05
December 2022 % Solids	19.28
Total Dry Tons Land Applied	479.50
<b>Total METRIC Dry Tons Land Applied</b>	<b>435</b>
Approx Acres Utilized	129
Tons to Landfill	0

# Recyc Systems, Inc

## VPA Permit List

January 14, 2023

	<u>Permit Number</u>	<u>Gross Acres</u>	<u>Permit Date</u>
ALBEMARLE	VPA 01574	5,889.60	11/1/21
AMELIA	VPA 00811	3,660.10	9/1/21
BRUNSWICK	VPA 00842	3,359.50	6/25/13
CAROLINE	VPA 00056	6,426.70	12/1/20
CLARKE	VPA 01572	3,550.80	8/15/22
CULPEPER	VPA 00057	22,034.00	9/1/22
DINWIDDIE	VPA 00817	7,669.40	4/1/22
ESSEX	VPA 00804	810.50	5/1/21
FAUQUIER	VPA 00054	13,120.51	6/25/10
GREENE	VPA 01577	3,095.30	5/1/21
HANOVER	VPA 00801	5,070.50	10/1/21
KING & QUEEN	VPA 00805	5,551.80	10/1/20
KING WILLIAM	VPA 00826	1,909.00	9/1/22
LUNENBURG	VPA 03010	6,121.20	3/1/22
MADISON	VPA 00061	8,578.20	9/8/11
MIDDLESEX	VPA 00820	3,417.10	8/1/21
NEW KENT	VPA 00800	196.20	5/1/20
NOTTOWAY	VPA 03003	6,984.30	9/1/21
ORANGE	VPA 00060	12,978.90	9/22/10
PRINCE GEORGE	VPA 00809	345.00	4/1/20
RICHMOND	VPA 00821	435.30	2/1/22
SPOTSYLVANIA	VPA 00058	3,056.10	9/22/10
SURRY	VPA 00818	434.40	8/1/21
SUSSEX	VPA 00827	1,698.00	12/1/22
WARREN	VPA 01573	789.50	8/1/22
WESTMORELAND	VPA 00823	2,312.40	3/1/22
total acres		129,494.31	

December 19, 2022

Farmer  
Farm Address  
Ruckersville Virginia 22968

Dear Farmer

Enclosed is a Nutrient Management Plan for the fields where biosolids were recently applied on your farm. The plan was written to fulfill a requirement of the biosolids regulations. Nutrient recommendations as shown on the balance sheet are based on Virginia Nutrient Management Standards and Criteria.

Application rates for biosolids are calculated with limits on nitrogen, phosphorus and lime. Biosolids regulations require that we use the Soil Buffer pH to calculate the lime loading for each field which takes into account the physical properties of the soil as well as the soil pH. Please note that results for phosphorus and soil buffer pH are different for VaTech and A&L Lab and one must have the correct chart for each lab.

- 1 -- The balance sheets shows carryover nitrogen from the biosolids and legume crops. Nitrogen needs are based on the soil productivity and crop.
- 2 -- Before additional phosphorus is applied, soil tests should taken to determine the needs.
- 3 -- Application of potash is necessary as recommended on the balance sheet to maximize plant growth.
- 4 -- Target soil pH east of I 95 is 6.5 and west of I 95 is 6.8 calculated using the Soil Buffer pH.
- 5 -- Proper soil management practices are necessary to maximize crop yields and reduce nutrient loss. For weed control, it is important to keep the pasture fields clipped and timely mowing of the hay fields.
- 6 -- Grazing of livestock and feeding of crops harvested off the field is prohibited for thirty days (sixty days for dairy cattle) after application of biosolids.
- 7 -- Access to the fields by the general public is restricted for one year after application of biosolids.

I appreciate the opportunity to work with you. Please feel free to contact me with any questions.

Sincerely,

Susan Trumbo  
Vice President - Technical Manager

Bulk biosolids notification requirements to comply with 9VAC 25-31-530.H or 9VAC25-32-313.I.

**Part II – To be completed by LAND APPLIER of biosolids and provided to the owner or lease holder of the land that receives those biosolids**

Location of land application site: J W Tatum, Madison County Virginia

Date and time bulk residuals were applied to the site: December 2015

Number of acres that were applied: 119

Amount of bulk sewage sludge applied: 840 tons

**A. Pathogen Reduction (9VAC25-31-710.B & 9VAC25-32-675.B)**

**The residuals applied on your site meet Class B Pathogen Reduction treatment standards. In order to ensure protection of public health after residuals that meet Class B pathogen reduction have been land applied, the following site restrictions must be implemented :**

TIME RESTRICTIONS FOLLOWING COMPLETION OF BIOSOLIDS/INDUSTRIAL RESIDUALS APPLICATION ASSOCIATED WITH CLASS B PATHOGEN REDUCTION		
	Type of Application	
	Surface <sup>(1)</sup>	Injection or Incorporation <sup>(2)</sup>
Control of access to sites with high potential for public contact	12 months	12 months
Control of access to sites with low potential for public contact	30 days	30 days
Time lapse required before above ground food crops with harvested parts that touch the biosolids/soil mixture can be harvested	14 months	14 months
Time lapse before food crops with harvested parts below the land surface can be harvested	20 months	38 months
Harvesting food crops, feed crops and fiber crops	30 days	30 days
Harvesting feed crops for lactating dairy animals	60 days	60 days
Grazing by farm animals	30 days	30 days
Grazing by lactating dairy animals	60 days	60 days
Harvesting turf for placement on land with a high potential for public exposure or a lawn	12 months	12 months
(1) Remains on land surface for four months or longer prior to incorporation.		
(2) Remains on land surface for less than four months prior to incorporation.		

**B. Vector Attraction Reduction (9VAC25-31-720.B & 9VAC25-32-685.B)**

**The residuals applied on your site met vector attraction reduction during treatment.**

The residuals applied on your site were not treated to meet vector attraction reduction; therefore, injection or incorporation was performed at the land application site. Please indicate the option performed.

- Option 9: Subsurface Injection
- Option 10: Incorporated into the soil

**NOTICE AND NECESSARY INFORMATION**

- C.  The pollutant levels in the residuals land applied were below the pollutant concentration limits in 9VAC25-31-540.B Table 3 or 9VAC25-32-356.C Table 4.

Molybdenum: Monthly Average pollutant concentration (mg/kg) \_\_\_\_\_<sup>(1)</sup>

- The pollutant levels in the residuals land applied do not meet the pollutant concentration limits in 9VAC25-31-540.B Table 3 or 9VAC25-32-356.C Table 4; therefore, cumulative loadings of the follow metals must be tracked on this site.

Parameters	Loading (Lbs/Ac) <sup>(2)</sup>	Maximum Loading (Lbs/Ac) <sup>(2)</sup>
Total Arsenic		36
Total Cadmium		35
Total Copper		1,340
Total Lead		270
Total Mercury		16
Total Molybdenum		NL
Total Nickel		375
Total Selenium		89
Total Zinc		2,500

(1) The pollutant concentrations and maximum cumulative application of Molybdenum are currently under study by USEPA. Research suggests that land applying residuals with a Molybdenum concentration below 40 mg/kg and maintaining a cumulative pollutant loading rate below 35.5 lbs/acre may be appropriate to reduce the risk of copper deficiency in grazing animals.

(2) Values are reported on a dry weight basis.

Name and official title Susan Trumbo, Technical Manager

Signature \_\_\_\_\_ Date Signed 01/15/16

Telephone number 540-547-3300



What follows is  
the sewage  
sludge short  
form. Included  
as alternate to  
long form

# VPDES Sewage Sludge Permit Application for Permit Reissuance

## Instructions

WHO MUST SUBMIT THE APPLICATION - All facilities with a current VPDES Permit that authorizes the discharge of treated sewage wastewater that are applying for reissuance must complete and submit this application.

Part 1 is general information to be provided by all facilities.

Part 2 must be completed by all facilities that generate Class A or Class B biosolids that are land applied.

Part 3 must be completed by all facilities that land apply Class B biosolids.

## Part 1 – Sludge Disposal Management (To be completed by all facilities)

Facility Name: \_\_\_\_\_ VPDES Permit No: \_\_\_\_\_

### 1. Shipment Off Site for Treatment or Blending

Is sewage sludge from your facility sent to another facility that provides treatment or blending?  Yes  No

If you send sewage sludge to more than one facility, attach additional sheets as necessary.

Shipment off site is:  The primary method of sludge disposal  A back up method of sludge disposal

a. Receiving Facility Name \_\_\_\_\_

b. Receiving Facility VPDES Permit No. \_\_\_\_\_

c. Include an acceptance letter from the Receiving Facility.

d. Receiving Facility's ultimate disposal method for sewage sludge \_\_\_\_\_

### 2. Disposal in a Municipal Solid Waste Landfill

Is sewage sludge from your facility placed in a municipal solid waste landfill?  Yes  No

If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.

Landfilling is:  The primary method of sludge disposal  A back up method of sludge disposal

a. Landfill Name \_\_\_\_\_

b. Landfill Permit No. \_\_\_\_\_

c. Include an acceptance letter from the landfill.

### 3. Incineration

Is sewage sludge from your facility fired in a sewage sludge incinerator?  Yes  No

Incineration is:  The primary method of sludge disposal  A back up method of sludge disposal

a. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired?  Yes  No

If yes, provide the Air Registration No. \_\_\_\_\_

If no, complete items b - d for each incinerator that you do not own or operate.

b. Facility Name \_\_\_\_\_

c. Air Registration No. \_\_\_\_\_

d. Include an acceptance letter from the Incinerator.

### 4. Class A Biosolids

Do you produce Class A biosolids for land application or distribution and marketing? If yes, complete Part 2.  Yes  No

Are Class A biosolids from your facility land applied in bulk?  Yes  No

Do you sell or give away Class A biosolids in a bag or other container for application to the land? If yes, provide the VDACS certification number?  Yes  No  
\_\_\_\_\_

### 5. Class B Biosolids

Do you produce Class B biosolids? If yes, complete Part 2.  Yes  No

Are Class B biosolids from your facility land applied under the authorization of this VPDES Permit? If yes, complete Part 3.  Yes  No

### 6. Land Application Under a Separate Permit

Are biosolids from your facility land applied under the authorization of a permit other than your VPDES Permit?  Yes  No

Biosolids are land applied under the authorization of a  VPA permit  Another VPDES Permit  Out of State

Complete items a - c for each VPA permit authorized to land apply biosolids from your facility.

a. Permittee Name \_\_\_\_\_ b. Permit No. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

c. Include copy of any information you provide to the Receiving VPDES or VPA Permittee to comply with the "notice and necessary information" requirement of 9VAC25-31-530 F.

# VPDES Sewage Sludge Permit Application for Permit Reissuance

## Part 2 – Biosolids Characterization (To be completed by all facilities that generate biosolids that are land applied.)

1. Have there been changes to sludge treatment processes or storage facilities since the previous permit issuance/reissuance?  Yes  No
  2. Do the biosolids generated under this permit that will be land applied meet one of the Class A pathogen requirements in 9VAC25-31-710 A 3 through A 8 or Class B pathogen requirements in 9VAC25-31-710 B 1 through B 4?  Yes  No  
Identify the pathogen reduction option utilized to demonstrate compliance with the pathogen reductions requirements and provide the data that demonstrate compliance with the applicable alternative. See attachment C
  3. Do the biosolids generated under this permit that will be land applied meet one of the vector attraction reduction requirements in 9VAC25-31-720 B 1 through B 10?  Yes  No  
Identify the vector attraction reduction option utilized to demonstrate compliance with the vector attraction reductions requirements and provide the data that demonstrate compliance with the applicable alternative. See attachment C
  4. Do the biosolids to be land applied meet the ceiling/pollutant concentrations in 9VAC25-31-540 B?  Yes  No
  5. Has data from the most recent 3 samples for pH (S.U.), Percent Solids (%), Ammonium Nitrogen (mg/kg), Nitrate Nitrogen (mg/kg), Total Kjeldahl Nitrogen (mg/kg), Total Phosphorus (mg/kg), Total Potassium (mg/kg), Alkalinity as CaCO<sub>3</sub> (mg/kg), Arsenic (mg/kg), Cadmium (mg/kg), Copper (mg/kg), Lead (mg/kg), Mercury (mg/kg), Nickel (mg/kg), Selenium (mg/kg), Zinc (mg/kg) been submitted to DEQ? The samples shall be no more than 4½ years old and each sampling date shall be at least 1 month apart.  Yes  No
- RECYC LAND APPLIES**
- If no, provide the data with this application.

## Part 3 – Land Application of Class B Biosolids (To be completed by all facilities that land apply Class B biosolids.)

1. Provide to DEQ and to each locality in which biosolids are to be land applied, written evidence of financial responsibility. Evidence of financial responsibility shall be provided in accordance with 9VAC25-31-100 P 9.
  2. For each site, provide a properly completed landowner agreement for each landowner, using the most current Land Application Agreement - Biosolids Form (VPDES Sewage Sludge Permit Application Form – Attachment to Section C).
  3. Are any new land application fields proposed at this reissuance?  Yes  No  
If yes, contact the DEQ Regional Office for additional submittal requirements.
  4. For the currently permitted land application fields, are the previously submitted site booklets, maps and acreage accurate.  Yes  No  
If no, contact the DEQ Regional Office for additional submittal requirements.
  5. Does the facility's Biosolids Management Plan on file with DEQ include the following minimum information?  Yes  No
    - a. An odor control plan that addresses the abatement of odors resulting from the storage and/or land application of biosolids.
    - b. A description of the transport vehicles to be used.
    - c. Procedures for biosolids offloading at the land application site including spill prevention, cleanup (including vehicle cleaning), field reclamation, and emergency notification and cleanup measures.
    - d. A description of the land application equipment including procedures for calibrating equipment to ensure uniform distribution and appropriate loading rates.
    - e. Procedures used to ensure that land application activities address notification requirements, signage requirements, slope restrictions, operation limitations during periods of inclement weather, soil pH requirements, buffer zone requirements, and site restrictions.
    - f. Any other information necessary to ensure compliance with the requirements of the Biosolids Program of the VPDES Permit Regulation (9VAC25-31-420 through 720).
- RECYC LAND APPLIES**

## 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 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.

Name and Official Title \_\_\_\_\_

Signature Milas Smith

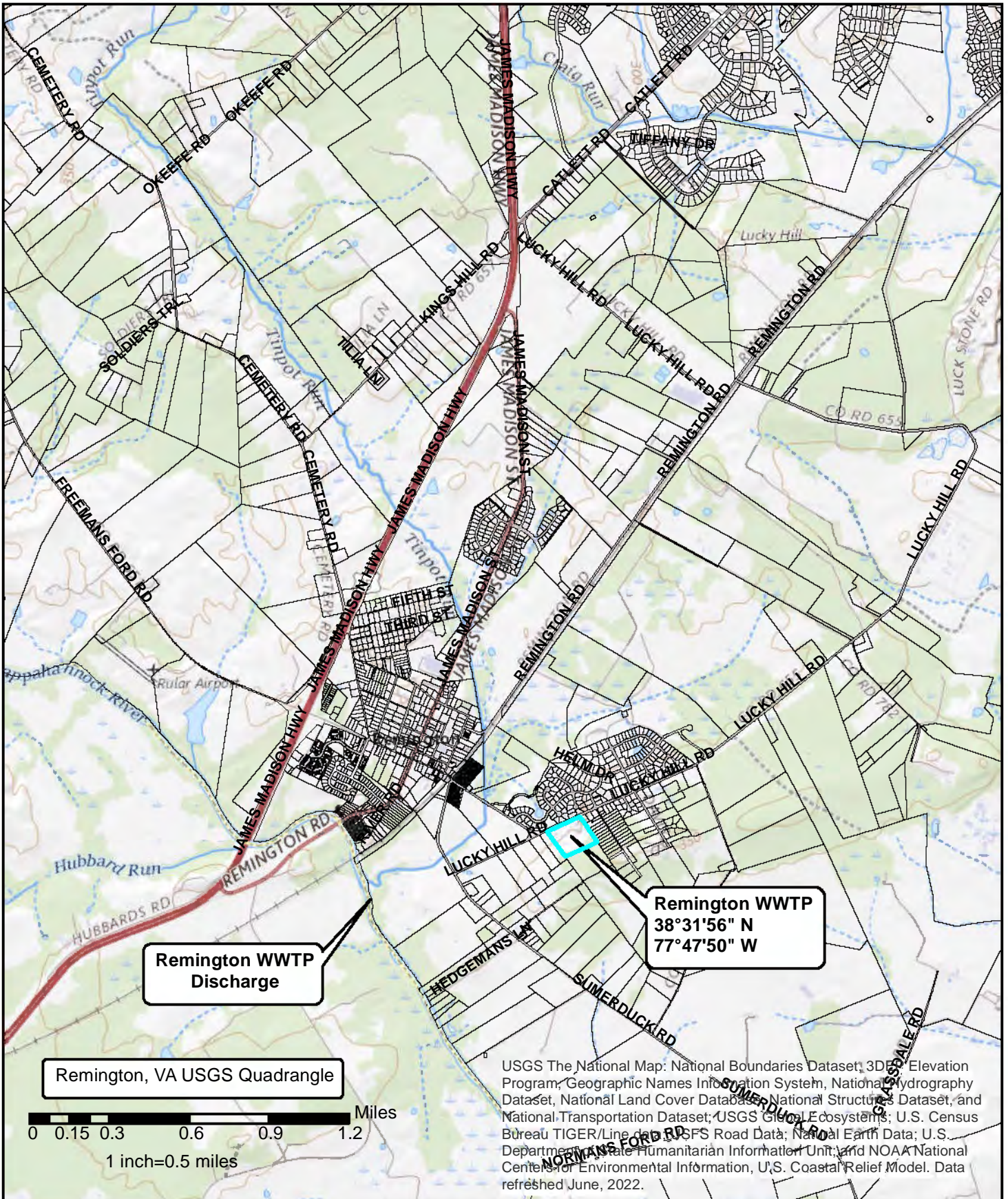
Telephone number / Email ( ) / \_\_\_\_\_

Date signed \_\_\_\_\_

(Based on a review of this information, it may be necessary to submit additional information to meet other legal or technical review requirements.)

# Attachment A

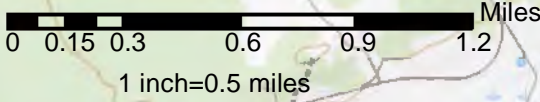




**Remington WWTP  
Discharge**

**Remington WWTP**  
38°31'56" N  
77°47'50" W

Remington, VA USGS Quadrangle



USGS The National Map: National Boundaries Dataset, 3D Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line and SFS Road Data; National Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.

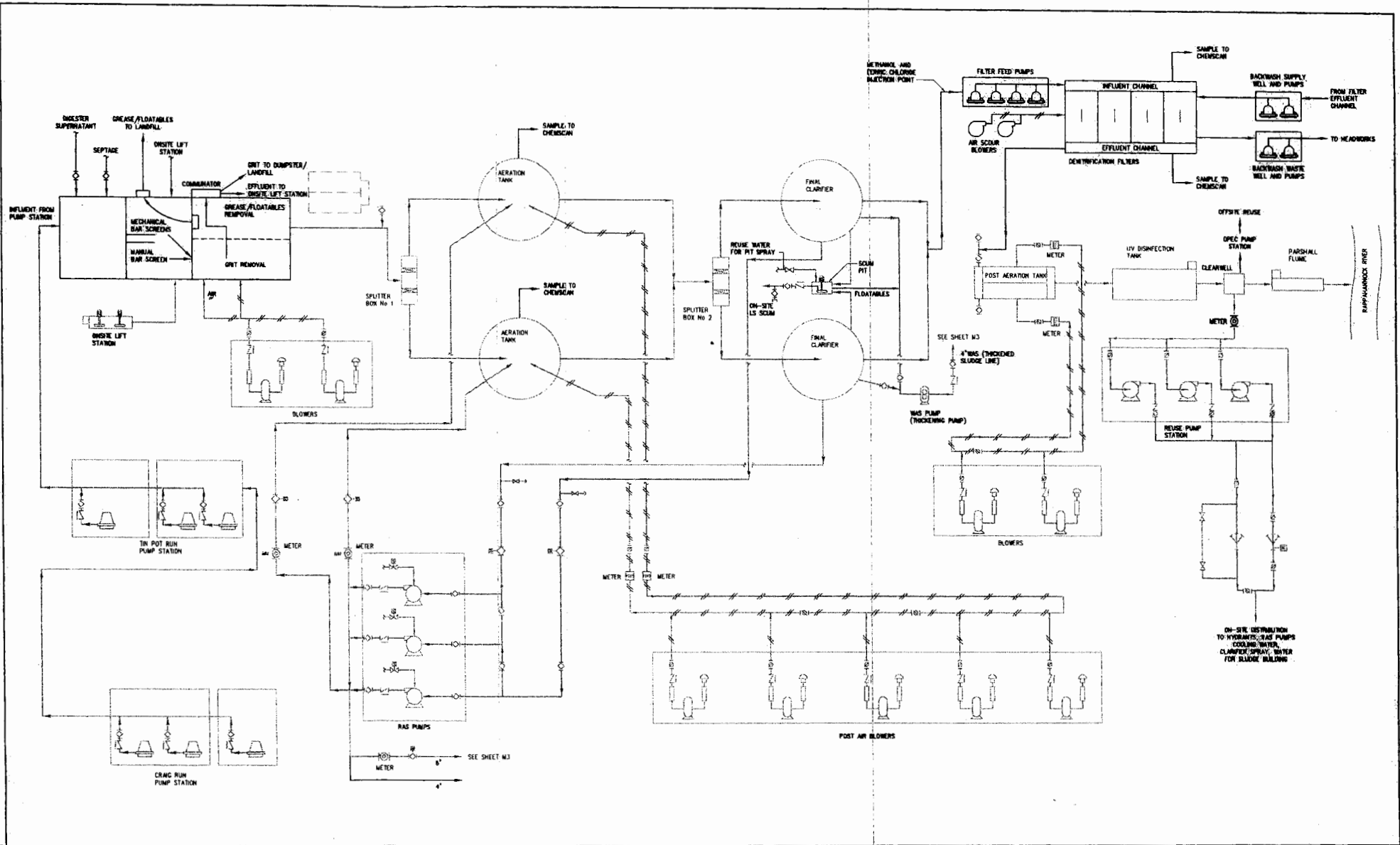


FAUQUIER COUNTY WATER  
AND SANITATION AUTHORITY  
DECEMBER 7, 2022  
TIM BUTCH

# REMINGTON WWTP



# Attachment B



DESIGNED	SEL
DRAWN	TDH
CHECKED	
PROJENR.	CTJ
ISSUED FOR BID	12/17/08
ISSUED FOR	DATE
NO.	APPROVED

THIS DOCUMENT ORIGINALLY ISSUED FOR CONSTRUCTION AND SEALED BY RONALD L. TAYLOR, LICENSE NUMBER 24649.

THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT

THIS DOCUMENT ORIGINALLY ISSUED FOR CONSTRUCTION AND SEALED BY CHARLES T. JOHNSON, LICENSE NUMBER 43610.

THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT

**HAZEN AND SAWYER**  
Environmental Engineers & Scientists

4011 WestChase Boulevard, Suite 500  
Raleigh, North Carolina 27607

FAUQUIER COUNTY  
WATER AND SANITATION AUTHORITY  
VIRGINIA

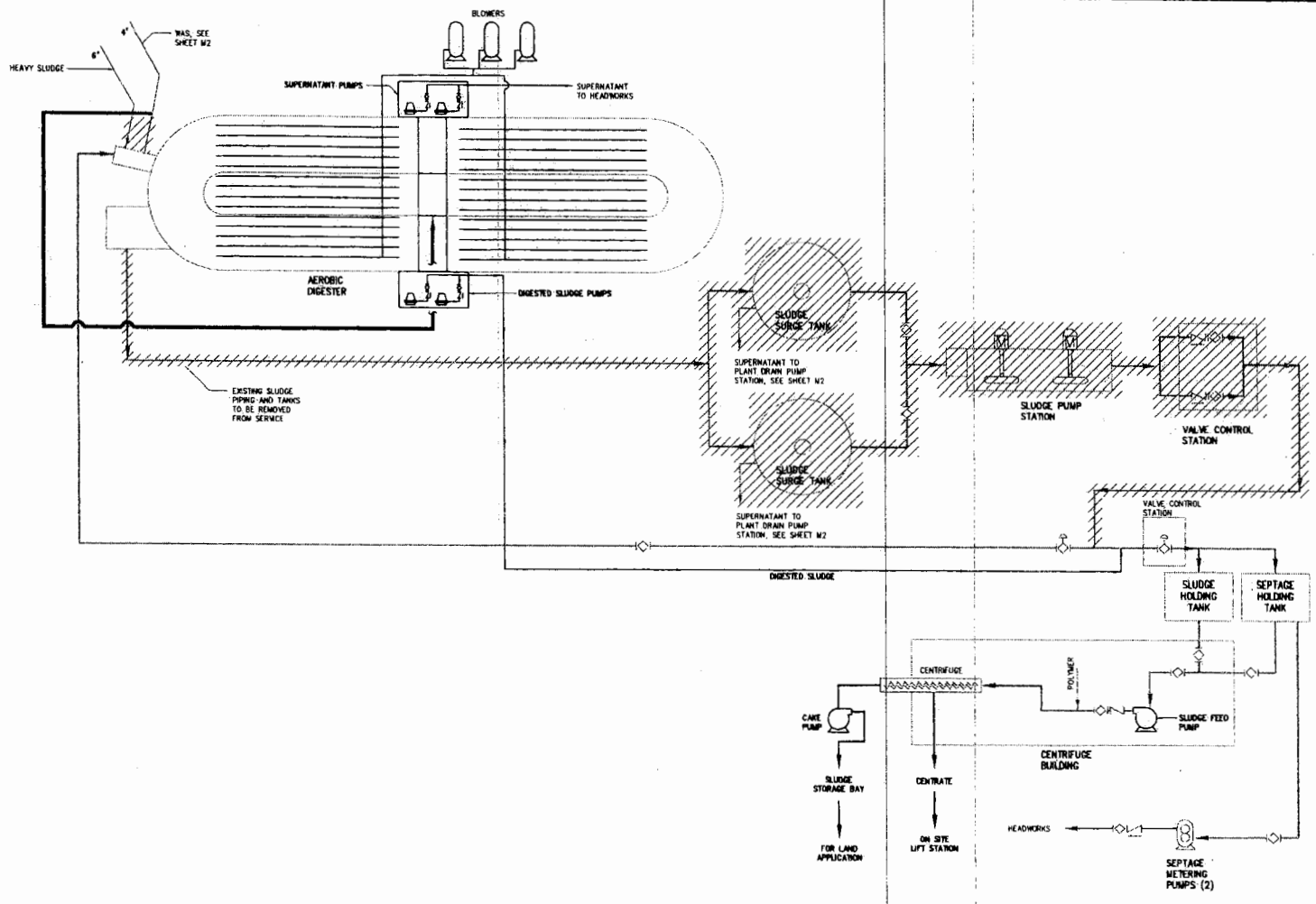
REMINGTON WASTEWATER TREATMENT PLANT  
ENHANCED NUTRIENT REMOVAL UPGRADE

MECHANICAL  
MAIN PROCESS FLOW DIAGRAM

THE SCALE BAR SHOWN BELOW MEASURES ONE INCH LONG ON THE ORIGINAL DRAWING	DATE: DECEMBER 2008
	DATE: DECEMBER 2008
	NO. & JOB NUMBER: 30554-007
	CONTRACT NUMBER
	DRAWING NUMBER: M2

02/17/09  
 AT & CHARTERED  
 ENGINEERS





NO.	ISSUED FOR	DATE	BY	APPROVED
1	ISSUED FOR BID	12/17/08	TDH	
2	PER ADDENDUM 1	02/24/09	CTJ	

DESIGNED	SEL
DRAWN	TDH
CHECKED	
PROLEGDR	CTJ

THIS DOCUMENT ORIGINALLY ISSUED FOR CONSTRUCTION AND SEALED BY RONALD L. TAYLOR, LICENSE NUMBER 24649.

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THIS DOCUMENT ORIGINALLY ISSUED FOR CONSTRUCTION AND SEALED BY CHARLES F. JOHNSON, LICENSE NUMBER 43810.

THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT

**HAZEN AND SAWYER**  
Environmental Engineers & Scientists  
4011 WestChase Boulevard, Suite 500  
Raleigh, North Carolina 27607

FAUQUIER COUNTY  
WATER AND SANITATION AUTHORITY  
VIRGINIA.  
REMINGTON WASTEWATER TREATMENT PLANT  
ENHANCED NUTRIENT REMOVAL UPGRADE

MECHANICAL  
SLUDGE PROCESS FLOW DIAGRAM

THE SCALE BAR SHOWN BELOW MEASURES ONE INCH LONG ON THE ORIGINAL DRAWING.	DATE: DECEMBER 2008
N.A.S. JOB NUMBER: 30554-007	CONTRACT NUMBER: _____
DRAWING NUMBER: _____	_____

CONFORMED DRAWING 8/17/09  
A-T-R-A-S-T-R-A-C-T-I-O-N



## SECTION 3.0 DESCRIPTION OF WWTP AND PUMP STATIONS

### A. AVERAGE AND PEAK FLOW VALUES

The Remington WWTP is owned and operated by the Fauquier County Water and Sanitation Authority and discharges into the Rappahannock River Basin under VPDES Permit No. VA0076805. The current permitted capacity of the Remington WWTP is 2.0 mgd. The Virginia Department of Environmental Quality (VDEQ) has established nutrient waste load allocations in accordance with the Chesapeake Bay Initiative Program to reduce significant discharges to the Chesapeake Bay watershed. The nutrient waste load allocations for this facility allow a maximum annual nutrient discharge of 24,364 lbs/yr and 1,827 lbs/yr for total nitrogen (TN) and total phosphorus (TP), respectively. These waste load allocations equate to effluent concentrations 4.0 mg/L of TN and 0.3 mg/L of TP at a design flow of 2.0 mgd.

The P-1 pumps, located in Activated Sludge Pump Station PS-1, are used for RAS (return activated sludge) and WAS (waste activated sludge). Each of these pumps are rated 450-675 GPM. With two pumps in operation at full speed (and one in standby) the WWTP has a recycle rate of 1350 gpm (1.94 mgd) or about 100% of design flow. At a peak flow of 5.0 mgd and full recycle rate of 2.0 mgd, the peak flow to the T-3 Aeration Tanks and T-4 Settling Tanks would be 7.0 mgd.

Plant effluent is discharged to the Rappahannock River by a 20" outfall. Peak flow capacity is 5.0 mgd, when the Rappahannock River is at its 100 Year Flood Elevation. Hydraulic capacity is higher at lower river elevations.

The wastewater collection system for the Remington/Bealeton Service Area has two main pump stations:

- Tinpot Run Pump Station, and
- Craig Run Pump Station

In addition, the service area has two minor pump stations, which are not discussed in detail, in this document:

- Bealeton Shopping Station Pump Station, and
- Marsh Run Pump station

The Marsh Run Pump Station and Bealeton Shopping Center Pump Station are tributary to the Craig Run Pump Station. The Craig Run Pump Station is tributary to the Tinpot Run Pump Station. The Tinpot Run Pump Station discharges to the Remington WWTP.

**FLOW DATA SUMMARY:**

Wastewater Treatment Plant:	2.0 mgd design flow rate; and 5.0 mgd peak flow rate	
Tinpot Run Pump Station:	5.0 mgd peak flow rate	Variable Frequency Drives
Craig Run Pump Station:	3.25 mgd peak flow rate	Variable Frequency Drives

The majority of the original Remington Wastewater Treatment Plant was abandoned in 1995 and replaced with new treatment units that included: preliminary treatment facilities, two 122-foot diameter Schreiber activated sludge tanks, two 65-foot diameter secondary clarifiers, a new post aeration facility, and an ultraviolet (UV) light disinfection system. In 2006 a new ferric chloride storage and feed facility was constructed for chemical phosphorus removal. In 2010 the plant design capacity was expanded to 2.0 mgd with the addition of denitrification filters and modifications to the aeration tanks and aerobic digesters. The WWTP provides full nitrification and provides biological nutrient removal (phosphorus and nitrogen).

Discussion of the WWTP process is divided into six areas:

- Main Flow
- Preliminary Treatment
- Activated Sludge Process
- Denitrification Filter
- Waste Sludge Processing
- Utility Water

A discussion of the pump stations follow:

- Tinpot Run Pump Station
- Craig Run Pump Station

#### B.1 MAIN FLOW

Flow enters the WWTP via a 16" force main from the Tinpot Run Pump Station. Preliminary treatment starts at the T-1 Automated Bar Screen and continues at the T-2 Grit/Grease Removal System (Refer to Section B.2, below).

The wastewater then flows to the SB-1 Splitting Box, which is used to control flow to the T-3A and T-3B Aeration Reactors. The K-1(A through E) Blowers provide compressed air to the air diffusers mounted on a rotating bridge in each T-3 Aeration Tank. The compressed air maintains dissolved oxygen levels and provides mixing. K-1 blowers A through E were overhauled and upgraded during the Enhanced Nutrient Removal Upgrade to provide 1,100 scfm @ 7.6 psig. DO (Dissolved Oxygen) probes continuously monitor DO levels and control the amount of air delivered to the T-3 Aeration Tanks.

Mixed liquor from the Aeration Reactors then flows to the T-4A and T-4B Final Clarifiers, where suspended solids settle to the bottom by gravity. The settled solids, referred to as activated sludge, are pumped back to the T-3 and T-4 Aeration Tanks (return activated sludge) to maintain an adequate level of biomass, or are pumped to the aerobic digester (waste activated sludge) for volatiles stabilization. (Refer to B.3 and B.4, below). Final Clarifier effluent flows to the Denitrification Filters where it is feed through the filters by five (5) filter feed

pumps. Each Filter Feed Pump is designed to provide 1,045 gpm at 14.1' tdh. Methanol is added to the final clarifier effluent to provide a carbon source for denitrification. The filter effluent flows to the post aeration tanks for re-aeration prior to UV disinfection. The filters are cleaned by a backwash cycle and the backwash waste is diverted to the end of the influent bar screens.

The dissolved oxygen level of the clarified effluent is then elevated in the T-5A and T-5B Post Aeration Tanks. The K-3A and K-3B Blowers, located on the B-3 blower pad and each rated 140 scfm @ 14.7 psig, deliver compressed air to submerged diffusers in the T-5A and T-5B Post Aeration Tanks. Post Aeration Tank T-5A or T-5B can be taken out of service by use of Sluice Gate S-5A or Sluice Gate S-5B, respectively.

The final treatment step is the T-6 Ultraviolet Irradiation Tank to disinfect the effluent. Three banks of UV lamps are installed in the 3'-0" wide channel. A 6" wide reduction baffle has been installed next to each bank of lamps. When peak flow increases to 4.2 mgd, the baffles will be removed and larger lamp racks will be installed. The level in the T-6 UV Tank is currently controlled by a fixed effluent weir. When peak flows of 2.1 mgd are reached at the WWTP, the fixed weir system will have excessive head loss and may promote bypassing of the UV lamps; At that time, the fixed weir system will need to be replaced by a tilting weir system.

The flow then enters the T-7 Utility Water Clearwell (Refer to Section B.5, below).

The final step is the PF-1 Parshall Flume, where flow is measured prior to its discharge to the Rappahannock River. The PF-1 Parshall Flume has a range of 0 to 5.0 mgd.

## B.2 PRELIMINARY TREATMENT

The Preliminary Treatment section of the WWTP includes the following units:

- T-1 Automated Bar Screen
- T-2 Grit/Grease Removal System, and
- K-2(A through E) Blowers (on the B-1 Blower Pad).

Raw sewage from the Tinpot Run Pump Station is discharged into an open channel leading to the Automated Bar Screen in structure T-1. The Bar Screen is a series of 3/8 wide stainless steel vertical bars on 1" centers in the wastewater channel, installed 80° from the horizontal, that screens out coarse wastewater debris. When adequate wastewater debris is caught on the bar screen, the head loss through the screen increases and the water level upstream of the bar screen increases. A float switch detects the elevated water level and starts the bar screen rake mechanism. The rake removes the screenings and discharges them into a self dumping container. After the screenings are removed, the water level should become lower and the bar screen will become inactive until the next cycle. A Manual Bar Screen is installed in a channel parallel to the above described Automated Bar Screen. It is identical in operation, except that screenings must be removed by hand rake, and disposed of manually. The Manual Bar Screen would normally be used in the event that the Automated Bar Screen is taken out of service for maintenance or repair.

Raw wastewater can be directed to either the Automated Bar Screen or the Manual Bar Screen (or both) by operation of the S-1, S-2, S-3, and S-4 slide gates in the T-1 structure. Screenings are carted away for disposal at a local landfill.

Effluent from the Bar Screens flows to the Grit/Grease Removal System in structure T-2. Flow enters a 51'-0" long x 5'-3" wide x 9'-9" deep "shaped" chamber, where diffused air washes organics from grit, allowing the grit to settle to the bottom and keeping the organics in suspension. The grit is removed from the bottom of the chamber by a grit pump (100 gpm @ 10" TDH), which is mounted on a traveling bridge. The traveling bridge moves along the length of the T-2 tank when activated by a timer or when operated in a manual mode. The grit is discharged to the 16" wide Grit Discharge Trough on the North side of the T-2 structure. The Grit Discharge Trough drains to a Grit Classifier, which separates the grit from the wastewater. Grit is conveyed to a dumpster and the remaining wastewater drains to the plant drain system, which flows to Pump Station PS-2.

A grease removal chamber is located parallel to the grit removal chamber. The grease floats to the surface and is removed by a scum boom, which is mounted on the same traveling bridge that the grit pump is mounted on. The scum boom moves the floating grease to West end of the grease removal chamber, where it is removed by a grease hoist. The grease hoist lifts the grease to a grease chute, which discharges to a grease dumpster.

If the Grit/Grease Removal System needs to be taken out of service, it can be bypassed by closing slide gate S-2 in the T-2 structure and opening the 16" plug valve on the south side of the T-2 structure.

Diffused air to the Grit/Grease Removal System comes from the K-2a and K-2b Blowers on the B-1 Blower Pad. Each blower is rated 62 scfm @ 3.4 psig. One unit is normally in operation and the other unit is standby. Wastewater effluent from the Preliminary Treatment units T-1 and T-2 flows to the SB-1 Splitting Box and then to the T-3 Aeration Tanks.

### B.3 ACTIVATED SLUDGE PROCESS

Underflow from the T-4A and T-4B Final Clarifiers is withdrawn by Return Activated Sludge Pumps P-1A, P-1B or P-1C or by Heavy Sludge Pump P-2, all of which are located in the lower level of the PS-1 Activated Sludge Pump Station. Each of the P-1 Pumps are rated 450 to 675 gpm @ 12' to 13' TDH, and receives flow from the T-4 sludge rapid withdrawal system. The P-1 Pumps can be used to increase biomass in the T-3 Aeration Tanks by returning sludge (Return Activated Sludge) to them, or to remove solids from the system by wasting sludge (Waste Activated Sludge) to the ET-1 Aerobic Digester. The P-2 Heavy Sludge Pump withdraws sludge from a hopper on the bottom of the T-4 Final Clarifiers and wastes sludge (Waste Activated Sludge) to the ET-1 Aerobic Digester. The P-2 Heavy Sludge Pump should be used occasionally, to remove heavy solids that are not readily withdrawn by the T-4 sludge rapid withdrawal system. The P-2 Heavy sludge Pump is rated 150 gpm @ 36' TDH.

The dissolved oxygen, nitrate and ammonia concentrations in the aeration basins are automatically monitored and provide automatic control for the aeration blowers. DO is monitored via luminescent dissolved oxygen sensors located within the aeration basin. Nitrate and ammonia are monitored by the process analyzer located in the sampling building. Two (2) 25 gpm @ 23 psi progressive cavity pumps are provided for transporting aeration basin sample to the process analyzer. Sample effluent is returned to the aeration tank splitter box.

#### B.4 DENITRIFICATION FILTERS

Final clarifier effluent flows by gravity through 24" pipe to the denitrification filter feed well. Five (5) filter feed pumps feed final clarifier effluent to the top of the filter influent channel. The filter feed pumps are each rated for 1,045 gpm @ 14.1' TDH. The filter influent channel feeds four (4) denitrification filters. Filtered effluent flows through a 24" pipe to the post aeration tanks. Methanol may be added to the final clarifier effluent as a supplementary carbon source for denitrification. Two (2) methanol metering pumps are provided with a capacity of 0.33 – 20 gph @ 100 psig.

The filters may be operated in rising or constant filter level modes. In rising filter level operating mode the influent and effluent valves are in the fully open position. When the water level reaches a high alarm a backwash sequence will be automatically initiated. In constant level mode the filter influent valve is in the fully open position and the filter effluent valve will modulate to maintain a level setpoint in the filter. When the filter effluent valve reaches 100% open a backwash sequence will be automatically initiated.

Two (2) filter backwash pumps are provided to feed filtered effluent up through the bottom of the filters during backwash cycles. The filter feed pumps are rated for 1,045 gpm @ 21' TDH. A backwash supply well is provided to maintain a steady source of filtered effluent water for backwash. Backwash waste is collected in the backwash waste well and is pumped to the head of the plant by one of two (2) backwash waste pumps. The backwash waste pumps are rated for 75 gpm @ 40' TDH.

## B.5 WASTE SLUDGE PROCESSING

As a result of the Enhanced Nutrient Removal Upgrade the sludge surge tanks, sludge pump station and valve control station are no longer in use. The surface aerators and concrete walls have been removed from the aerobic digester. New walls were installed with influent gates to isolate the digester halves. The ET-1 Aerobic Digester stabilizes the WAS (waste activated sludge) pumped from the T-4 Final Clarifiers. Waste activated sludge is pumped from the final clarifiers to the aerobic digester where it can be diverted to either half of the digester. The aerobic digester is aerated by 6" air diffuser headers and three (3) 1,400 scfm positive displacement blowers. Supernatant is decanted from the digester and is pumped to the headworks by two (2) 200 gpm submersible non-clog supernatant pumps. Thickened sludge is then pumped to the sludge holding tanks by two (2) 200 gpm submersible non-clog supernatant pumps. Sludge is pumped from the sludge storage tank to the centrifuge for dewatering.

Sludge from the ET-3A Sludge Holding Tank or the ET-3B Septage Holding Tank is transferred by Pump EP-9 in Building EB-3 to the Centrifuge for dewatering. In the event that the centrifuge is off line, a limited quantity of solids can be held in the system, or the EB-2 Sludge Drying Beds can be used to dewater the sludge. Sludge from Septage Holding Tank ET-3B can also be returned to the T-1 Bar Screen by the P-10A and B-10B Sludge Pumps in Building EB-5. The P-10 Sludge Pumps are each rated 135 gpm @ 6' TDH.

Dewatered sludge is trucked to a land application site.

## B.6 UTILITY WATER

Plant effluent is the source of the non-potable utility water used in process units:

- Yard hydrant water
- Seal water system for pumps.



The Utility Water System of the WWTP includes the following units:

- T-7 Utility Water Well
- P-1A, P-1B and P-1C Utility Water Pumps (in Pump Station PS-1)
- Motor Operated Strainer (in Pump Station PS-1)
- Manually Operated Strainer (in Pump Station PS-1)
- 3" Utility Water Flow Meter (in Pump Station PS-1)

Water from the T-7 Utility Water Well is piped to the suction side of the P-1A, P-1B and P-1C Utility Water Pumps in the basement of the PS-1 Activated Sludge Pump Station. Each Utility Water Pump is rated 60 gpm @ 140' TDH. Under low demand conditions, one (1) Utility Water Pump is in operation. When the Utility Water Flow Meter registers a threshold flow of 60 gpm, a second pump comes on line to meet the higher demand. To protect equipment and prevent clogging of piping, utility water passes through a strainer box at the bottom of the T-7 Utility Water Well and a Motor Operated Strainer located on P-1 pump discharge piping in PS-1, which removes large solids. If the Motor Operated Strainer needs to be taken out of service, the two (2) 4" butterfly isolation valves can be closed and the two (2) 4" butterfly isolation valves to the Manually Operated Strainer can be opened.

In addition to providing water to the yard hydrant system, the Utility Water System provides the following pumps (in the basement of the PS-1 Activated Sludge Pump Station) with seal water:

- P-1A Return Activated Sludge Pump
- P-1B Return Activated Sludge Pump
- P-1C Return Activated Sludge Pump
- P-2 Heavy Sludge Pump

## B.7 REGIONAL PUMP STATIONS

The 3,500 gpm (gallons per minute) Tinpot Run Pump Station will serve the Remington area and the 2,250 gpm Craig Run Pump Station will serve the Bealeton area. Both pump stations utilize variable frequency drives and standby power generators.

**Table 3.1: Wastewater Treatment Plant Technical Data Summary**

T-1	Bar Screens (2)	1 - Mechanically cleaned, 5/8" openings 1 - Manually cleaned, 5/8" openings
T-2	Grit Chamber (1)	51' long x 5'-3" wide x 10' depth
T-2	Grease Chamber (1)	51' long x 4' 8" wide
K-2A, B	Blowers (2)	62 scfm
T-3A, B	Aeration Reactor (2)	122' diameter x 14' sidewater depth
K-1A, B, C, D, E	Blowers (5)	1,100 scfm
T-4A, B	Final Clarifiers (2)	65' diameter x 14' sidewater depth
T-5A, B	Post Aeration Tanks (2)	21' long x 6' wide x 15' sidewater depth
K-3A, B	Blowers (2)	140 scfm
T-6	UV Disinfection Tank	41'-6" long x 3' long x 2' depth 3 banks of UV lamps @ 8 kw each
T-7	Utility Water Clearwell	
PF-1	Parshall Flume for effluent metering	
P-3A, B, C	Utility Water Pumps	
ET-1	Aerobic Digester	294' long x 17'-6" wide x 9' sidewater depth
K-4A, B, C	Blowers (3)	1,400 scfm
	Digester Supernatant Pumps (2)	200 gpm @ 20' TDH
	Thickened Sludge Pumps (2)	200 gpm @ 20' TDH
ET-2A, B	Gravity Thickeners	
P-8A, B	Sludge Recirculation Pumps	
ET-3A	Septage Pumps in Existing Building (EB-5)	
ET-3B	Sludge Pumps	

P-10A, B	Polymer Pumps	
EP-9, 10	Standby Power Generator	500 KVA, 400 KW
	Denitrification Filters (4)	9.5' wide 18.25' long 2.0 mgd Average Flow 2.0 gpm/sf Average Filtration Rate 6.0 mgd Peak Flow 6.0 gpm/sf Peak Filtration Rate
	Filter Feed Pumps (5)	1,045 gpm @ 14.1' TDH
	Backwash Supply Pumps (2)	1,45 gpm @ 21' TDH
	Backwash Waste Pumps (2)	75 gpm @ 40' TDH

***Tinpot Run Pump Station Technical Data***

Wastewater Pumps                    3 - submersible pumps (1736 gpm @ 95' TDH each)

Standby Power Generator    250 KVA, 200 KW

***Craig Run Pump Station Technical Data***

Wastewater Pumps                    3 - submersible pumps ( 1125 @ 110' TDH each)

Standby Power Generator    250 KVA, 200 KW

C. EXPECTED WWTP INFLUENT/ EFFLUENT CONCENTRATIONS

The estimated wastewater quantity and characteristics are based on the existing wastewater plus estimated characteristics of future wastewater. Population equivalents are used to estimate design load to the wastewater treatment process.

1. BOD<sub>5</sub> Design Load

The 2008 Enhanced Nutrient Removal Upgrade was designed around a maximum month BOD<sub>5</sub> concentration of 264 mg/L and an annual average BOD<sub>5</sub> concentration of 221 mg/L, with a 2.0 mgd flow this equates to daily loadings of 4,400 and 3,690 lbs/day respectively.

## 2. Suspended Solids Loading

The 2008 Enhanced Nutrient Removal Upgrade was designed around a maximum month TSS concentration of 245 mg/L and an annual average TSS concentration of 205 mg/L, with a 2.0 mgd flow this equates to daily loadings of 4,090 and 3,420 lbs/day respectively.

**Table 3.2: Design Loads**

Parameter	Annual Average	Maximum Month
COD, mg/L	460	551
BOD <sub>5</sub> , mg/L	221	264
Volatile Suspended Solids, mg/L	183	219
Total Suspended Solids, mg/L	205	245
Total Kjeldahl Nitrogen, as N, mg/L	44.6	53.6
Ammonia Nitrogen, as N, mg/L	31.1	37.3
Total Phosphorus, mg/L	6.6	7.8
Ortho-Phosphate, as P, mg/L	4.4	5.3
Alkalinity, mg/L as CaCO <sub>3</sub>	300	300
Temperature, °C	17.5	10

## 3. Effluent Requirements

The effluent requirements for the designed facilities are:

CBOD <sub>5</sub> , mg/l	20
SS, mg/l	20
pH, su	6 to 9
DO, mg/l	6.5 or greater any time
Total Nitrogen, lbs/year	24,364
Total Phosphorus	1,827

D. DETAILED UNIT PROCESS DESCRIPTIONS

1. Final Clarifiers (T-4A and T-4B)

Two clarifiers, T-4A and T-4B, are each 65 feet in diameter (total of 6,637 ft<sup>2</sup>) and fourteen feet side water depth.

Final clarifier hydraulic loadings for both 2.0 mgd permitted flow and 2.5 mgd design flow are summarized in Table 3.3.

**Table 3.3: Secondary Clarifier Design Criteria**

	2.0 mgd Permitted Flow		2.5 mgd Future Flow	
	Average Flow	Peak Flow	Average Flow	Peak Flow
Influent Flow, mgd	2.0	6.0	2.5	7.5
RAS Flow, mgd	2.0	2.0	2.5	2.5
Surface Overflow Rate, gpd/ft <sup>2</sup>				
-all clarifiers in service	301	904	377	1,130
-one clarifier out of service	603	1,808	753	2,260
Weir Loading Rate, gpd/ft				
-all clarifiers in service	4,897	14,691	6,121	18,364
-one clarifier out of service	9,794	29,382	12,143	36,728
Solids Loading Rate, lbs/hr-ft <sup>2</sup>				
-all clarifiers in service	0.4	1.0	0.6	1.5
-one clarifier out of service	0.8	1.9	1.2	3.0

A solids flux analysis was performed to determine the maximum MLSS concentration that can be applied to the existing 65-foot diameter clarifiers at the maximum month and maximum day flows. The solids flux analysis was based on the 95th percentile sludge volume index (SVI) over the period from December 2004 through July 2006,

which was 133 mL/g. A peak day flow of 2.5 times the influent flow was assumed for the analysis. The maximum operational MLSS concentrations predicted by the solids flux analysis are presented in Table 3.4.

**Table 3.4: Maximum MLSS Concentrations**

	Maximum Month	Maximum Day
<b>2.0 mgd Permitted Flow</b>		
Influent Flow, mgd	2.0	5.0
Maximum MLSS, mg/L		
-all clarifiers in service	7,500	4,300
-one clarifier out of service	5,800	3,000
<b>2.5 mgd Future Flow</b>		
Influent Flow, mgd	2.5	6.25
Maximum MLSS, mg/L		
-all clarifiers in service	7,100	4,000
-one clarifier out of service	5,200	2,300

The existing secondary clarifiers have sufficient capacity to treat the 2.0 mgd design flow, assuming both clarifiers are in service during peak flow and loads. Care should be taken to limit MLSS concentrations to less than 3,000 mg/L during peak flow events if one clarifier is out of service to prevent solids breakthrough.

Hydraulic and solids loading rates on the existing secondary clarifiers will be excessive during peak flow events associated with the 2.5 mgd design flow, particularly if one clarifier is out of service. The existing clarifier capacity is adequate for the expected range of flows and MLSS concentrations at the maximum month load at a 2.5 mgd design flow. However, the flux analysis indicates that the clarifiers are expected to fail during maximum day conditions if one clarifier is out of service, and may become critically loaded with both clarifiers in service.

Implementation of wet weather flow strategies and/or construction of a third secondary clarifier to accommodate an expansion to 2.5 mgd are necessary to ensure adequate performance during sustained peak hydraulic flows, particularly if a clarifier is out of service.

## 2. Aeration Basin Volume (T-3A and T-3B)

### **1992 Plant Design**

The aeration volume of the two existing Schreiber aeration tanks was determined through modeling of the activated sludge process. A discussion of mathematical model relationships and results are presented in Appendix F. In addition to the design parameters, inputs to the model include the clarification underflow area and the reaction temperature. Other inputs are reaction kinetic rates and constants for sludge settling characteristics (presented in Appendix F-1).

In pages 1 through 6 of Appendix F-2, process performance is estimated as the aeration volume is increased. Nitrification is the parameter of primary concern, and it is examined as the nitrification safety factor (NSF). NSF is the ratio of sludge age divided by the generation time for nitrification bacteria. The ratio must be greater than 1.0 for the potential for nitrification to exist. The influent to the process have diurnal variability, and the nitrification process will not become stable until the NSF value is about equal to or greater than the variability. Thus, a NSF 2.0 to 2.5 is desirable. A safety factor of 2.5 is attained with an aeration volume of about 1.8 mg when the mixed liquor solids are maintained conservatively low at 3,500 mg/l (Appendix F-2, pages 1 and 2).

Modeling on pages 7 and 8 of Appendix F-2, process performance is estimated with one clarifier out of service, with an aeration volume of 1.8 mg, and a mixed liquor concentration of 3,500 mg/l. The resulting NSF is 2.2, and nitrification would remain stable.

On pages 9 and 10 of Appendix F-2, process performance is estimated when one aeration basin is out of service. The mixed liquor concentration remains at 3,500 mg/l.

The NSF of 1.1 is not acceptable. On pages 11 and 12, the mixed liquor is increased to 4,000 mg/l. The increase of NSF to 1.3 is not adequate.

On pages 13 and 14 of Appendix F-2, the aeration volume is increased 2.4 mg

(1.2 mg in one basin). The estimated NSF is 1.8 which is marginal for a stable nitrification process at the April conditions, but this condition is acceptable for the infrequent event of one aeration basin out of service in April. Figure 4 shows the change in NSF for different aeration volumes for April performance.

### **2008 Enhanced Nutrient Removal Upgrade and Expansion to 2.0 mgd**

In order to meet the future design flow capacity and nutrient discharge limits Remington WWTP will be required to operate the existing aeration basins aerobically and construct new anaerobic/ pre-anoxic facilities upstream of the existing basins.

The future design capacity flow of 2.0 mgd was modeled through steady state simulations to predict operational criteria and effluent quality under annual average and maximum month conditions. A NRCY rate of 400% of the influent flow (8.0 mgd) was assumed for the evaluation. Since the deep bed filters will primarily be used for solids removal and nitrate trim, reduced hydraulic loading rates are appropriate under these alternatives. A hydraulic loading rate of 3.0 gpm/ft<sup>2</sup> was considered in the evaluation. Significantly better effluent quality was predicted with the upstream anaerobic/pre-anoxic zone in comparison to the current CSR configuration, particularly during maximum month conditions.



**Table 3.5: Predicted Operations and Effluent Quality Annual Average Conditions**

<b>Parameter</b>	<b>Annual Average Conditions</b>	<b>Maximum Month Conditions</b>
Aerobic SRT, days	15	15
MLSS (2.0 mgd design), mg/L	1,900	2,300
MLSS (2.5 mgd design), mg/L	2,400	2,900
Effluent NH <sub>3</sub> -N, mg/L	0.5	1.0
Effluent TKN, mg/L	2.5	3.2
Secondary Effluent NO <sub>3</sub> -N, mg/L	3.8	4.5
Effluent NO <sub>3</sub> -N, mg/L	< 1.5 <sup>2</sup>	< 0.8 <sup>2</sup>
Effluent TN, mg/L	4.0 <sup>2</sup>	4.0 <sup>2</sup>
Effluent PO <sub>4</sub> -P, mg/L <sup>3</sup>	< 0.2	< 0.2
Effluent TP, mg/L <sup>3</sup>	0.3	0.3
Effluent CBOD <sub>5</sub> , mg/L	< 5.0	< 5.0
Effluent TSS, mg/L	< 5.0	< 5.0

<sup>1</sup> 2.0/2.5 mgd design flows

<sup>2</sup> After nitrate trim at deep bed filters

<sup>3</sup> After chemical phosphorus trim at deep bed filters

<sup>4</sup> Assumes Methanol Addition

The aeration system required increased capacity to provide for enhanced nutrient removal for the permitted 2.0 mgd flow. The diffusers and header holder assembly were replaced in the recent upgrade to provide sufficient aeration capacity.

The air demand calculations are provided in Appendix F. 672 diffusers have been provided for each of the 8 rotating headers per aeration tank resulting in a total of 10,752 diffusers to meet maximum aeration demand. The aeration blowers have been upgraded to provide five (5) positive displacement blowers with a capacity of 1,100 scfm each. To meet the 2.0 mgd flow air demand.

### 3. Oxygen Transfer (B-2)

The peak hour 2.0 mgd oxygen requirement is 12,216 lb O<sub>2</sub>/day. The maximum air requirement is 4,550 scfm. Accordingly, the aeration blowers have been upgraded to provide five (5) positive displacement blowers with a capacity of 1,100 scfm each. See Appendix F for a more detailed description of air demand calculations.

### 4. Design for Denitrification Filters

Denitrification filters are designed to reduce nitrate levels coming from the secondary process. The deep bed denitrification filters have a design filter loading rate of 2 gpm/sf. Four 173 ft<sup>2</sup> filters provide a total area of 692 ft<sup>2</sup> and would meet this recommended loading rate at the 2.0 mgd design flow. Additional filters may be added to expand capacity to 2.5 mgd in the future.

New methanol storage and feed facilities provide supplemental carbon for enhanced denitrification. The storage and feed facilities may also accommodate alternative carbon sources such as sugar water. Methanol feed pumps provide methanol feed to the influent to the denitrification filters.

### 5. UV Irradiation (T-6)

The Virginia Department of Health provides the following guidelines for UV disinfection units.

- Effluent filtered to consistently provide a quality of (K)AB (base e) of no more than 0.4/cm
- Spacing between lamps not greater than 8 cm
- At least 90% of light output at 253.7 nm
- 120 μW/cm<sup>2</sup> at 1 meter from source
- Minimum average UV dose of 30,000 μWatt-seconds/cm<sup>2</sup> after 7,500 hours
- E value to be no more than 100 cm<sup>2</sup>/second
- Contact time (RTD dimensionless variable): 10 seconds
- Fecal coliform level to be consistently maintained at 200/100 ml or less.

The proposed UV irradiation system is a single channel with three modules. The channel is 36 feet long by 27 inches wide by 48 inches deep. One module is a standby module.

6. Post Aeration Basins (T-5A and T-5B)

If the wastewater entering the basin is devoid of oxygen, the transfer capacity must increase the DO to 6.5 mg/l at any time. At a flow of 5 mgd, the required oxygen transfer is 271 lb/day. For maximum efficiency, reaeration should be a plug flow process, and fine-bubble aeration is proposed.

The plug-flow reaction can be divided into logarithmic intervals because the completion of reaction will be first order. Since, logarithmically, the reaction is never completed, it is convenient to model the reaction as partly complete. For example, use a piece of semilog graph paper and divided 90 percent completion of the reaction into 14 equal intervals (each one-half inch on the linear scale). Specifically, designate 10 on the log-y scale as "100% of the reaction remaining" and draw a straight line that has a negative slope across the width of the semilog paper, to the right side, to one on the log scale (ten percent of the reaction remaining).

The reaction in this case is reaeration at 25°C. In a 15 foot deep basin, the expected DO saturation value at 25°C is about 9.7 mg/l. The reaction increases the DO toward 9.7 mg/l, and the 14 one-half inch intervals on the graph paper increase the DO to 90 percent or 9.7 or 8.75 mg/l. In the following table, each interval is designated as a reaction stage. The objective DO of 6.5 is exceeded in the seventh stage.

**Table 3.6: Post Aeration DO**

Stage	Percent of Reaction	Outlet Do mg/l
1	15	1.5
2	28	2.7
3	39	3.8
4	48	4.7
5	56	5.4
6	63	6.1
7	68	6.6

The first stage completes fifteen percent of the reaeration (about 41 lb/day of oxygen transfer). Each following stage will achieve an equal percentage of the reaction remaining, and each stage will require the same amount of aeration effort (the same air flow). Thus, when the oxygen transfer is sized for the first stage, six additional stages that have the same oxygen transfer capability are required to bring the DO to 6.5 mg/l at 25 °C.

$$\text{Air/stage, scfm} = \frac{41}{1440 \times 0.0752 \times 0.209 \times 0.09}$$

Air/stage, scfm = 20.1

The proposed reaeration basin is 6 feet wide, 21 feet' long, and had a 15-foot SWD. About 6.7 scfm of air is provide per foot of basin length. *For example, if Envirex fine-bubble diffusers are used, there should 14 diffusers located as two across the tank and in seven rows down the tank., spaced at three-foot intervals. The maximum flow rate per diffuser would be 10 scfm which would be required at a peak flow of 5 mgd.*

There should be two reaeration basins so that one can be taken out of service for maintenance and cleaning. The reaeration basins should be located before the UV disinfection units.

#### 7. Aerobic Digestion of Sludge (ET-1)

Oxidation Ditch No. 3 was previously converted to an aerobic digester and the plant had also been using associated 25-foot I.D. clarifiers to provide about 489,000 gallons of storage volume. The Schreiber biological treatment reactor that had been utilized for aerobic stabilization was required for liquid treatment as flows to the treatment facility increase to 2.0 mgd. Additionally, the previous practice of intermittently operating secondary clarifier solids removal equipment for sludge thickening has been discontinued as flows and effluent nutrient removal expectations increase resulting in a more dilute solids concentration feeding the aerobic digestion process. The loss of aerobic stabilization volume associated with one of the Schreiber tanks, combined with a more dilute solids stream, and has resulted in a significant reduction in the aerobic stabilization

reactor hydraulic residence time.

Estimated oxidation ditch residence times are approximately 10.5-days and 9.0-days, respectively, under annual average and maximum month loading conditions at the 2.0 mgd permitted flow based on expected solids production rates and a 0.75% (7,500 mg/L) waste activated sludge feed solids concentration. Under winter operating conditions with a liquid feed temperature of 11.5°C, the digestion intensity is approximately 121 °C-days under average annual loading conditions which is well below the 800-900 °C-days recommended in 40 CFR 503 for aerobic stabilization processes under the Process to Significantly Reduce Pathogen (PSRP) requirements. The anticipated winter volatile solids reduction rates are estimated at 17.5% and 15.0%, respectively, under average annual and maximum month design loading rates. Therefore, it is expected that using the existing oxidation ditch to provide residuals stabilization of the unthickened waste activated sludge will not achieve the Class B pathogen reduction or vector attraction reduction requirements to land apply the dewatered residuals. Gravity belt thickening facilities will be required to thicken waste activated sludge to 4.0% TS to achieve Class B pathogen reduction and vector attraction reduction at the 2.0 mgd design flow. However, the installation of fine bubble diffusers to provide additional oxygen transfer capacity and decanting equipment to the oxidation ditch to improve aerobic stabilization will allow sludge to be thickened to approximately 2.0 percent and support operation for influent flows up to 1.2 mgd without installing the gravity belt thickening facilities. Current flow projections indicate the Remington WWTP will approach 1.2 mgd in 2017. When the average plant flow approaches 1.2 mgd, FCWSA should proceed with design and construction of the gravity belt thickening facilities or evaluate treatment alternatives to provide a Class A residual product.

The aerobic stabilization liquid feed volumes and performance are estimated based on a thickened waste activated sludge feed concentration of 4.0% from the future gravity belt thickening facility and the existing oxidation ditch total volume of 430,000 gallons. Winter and summer operating conditions are estimated based on operating temperatures of 11.5°C and 25.0°C, respectively. Aerobic stabilization system feed

volumes and loading rate criteria are summarized in Table 3.6.

**Table 3.7: Aerobic Digester Loading Rates**

	Average Annual	Maximum Month
Pre-Digestion Mass Rate, lbs TS/day	2,560	3,000
Pre-Digestion Volatile Fraction, %VS	65%	65%
Pre-Digestion Mass Rate, lbs VS/day	1,664	1,950
Volatile Solids Loading, lb/day-ft <sup>3</sup>	0.029	0.034
TWAS Flow (at 4.0% TS), gallons/day	7,674	8,993
Hydraulic Retention Time, days	56.0	47.8

Oxidation ditch volume (430,000 gallons) is approximately 22% of the 2.0 mgd permitted average annual flow which is in excess of the minimum 20% volume fraction under the requirements of 9 VAC 25-790-560 (B)(2) and the anticipated volatile solids loading rates are well below the 0.10 to 0.20 lb/day-ft<sup>3</sup> rate range under the requirements of 9 VAC 25-790-560 (C).

Aerobic digester reactor performance is estimated as shown in Table 3.7. Estimated volatile solids reduction in the aerobic digestion system is based on typical operating data for aerobic digestion systems (WEF, MOP-8, Figure 18.13, Volume II, page 1231, 1992).

**Table 3.8: Aerobic Stabilization Performance**

	Winter		Summer	
	Average Annual Loading	Maximum Month Loading	Average Annual Loading	Maximum Month Loading
Digestion Intensity, °C-days	644	550	1,401	1,195
Volatile Solids Mass, lbs VS/day	1,664	1,950	1,664	1,950
Volatile Solids Reduction, %	42.6%	41.0%	51.0%	49.0%
VS Destroyed, lbs VS/day	709	800	948	1,073

Post-Digestion Mass, lb TS/day	1,851	2,201	1,711	2,045
Post-Digestion Solids, %TS	2.89%	2.93%	2.67%	2.73%
Post-Digestion VS Fraction, %VS	51.6%	52.3%	47.6%	48.6%

Oxygen transfer requirements are estimated for the annual average and maximum month loading conditions based on an oxygen requirement of 2.0 pounds oxygen per pound volatile solids destroyed to accommodate both volatile solids destruction and nitrification of mineralized nitrogen compounds. Oxygen transfer requirements under the maximum summer condition are estimated in Table 3.8.

**Table 3.9: Aerobic Digester Oxygen Transfer Requirements Under Maximum Summer Conditions**

	Average Annual	Maximum Month
Volatile Solids Loading, lbs VS/day	1,664	1,950
Volatile Solids Reduction, %VSR	57.0%	55.0%
Volatile Solids Destroyed, lbs VS/day	950	1073
Oxygen Requirement, lbs O <sub>2</sub> /day	1,900	2,145
Existing Transfer Capacity, lbs O <sub>2</sub> /day	1,200	1,200
Additional Transfer Capacity, lbs O <sub>2</sub> /day	700	945

As shown in Table 3.8, the previous brush aerator oxygen transfer system at the oxidation ditch did not have sufficient capacity (1,200 lbs O<sub>2</sub>/day) to meet the maximum anticipated oxygen demand for aerobic stabilization at the treatment plant capacity (2,145 lbs O<sub>2</sub>/day). Additional oxygen transfer capacity utilizing fine bubble diffused air was added as part of the 2008 Enhanced Nutrient Removal Improvements Project to boost the available oxygen transfer capacity to meet the maximum anticipated oxygen demand.

A fine bubble aeration system was installed during the enhanced nutrient removal upgrade. Three (3) positive displacement blowers with a capacity of 1,400 scfm @ 9.5 psig provide sufficient oxygen transfer to meet the 2,145 lbs O<sub>2</sub>/day maximum

month oxygen requirement. The fine bubble aerations system consists of a total of 1,400 membrane diffusers on two grids.

E. PROCESS FLOW DIAGRAM

A process flow diagram is attached to the end of this section. The table below presents a summary of unit operation details.

Activated Sludge

Schreiber aeration basins  
Oxygen transfer  
Blowers

SUMMARY OF WWTP PROCESS-UNIT SIZES

Process Operation	No. of Units	Size
Grit and grease removal	1	Grit: 51-foot long by 4-foot-8-inch wide by 9-foot-9-inch SWD Grease: 51 foot long by 5 foot 3-inch wide Two 2.4-hp air blowers - 55 cfm
<u>Activated Sludge</u>		
Schreiber aeration basins Oxygen transfer	2	122-foot diameter, 14-foot SWD Maximum transfer of 7,800 lb/day AOR
Blowers	5	1,100 scfm
Returned sludge pumping		2 mgd for the 2.0-mgd WWTP
Tertiary (Denitrification) Filters	4	9.5' x 18.25'
Final clarifiers	2	65-foot diameter units, 14-foot SWD, rapid sludge withdrawal
Disinfection - UV irradiation	1	One 36-foot long by 48-inch deep by 27-inch wide channel. The channel contains three modules, that provide 50,160 i_tWatt-sec/cm <sup>2</sup> at 0.5 transmission.
Reaeration basin	2	6 feet wide by 21 feet long, with 15-foot SWD. Firm air supply of 140 scfm.
Aerobic digestion	1	Oxidation Ditch No. 3 has been converted to Aerobic Digestion. Volume: 430,000 gallons Blowers: Three (3), 1,400 scfm @ 9.5 psig



Recyc Systems has prepared and submits our annual summary report of biosolids land application for the 2022 year. The monthly reports should be referenced for detailed information regarding individual land application sites.

Copies of this report have been concurrently submitted to the Virginia Department of Environment, Central Office and Regional Offices and the Local County Administrator or his designee where Recyc Systems conducted operations.

This report was prepared on behalf of Recyc Systems, Inc. by Susan Trumbo, Vice President-Technical Manager. Submitted February 2023.

## GENERAL OPERATIONS:

Field Operations were conducted in accordance with DEQ Biosolids Use Regulations and DCR Nutrient Management Regulations.

Field Operations used the Operations and Management Manual submitted to Virginia Department of Environment 2008. The O&M was last revised in December 2010.

At year end, Recyc Systems has fifteen DEQ Certified Field Managers on staff. Daily field logs are signed off by a Certified Field Manager.

The monthly report was sent electronically to DEQ and localities where field operations were conducted that reporting period.

Recyc Systems prepared a Nutrient Management Plan for sites prior to application of biosolids, "target plan". After application of the biosolids, the plan was revised to show actual tons applied and the commercial fertilizer recommendations were revised accordingly, "revised plan". The revised plan was provided to the farmer with copies sent to DCR and the locality.

Recyc Systems takes soil samples of fields prior to application of biosolids. Fields with soil samples greater than three years are resampled. Lime recommendations from the lab are being used to calculate application rates.

At the request of DEQ-CO, Recyc Systems' daily notice of field operations by e-mail is sent to DEQ and all County Biosolids Monitors.

# Attachment C

FAUQUIER COUNTY

**WATER & SANITATION AUTHORITY**

7172 Kennedy Road • Vint Hill Farms

Warrenton, Virginia 20187-3907

Phone (540) 349-2092 • Fax (540) 347-7689



January 19, 2023

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

Subject: Remington WWTP VA0076805

To Whom It May Concern:

Enclosed are the 2022 Annual Sludge Program Discharge Monitoring Reports for the Remington Wastewater Treatment Plant. We have no excursions to report.

If you have any questions or require additional information, please contact me at (540) 349-2092.

Sincerely,

*Milas Smith*

Milas Smith  
Director of Operation

Cc: Ben Shoemaker, Executive Director  
Remington WWTP  
File

**PERMITTED FACILITY**

Remington Wastewater Treatment Plant  
 c/o Fauquier County Water and Sewer Authority, Warrenton VA  
 20188

Permit Number: VA0076805

Permit Type: Major Municipal

No Discharge:

**COMMONWEALTH OF VIRGINIA  
 DEPARTMENT OF ENVIRONMENTAL QUALITY  
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)**

**RETURN TO**

Department of Environmental Quality  
 Northern Regional Office  
 13901 Crown Court, Woodbridge VA 22193  
 (703) 583-3800

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE  
 COMPLETING THIS FORM AND RETURNING IT.

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
2022	01	01	TO	2022	12	31

Outfall Num: S01 Reporting Frequency: Annual

Run Date: Mar 18, 2023

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM				UNITS
672 SOLIDS, TOTAL, SLUDGE AS PERCENT	REPORTD	*****	*****		*****	19.7	*****	%	0	1/YR	COMP
	REQRMNT	*****	*****		*****	NL	*****	%	0	1/YR	COMP
680 ARSENIC, SLUDGE	REPORTD	*****	*****		*****	11.2	19.7	MG/KG	0	1/YR	COMP
	REQRMNT	*****	*****		*****	41	75	MG/KG	0	1/YR	COMP
681 MOLYBDENUM, SLUDGE	REPORTD	*****	*****		*****	7.22	12.2	MG/KG	0	1/YR	COMP
	REQRMNT	*****	*****		*****	NL	75	MG/KG	0	1/YR	COMP
682 ZINC, SLUDGE	REPORTD	*****	*****		*****	911	1380	MG/KG	0	1/YR	COMP
	REQRMNT	*****	*****		*****	2800	7500	MG/KG	0	1/YR	COMP
683 LEAD, SLUDGE	REPORTD	*****	*****		*****	11.63	16.5	MG/KG	0	1/YR	COMP
	REQRMNT	*****	*****		*****	300	840	MG/KG	0	1/YR	COMP
684 NICKEL, SLUDGE	REPORTD	*****	*****		*****	18.03	25.6	MG/KG	0	1/YR	COMP
	REQRMNT	*****	*****		*****	420	420	MG/KG	0	1/YR	COMP
685 MERCURY, SLUDGE	REPORTD	*****	*****		*****	0.2907	0.519	MG/KG	0	1/YR	COMP
	REQRMNT	*****	*****		*****	17	57	MG/KG	0	1/YR	COMP
686 COPPER, SLUDGE	REPORTD	*****	*****		*****	692	973	MG/KG	0	1/YR	COMP
	REQRMNT	*****	*****		*****	3500	4300	MG/KG	0	1/YR	COMP
687 CADMIUM, SLUDGE	REPORTD	*****	*****		*****	16.7	28.7	MG/KG	0	1/YR	COMP
	REQRMNT	*****	*****		*****	39	85	MG/KG	0	1/YR	COMP
688 LEVEL OF PATHOGEN REQUIREMENTS ACHIEVED	REPORTD	*****	*****		*****		2	STCL#	0	1/YR	COMP
	REQRMNT	*****	*****		*****		NL	STCL#	0	1/YR	*****

Additional Permit Requirements (Outfall S01):  
 Comments:

**PERMITTED FACILITY**

Remington Wastewater Treatment Plant  
 c/o Fauquier County Water and Sewer Authority, Warrenton VA  
 20188

Permit Number: VAD076805

Permit Type: Major Municipal

No Discharge

**COMMONWEALTH OF VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

**RETURN TO**

Department of Environmental Quality  
 Northern Regional Office  
 13901 Crown Court, Woodbridge VA 22193  
 (703) 583-3800

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE  
 COMPLETING THIS FORM AND RETURNING IT

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 2022	01	01	TO	2022	12	31

Outfall Num: S01 Reporting Frequency: Annual

Run Date: Mar 18, 2023

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM				UNITS
689 DESCRIPTION OF PATHOGEN OPTION USED	REPORTED	*****	*****		*****	*****	2	ALTR#	0	1/YR	
	REQUIRED	*****	*****		*****	*****	NL	ALTR#	0	1/YR	*****
890 VECTOR ATTRACTION REDUCTION OPTION USED	REPORTED	*****	*****		*****	*****	2	ALTR#	0	1/YR	
	REQUIRED	*****	*****		*****	*****	NL	ALTR#	0	1/YR	*****
697 SELENIUM, SLUDGE	REPORTED	*****	*****		*****	*****	<4.00	MG/KG	0	1/YR	COMP
	REQUIRED	*****	*****		*****	*****	100	MG/KG	0	1/YR	COMP

Additional Permit Requirements (Outfall S01):

Comments:



**PERMITTED FACILITY**

Remington Wastewater Treatment Plant  
c/o Fauquier County Water and Sewer Authority, Warrenton VA  
20188

Permit Number: VA0076805

Permit Type: Major Municipal

No Discharge:

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)**

**RETURN TO**

Department of Environmental Quality  
Northern Regional Office  
13901 Crown Court, Woodbridge VA 22193  
(703) 583-3800

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE  
COMPLETING THIS FORM AND RETURNING IT

MONITORING PERIOD							
YEAR	MO	DAY		YEAR	MO	DAY	
FROM	2022	01	01	TO	2022	12	31

Outfall Num: SP1

Reporting Frequency: Annual

Run Date: Mar 18, 20

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM			
893 ANNUAL SLUDGE PRODUCTION TOTAL	REPORTD	*****	479.50	MTNYR	*****	*****	*****	0	1/YR	CALC
	REQMNT	*****	NL	MTNYR	*****	*****	*****	0	1/YR	CALC
894 ANNUAL AMT SLUDGE LAND APPLIED	REPORTD	*****	479.50	MTNYR	*****	*****	*****	0	1/YR	CALC
	REQMNT	*****	NL	MTNYR	*****	*****	*****	0	1/YR	CALC

Additional Permit Requirements (Outfall SP1):

Comments:

Remington Wastewater Treatment Plant  
 c/o Fauquier County Water and Sewer Authority, Warrenton VA  
 20188

Permit Number: VAD076805  
 Permit Type: Major Municipal

DEPARTMENT OF ENVIRONMENTAL QUALITY  
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

Department of Environmental Quality  
 Northern Regional Office  
 13901 Crown Court, Woodbridge VA 22193  
 (703) 583-3800

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE  
 COMPLETING THIS FORM AND RETURNING IT

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.

BYPASS AND OVERFLOWS		
TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)
0	0	0

OPERATOR IN RESPONSIBLE CHARGE			DATE		
<i>Troy Wilkington</i>	<i>Troy Wilkington</i>	1965006730	2023	01	18
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT			TELEPHONE		
Milas Smith	<i>Milas Smith</i>	540-349-2092	2023	01	18
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY





March 18, 2022

Mr. Raymond Searls  
 FCWSA- Remington WWTP  
 12523 Lucky Hill Road  
 Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the first quarter vector (2022) attraction study for the Remington WWTP from 2/8/2022 to 3/9/2022. The original 5 gallon sample which was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels were labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples were collected from Vessels A and B at both the start test date and after the 30 day period. Each vessel was mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30 day period, additional distilled water was added to each vessel as needed until the original test volume was maintained.

After the 30 day period had expired a second round of MLSS, MLVSS, and Fecal Coliform samples were collected from Vessels A and B.

<b>Vessel A % Sludge = 1.78%</b>				
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
2/8/2022	17800	12700	71.3%	78700
3/9/2022	13300	9310	70.0%	< 180
		Reduction	<b>1.3%</b>	

<b>Vessel B % Sludge = 1.67%</b>				
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
2/8/2022	16700	12100	72.5%	32300
3/9/2022	12200	8550	70.1%	< 180
		Reduction	<b>2.4%</b>	

Average Reduction for 30 Day Period **1.9%**

The average total volatile reduction of Vessels A and B during the 30 day period was calculated to be 1.9%. According to the biosolids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent of 2.0% or less acrobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15%, vector attraction reduction is achieved.

Since the volatile solids reduction for the Remington WWTP was found to be an average of 1.9% reduction after the additional 30 day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information should be submitted on your Form S01 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody





218 North Main St. ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel: (540) 825-6660 ♦ Fax: (540) 825-4961 ♦ [www.ess-services.com](http://www.ess-services.com)

### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1848

Report Date: 02/18/2022  
Report #: 84025  
Job #: 0010022  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that methods used meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com](http://www.ess-services.com).

This laboratory report may not be reproduced, except in full, without the written approval of ESS. If you have received this report in error, please notify ESS immediately at (540) 825-6660.

- Definitions:
- QL = Quantitation limit is the lowest concentration of analyte that the lab can report with confidence
  - INIT = Analyst initials
  - ug/l = micrograms per liter (1 ug/l = 1 part per billion or ppb)
  - mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)
  - SU = Standard unit
  - umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials TS





## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1648

Report Date: 02/16/2022  
Report #: 64025  
Job #: 0010022  
Customer #: 89R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

Sample ID#: 0192551      Sample Source: Vessel A  
Sample Date/Time: 02/08/2022 / 08:40      Date Received: 02/08/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	17,800	mg/l	1.00	SM 2540 D-2011	02/10/2022	15:33	JL
Mixed Liquor Volatile SS	12,700	mg/l	1.00	SM 2540 E-2011	02/11/2022	11:05	JL
Fecal Coliform	78,700	MPN/g	180	SM 9221 E+C-2006	02/08/2022	11:50	JL

Sample ID#: 0192552      Sample Source: Vessel B  
Sample Date/Time: 02/08/2022 / 08:50      Date Received: 02/08/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	16,700	mg/l	1.00	SM 2540 D-2011	02/10/2022	15:37	JL
Mixed Liquor Volatile SS	12,100	mg/l	1.00	SM 2540 E-2011	02/11/2022	11:25	JL
Fecal Coliform	32,300	MPN/g	180	SM 9221 E+C-2006	02/08/2022	12:15	JL

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.





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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1645

Report Date: 03/01/2022  
Report #: 64024  
Job #: 0010110  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

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INIT = Analyst initials

ug/l = micrograms per liter (1 ug/l = 1 part per billion or ppb)

mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)

SU = Standard unit

umhos/cm = micromhos per centimeter @25°C

Approved by:

Angie Woodward

A. Woodward Technical Director

Reviewer's Initials

AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 03/01/2022  
 Report #: 64024  
 Job #: 0010110  
 Customer #: 99R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0192550      Sample Source: Sludge  
 Sample Date/Time: 02/08/2022 / 08:15      Date Received: 02/08/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Total Solids (%)	17.8	%	0.500	SM 2540 G-2011	02/11/2022	17:06	574
Arsenic, Total Recoverable	9.90	mg/kg	4.00	SW-846 6010B	02/18/2022	09:08	574
Molybdenum, Total Recoverable	6.16	mg/kg	4.00	SW-846 6010B	02/18/2022	09:08	574
Zinc, Total Recoverable	836	mg/kg	4.00	SW-846 6010B	02/18/2022	09:08	574
Lead, Total Recoverable	10.6	mg/kg	4.00	SW-846 6010B	02/18/2022	09:08	574
Nickel, Total Recoverable	14.4	mg/kg	4.00	SW-846 6010B	02/18/2022	09:06	574
Mercury, Total Recoverable	0.0519	mg/kg	0.0250	SW-846 7471A	02/21/2022	10:52	574
Copper, Total Recoverable	587	mg/kg	2.00	SW-846 6010B	02/18/2022	09:08	574
Cadmium, Total Recoverable	5.41	mg/kg	2.00	SW-846 6010B	02/18/2022	09:08	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	02/18/2022	09:08	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 460150













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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 03/16/2022  
Report #: 64818  
Job #: 0010022  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

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INIT = Analyst initials  
ug/l = micrograms per liter (1 ug/l = 1 part per billion or ppb)  
mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by:

Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials:

AW





### Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 03/16/2022  
 Report #: 64818  
 Job #: 0010022  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector

Sample ID#: 0194460      Sample Source: Vessel A  
 Sample Date/Time: 03/09/2022 / 11:40      Date Received: 03/09/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	13,300	mg/l	1.00	SM 2540 D-2011	03/11/2022	17:33	Jl
Mixed Liquor Volatile SS	8,310	mg/l	1.00	SM 2540 E-2011	03/14/2022	14:45	Jl
Fecal Coliform	< 180	MPN/g	180	SM 9221 E+C-2008	03/09/2022	13:45	Jl

Sample ID#: 0194461      Sample Source: Vessel B  
 Sample Date/Time: 03/09/2022 / 11:50      Date Received: 03/09/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	12,200	mg/l	1.00	SM 2540 D-2011	03/11/2022	17:36	Jl
Mixed Liquor Volatile SS	8,550	mg/l	1.00	SM 2540 E-2011	03/14/2022	14:45	Jl
Fecal Coliform	< 180	MPN/g	180	SM 9221 E+C-2008	03/09/2022	14:11	Jl

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis





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64818

### CHAIN OF CUSTODY RECORD

Resubmittal WPT  
 Raymond's Seeds

Additional Notes/Comments/Special Instructions:

Client: Quincy Weston P.O.# \_\_\_\_\_

Print Name: Sean Hinna (Signature)

COLLECTION DATE	TIME	SAMPLE LOCATION	IDENTIFY MARKS	NO. OF #	UNDO	STAMP	PREPARE
-----------------	------	-----------------	----------------	----------	------	-------	---------

DATE	TIME	RECEIVED BY	REQUISITIONED BY	DATE	TIME	RECEIVED BY	REQUISITIONED BY	COMMENTS
3/9/22	1140	Vessel A						
3/9/22	1140	Vessel A						
3/9/22	1150	Vessel B						
3/9/22	1150	Vessel R						
3/9/22	1155			3/9/22	1155			Mixed Lie. Fecal

On heat?  Y  N

Received @ 18.1 °C

Normal  Rush

Need Results by \_\_\_\_\_ From changes will only for Rush Test

Job # 10082

Sample condition OK upon receipt to lab

Sample Condition Stamp

### NOTICE AND NECESSARY INFORMATION

Biosolids notification requirements to comply with 9VAC25-31-530.F - G or 9VAC25-32-313.G - H.

Part I - To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids

Facility Name: Remington WWTP Permit Number: VA. 0076805

#### A. Metals Limitations

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	9.90	9.90	41	75
Total Cadmium	6.41	6.41	39	85
Total Copper	587	587	1,500	4,300
Total Lead	10.6	10.6	300	840
Total Mercury	0.0519	0.0519	17	57
Total Molybdenum	6.18	6.18	NL <sup>(3)</sup>	75
Total Nickel	14.4	14.4	420	420
Total Selenium	<4.00	<4.00	100	100
Total Zinc	836	836	2,800	7,500

(1) Values to be reported on a dry weight basis.

(2) Sludge may not be land applied if any pollutant exceeds these values.

(3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

#### B. Class B Pathogen Reduction

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675 B by:

Alternative 1: Fecal coliform testing -geometric mean of 7 samples

Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:

Option 1 - Aerobic digestion

Option 2 - Air drying beds

Option 3 - Anaerobic digestion

Option 4 - Composting

Option 5 - Lime Stabilization

Other: \_\_\_\_\_

357  
314



**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

VAR requirements for Class B biosolids were achieved (in accordance with 9VAC25-31-720.B.1 - 8 and 9VAC25-32-685.B.1 - 8) by:

- Option 1:  $\geq 38\%$  volatile solids reduction
- Option 2: Anaerobic 40 day bench test
- Option 3: Aerobic 30 day bench test
- Option 4: Specific Oxygen Uptake Rate (SOUR) test
- Option 5: Aerobic process, 14 days @ 40°C (45°C)
- Option 6: Alkaline stabilization
- Option 7: Dry to  $\geq 75\%$  T.S. w/no unstabilized 1<sup>o</sup> sludges
- Option 8: Dry to  $\geq 90\%$  T.S.

OR

VAR requirements for Class B biosolids were not achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Raymond Seawis chief operator

Signature [Signature] Date Signed 4-5-3-2022

Telephone number 540-439-2225



July 1, 2022

Mr. Raymond Searls  
 FCWSA- Remington WWTP  
 12523 Lucky Hill Road  
 Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Environmental Systems Service, Ltd. (ESS) conducted the second quarter vector (2022) attraction study for the Remington WWTP from 5/10/2022 to 6/9/2022. The original 5-gallon sample was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples collected from Vessels A and B at both the start test date and after the 30-day period. Each vessel mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30-day period, additional distilled water added to each vessel as needed until the original test volume maintained.

After the 30-day period had expired a second round of MLSS, MLVSS, and Fecal Coliform samples collected from Vessels A and B.

Vessel A		% Sludge = 1.01%		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
5/10/2022	10100	7060	69.9%	9,110
6/9/2022	7960	5420	68.1%	<180
Reduction			<b>1.8%</b>	

Vessel B		% Sludge = 1.02%		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
5/10/2022	10200	7180	70.4%	16,700
6/9/2022	7400	5070	68.5%	<180
Reduction			<b>1.9%</b>	

Average Reduction for 30 Day Period **1.8%**

The average total volatile reduction of Vessels A and B during the 30-day period calculated to be 1.8%. According to the bio-solids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies the vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent of 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period reduced by less than 15%, vector attraction reduction achieved.

Since the volatile solids reduction for the Remington WWTP found to be an average of 1.8% reduction after the additional 30-day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information submitted on your Form S01 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody





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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 05/19/2022  
Report #: 66475  
Job #: 0010246  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Vector Study - Remington  
WWTP

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)

SU = Standard unit

umhos/cm = micromhos per centimeter @25°C

Approved by:

Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials:

AW







## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1848

Report Date: 05/19/2022  
Report #: 66475  
Job #: 0010246  
Customer #: 89R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Vector Study - Remington  
WWTP

Sample ID#: 0199675      Sample Source: Vessel A  
Sample Date/Time: 05/10/2022 / 08:20      Date Received: 05/10/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
<b>MLSS/MLVSS</b>							
Mixed Liquor Susp Solids	10,100	mg/l	1.00	SM 2540 D-2011	05/12/2022	14:59	JJ
Mixed Liquor Volatile SS	7,060	mg/l	1.00	SM 2540 E-2011	05/13/2022	09:25	BH
Fecal Coliform	9,110	MPN/g	180	SM 9221 E+C-2006	05/10/2022	12:15	JJ

Sample ID#: 0199676      Sample Source: Vessel B  
Sample Date/Time: 05/10/2022 / 08:30      Date Received: 05/10/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
<b>MLSS/MLVSS</b>							
Mixed Liquor Susp Solids	10,200	mg/l	1.00	SM 2540 D-2011	05/12/2022	15:02	JJ
Mixed Liquor Volatile SS	7,180	mg/l	1.00	SM 2540 E-2011	05/13/2022	09:25	BH
Fecal Coliform	16,700	MPN/g	180	SM 9221 E+C-2006	05/10/2022	12:45	JJ

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.







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## Analytical Report

Fauquier County WSA,  
Remington WWTP  
7172 Kennedy Road  
Warronton, VA 20187-1648

Report Date: 06/17/2022  
Report #: 67293  
Job #: 0010246  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by:

Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials

AW



## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 06/17/2022  
 Report #: 67293  
 Job #: 0010246  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#: 0202015      Sample Source: Vessel A  
 Sample Date/Time: 08/09/2022 / 06:45      Date Received: 06/09/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	7,960	mg/l	1.00	SM 2540 D-2011	06/09/2022	15:41	BH
Mixed Liquor Volatile SS	5,420	mg/l	1.00	SM 2540 E-2011	06/10/2022	10:31	BH
Fecal Coliform	< 180	MPN/g	180	SM 9221 E+C-2006	06/09/2022	12:50	JL

Sample ID#: 0202016      Sample Source: Vessel B  
 Sample Date/Time: 06/09/2022 / 06:55      Date Received: 06/09/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	7,400	mg/l	1.00	SM 2540 D-2011	06/09/2022	15:48	BH
Mixed Liquor Volatile SS	5,070	mg/l	1.00	SM 2540 E-2011	06/10/2022	10:31	BH
Fecal Coliform	< 180	MPN/g	180	SM 9221 E+C-2006	06/09/2022	13:20	JL

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.



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 540-586-6413 • Fax: 540-582-5500



Rainey Vector (w/PT)

### CHAIN OF CUSTODY RECORD

Additional Notes/Comments/ Special Instructions:

Quarantary vector study

enterSite

By: Sean Mahan

(Signature)

COLLECTOR NAME

SAMPLE LOCATION

CONTAINERS

DATE RECEIVED

COMMENTS

DATE	TIME	RECEIVED BY	DATE	TIME	RECEIVED BY	DATE	TIME	RECEIVED BY
6/9/22	12:55	VESSIE A	6/9/22	12:55	PI 2			
6/9/22	12:55	VESSIE A	6/9/22	12:55	PI 1			
6/9/22	12:55	VESSIE B	6/9/22	12:55	PI 1			
6/9/22	12:55	VESSIE B	6/9/22	12:55	PI 1			
6/9/22	12:55	VESSIE B	6/9/22	12:55	PI 1			

Fed Ex  Hand Delivery  
 Post Office  Under 2 hours  
 Received @ 12:22 P.M.  
 Normal  Fresh  
 Need Results by  Extra charges will apply for Rush TAT

Sample condition OK upon receipt to lab. Sample Condition Stamp

Revised 12/26/2018





2nd arr  
Vector study

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### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 05/19/2022  
Report #: 86475  
Job #: 0010248  
Customer #: 89R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Vector Study - Remington WWTP

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 05/19/2022  
 Report #: 68475  
 Job #: 0010246  
 Customer #: 89R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Vector Study - Remington WWTP

Sample ID#: 0199675      Sample Source: Vessel A  
 Sample Date/Time: 05/10/2022 / 08:20      Date Received: 05/10/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	10,100	mg/l	1.00	SM 2540 D-2011	05/12/2022	14:58	JJ
Mixed Liquor Volatile SS	7,060	mg/l	1.00	SM 2540 E-2011	05/13/2022	09:25	BH
Fecal Coliform	9,110	MPN/g	180	SM 9221 E+C-2006	05/10/2022	12:15	JJ

Sample ID#: 0199676      Sample Source: Vessel B  
 Sample Date/Time: 05/10/2022 / 08:30      Date Received: 05/10/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	10,200	mg/l	1.00	SM 2540 D-2011	05/12/2022	15:02	JJ
Mixed Liquor Volatile SS	7,180	mg/l	1.00	SM 2540 E-2011	05/13/2022	09:25	BH
Fecal Coliform	16,700	MPN/g	180	SM 9221 E+C-2006	05/10/2022	12:45	JJ

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.







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 500 Stone Street • Post Office Box 736 • Bedford, Virginia 24523 •  
 540-691-5413 • Fax: 540-698-8530

66475

### CHAIN OF CUSTODY RECORD

Company: Pennington County WSA  
 Contact: Raymond Search  
 Address: 7172 Kennedy Rd.  
Warrenton, Virginia 20187  
 Phone: 347-2092, 347-7899 (fax)

Additional Notes/Comments/ Special Instructions:

Project Name/ Site: Remington WWTP - 438-2226; 3490-494 P.O.

Sampled By: Levis Cash Raymond Search

ESD	DATE	TIME	VEHICLE	PL	TIME	RECEIVED BY	DATE	TIME	RECEIVED BY	REMARKS	PH CHANGE	COMMENTS
	5-10-22	0740	Vehicle A	2.8 Q	P 1							
	5-10-22	0740	Vehicle B	2.8 Q	P 1							
	199675	5/10/22	0820	Vehicle A	12.5	P 2						
	199676		0830	Vehicle B	5:00	P 1						
				Vehicle B	2.5	P 1						
				Vehicle B	5:00	P 1						
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290-101-  
Storage materials



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### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1648

Report Date: 05/26/2022  
Report #: 66474  
Job #: 0010343  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that methods used meet the requirements of either TVAC30-4B and the 2009 TNI Standard for non-potable water and solid and chemical materials or TVAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com](http://www.ess-services.com).

This laboratory report may not be reproduced, except in full, without the written approval of ESS. If you have received this report in error, please notify ESS immediately at (540) 825-6660.

- Definitions: QL = Quantitation limit is the lowest concentration of analyte that the lab can report with confidence
- INIT = Analyst Initials
- ug/l = micrograms per liter (1 ug/l = 1 part per billion or ppb)
- mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)
- SU = Standard unit
- umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials AW



## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 05/26/2022  
 Report #: 68474  
 Job #: 0010343  
 Customer #: 99R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0199673      Sample Source: Sludge  
 Sample Date/Time: 05/10/2022 / 07:40      Date Received: 05/10/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Total Solids (%)	19.4	%	0.500	SM 2540 G-2011	05/12/2022	14:54	574
Arsenic, Total Recoverable	4.62	mg/kg	4.00	SW-846 6010B	05/17/2022	09:30	574
Molybdenum, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	05/17/2022	09:30	574
Zinc, Total Recoverable	458	mg/kg	4.00	SW-846 6010B	05/17/2022	09:30	574
Lead, Total Recoverable	7.02	mg/kg	4.00	SW-846 6010B	05/17/2022	09:30	574
Nickel, Total Recoverable	12.1	mg/kg	4.00	SW-846 6010B	05/17/2022	09:30	574
Mercury, Total Recoverable	0.397	mg/kg	0.0250	SW-846 7471A	05/24/2022	10:52	574
Copper, Total Recoverable	.179	mg/kg	2.00	SW-846 6010B	05/17/2022	09:30	574
Cadmium, Total Recoverable	3.49	mg/kg	2.00	SW-846 6010B	05/17/2022	09:30	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	05/17/2022	09:30	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 460160





## NOTICE AND NECESSARY INFORMATION

Biosolids notification requirements to comply with 9VAC25-31-530.F - G or 9VAC25-32-313.G - H)

**Part I - To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTP Permit Number: Va. 0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	4.52	4.52	41	75
Total Cadmium	3.49	3.49	39	85
Total Copper	379	379	1,500	4,300
Total Lead	7.02	7.02	300	840
Total Mercury	0.337	0.337	17	57
Total Molybdenum	< 4.00	< 4.00	NL <sup>(3)</sup>	75
Total Nickel	12.1	12.1	420	420
Total Selenium	< 4.00	< 4.00	100	100
Total Zinc	458	458	2,800	7,500

(1) Values to be reported on a dry weight basis

(2) Sludge may not be land applied if any pollutant exceeds these values.

(3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

Alternative 1. Fecal coliform testing - geometric mean of 7 samples

Alternative 2. Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:

Option 1 - Aerobic digestion

Option 2 - Air drying beds

Option 3 - Anaerobic digestion

Option 4 - Composting

Option 5 - Lime Stabilization

Other: \_\_\_\_\_

PAID  
1-5-11

**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8 by:

- Option 1:  $\geq 38\%$  volatile solids reduction
- Option 2: Anaerobic 40 day bench test
- Option 3: Aerobic 30 day bench test
- Option 4: Specific Oxygen Uptake Rate (SOUR) test
- Option 5: Aerobic process, 14 days @ 40°C (45°C)
- Option 6: Alkaline stabilization
- Option 7: Dry to  $\geq 75\%$  T.S. w/no unstabilized 1<sup>o</sup> sludges
- Option 8: Dry to  $\geq 90\%$  T.S.

OR

VAR requirements for Class B biosolids were not achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_

Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

<sup>(1)</sup>Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Raymond Scaris Chief Operator

Signature [Signature] Date Signed 7/5/2022

Telephone number 540 434 2225



September 22, 2022

Mr. Lewis  
 FCWSA- Remington WWTP  
 12523 Lucky Hill Road  
 Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Dear Mr. Lewis,

Environmental Systems Service, Ltd. (ESS) conducted the third quarter vector (2022) attraction study for the Remington WWTP from 8/15/2022 to 9/14/2022. The original 5-gallon sample was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples collected from Vessels A and B at both the start test date and after the 30-day period. Each vessel mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30- day period, additional distilled water added to each vessel as needed until the original test volume maintained.

After the 30-day period expired a second round of MLSS, MLVSS, and Fecal Coliform samples collected from Vessels A and B.

Vessel A		% Sludge = 0.83%		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
8/15/2022	8330	5190	62.3%	648
9/14/2022	11800	7400	62.7%	<180
Reduction			<b>-0.4%</b>	

Vessel B		% Sludge = 0.88%		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
8/15/2022	8330	5310	60.1%	396
9/14/2022	11700	7310	62.5%	<180
Reduction			<b>-2.3%</b>	

7 < 180

Average Reduction for 30 Day Period **-1.4%**



The average total volatile reduction of Vessels A and B during the 30-day period calculated to be -1.4%. According to the bio-solids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case, vector attraction reduction demonstrated by digesting a portion of the previously digested sewage sludge that has a percent of 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period reduced by less than 15%, vector attraction reduction achieved.

Since the volatile solids reduction for the Remington WWTP found to be an average of -1.4% reduction after the additional 30-day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information submitted on your Form S01 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment = Analytical Report & Chains of Custody





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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date 09/02/2022  
Report # 69100  
Job # 0010467  
Customer # 99R  
Customer PO #  
Collected By ESS Employee  
Sample Location Vector Study

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS)

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report

The signature on this analytical report certifies that methods used meet the requirements of either 1VAC30-46 and the 2009 TNM Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com](http://www.ess-services.com)

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25 °C

Approved by

Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials TS





### Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date 09/02/2022  
 Report # 69100  
 Job # 0010467  
 Customer # 99R  
 Customer PO #  
 Collected By ESS Employee  
 Sample Location Vector Study

Sample ID#: 0205750 Sample Source: Vessel A  
 Sample Date/Time: 08/15/2022 / 09:30 Date Received: 08/15/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	8,330	mg/l	100	SM 2540 D-2011	08/18/2022	12:13	JL
Mixed Liquor Volatile SS	5,190	mg/l	100	SM 2540 E-2011	08/19/2022	11:30	JL
Fecal Coliform	648	MPN/g	180	SM 9221 E+C-2006	08/15/2022	12:50	JL

Sample ID#: 0205752 Sample Source: Vessel B  
 Sample Date/Time: 08/15/2022 / 09:40 Date Received: 08/15/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	8,830	mg/l	100	SM 2540 D-2011	08/18/2022	12:20	JL
Mixed Liquor Volatile SS	5,310	mg/l	100	SM 2540 E-2011	08/19/2022	11:30	JL
Fecal Coliform	396	MPN/g	180	SM 9221 E+C-2006	08/15/2022	13:15	JL

COMMENT:  
 Results reported as mg/kg or MPN/g are reported on a dry weight basis





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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 09/21/2022  
Report #: 69913  
Job #: 0010467  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd. (ESS)

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that methods used meet the requirements of either 1VAC30-46 and the 2009 TN1 Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com](http://www.ess-services.com).

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by

Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials

AW





**Analytical Report**

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 09/21/2022  
 Report #: 69913  
 Job #: 0010467  
 Customer #: 99R  
 Customer PO #  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector

Sample ID#: 0207399      Sample Source: Vessel A  
 Sample Date/Time: 09/14/2022 / 08:00      Date Received: 09/14/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	11,800	mg/l	100	SM 2540 D-2011	09/16/2022	15:48	JL
Mixed Liquor Volatile SS	7,400	mg/l	100	SM 2540 E-2011	09/18/2022	13:25	JL
Fecal Coliform	< 180	MPN/g	180	SM 9221 E+C-2006	09/14/2022	11:25	JL

Sample ID#: 0207400      Sample Source: Vessel B  
 Sample Date/Time: 09/14/2022 / 08:10      Date Received: 09/14/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	11,700	mg/l	100	SM 2540 D-2011	09/16/2022	15:49	JL
Mixed Liquor Volatile SS	7,310	mg/l	100	SM 2540 E-2011	09/18/2022	13:25	JL
Fecal Coliform	< 180	MPN/g	180	SM 9221 E+C-2006	09/14/2022	12:20	JL

COMMENT:  
 Results reported as mg/kg or MPN/g are reported on a dry weight basis



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69913

Viewers Through Quality Service

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### CHAIN OF CUSTODY RECORD

Sanitation work  
 Analytical

Additional Notes/ Comments/ Special Instructions:

### ANALYSES

Site: Quantity sector P.O.# Sanitation

(Print Name) Sanitation (Signature) [Signature]

COLLECTION DATE	TIME	SAMPLE LOCATION	CONTAINERS		SCALE	PRESERVATIVE	COMMENTS
			SIZE	Q.P.#			
9/22	0800	VESSEL A	500	P11	STC	—	
+	0800	VESSEL A	125	P12	STC	STC	
9/22	0810	VESSEL B	500	P11	STC	—	
+	0810	VESSEL B	125	P11	STC	STC	

Fed Ex     Hand Delivery  
 Fossil     Post Office

On Site     Received @ Site     Under 2 hours

Normal     Rush  
 Need Results by End of day and/or for Rush TAT

Job # 11467    Date 9/11/20    Time 0810    Requested by ASD

Sample condition "O" upon receipt to IC  
 Sample Condition Standard



**NOTICE AND NECESSARY INFORMATION**

Biosolids notification requirements to comply with 9VAC25-31-530 F -- G or 9VAC25-32-313.G - H.

**Part I - To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTP Permit Number: va 0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(7)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(12)</sup>
Total Arsenic	19.1	19.1	41	75
Total Cadmium	28.7	28.7	39	85
Total Copper	973	973	1,500	4,300
Total Lead	16.5	16.5	300	840
Total Mercury	0.519	0.519	17	57
Total Molybdenum	12.2	12.2	NL <sup>(3)</sup>	75
Total Nickel	20.0	20.0	420	420
Total Selenium	< 4.00	< 4.00	100	100
Total Zinc	1,380	1,380	2,800	7,500

- (1) Values to be reported on a dry weight basis.
- (2) Sludge may not be land applied if any pollutant exceeds these values.
- (3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

- Alternative 1: Fecal coliform testing -geometric mean of 7 samples
- Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:
  - Option 1 - Aerobic digestion
  - Option 2 - Air drying beds
  - Option 3 - Anaerobic digestion
  - Option 4 - Composting
  - Option 5 - Lime Stabilization
  - Other: \_\_\_\_\_

**FAKES**  
9-06-02

**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

- VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8 by:
  - Option 1:  $\geq 38\%$  volatile solids reduction
  - Option 2: Anaerobic 40 day bench test
  - Option 3: Aerobic 30 day bench test
  - Option 4: Specific Oxygen Uptake Rate (SOUR) test
  - Option 5: Aerobic process, 14 days @ 40°C (45°C)
  - Option 6: Alkaline stabilization
  - Option 7: Dry to  $\geq 75\%$  T.S. w/no unstabilized 1° sludges
  - Option 8: Dry to  $\geq 90\%$  T.S.

OR

- VAR requirements for Class B biosolids were not achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Troy Willingham Troy Willingham Chief Operator  
 Signature *Troy Willingham* Date Signed 9-26-22  
 Telephone number 540-439-2225





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### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 09/20/2022  
Report #: 69101  
Job #: 0010467  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that methods used meet the requirements of either 1VAC30-46 and the 2009 TN1 Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com](http://www.ess-services.com).

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- Definitions:
- QL = Quantitation limit is the lowest concentration of analyte that the lab can report with confidence
  - INIT = Analyst Initials
  - ug/l = micrograms per liter (1 ug/l = 1 part per billion or ppb)
  - mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)
  - SU = Standard unit
  - umhos/cm = micromhos per centimeter @25° C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 09/20/2022  
 Report #: 69101  
 Job #: 0010467  
 Customer #: 99R  
 Customer PO #  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0205753      Sample Source: Sludge  
 Sample Date/Time: 08/15/2022 / 07:50      Date Received: 08/15/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Total Solids (%)	19.9	%	0.500	SM 2540 G-2011	08/18/2022	14:55	574
Arsenic, Total Recoverable	19.1	mg/kg ✓	4.00	SW-846 6010B	09/09/2022	10:30	574
Molybdenum, Total Recoverable	12.2	mg/kg	4.00	SW-846 6010B	09/09/2022	10:30	574
Zinc, Total Recoverable	1,300	mg/kg	4.00	SW-846 6010B	09/09/2022	10:30	574
Lead, Total Recoverable	16.5	mg/kg	4.00	SW-846 6010B	09/09/2022	10:30	574
Nickel, Total Recoverable	20.0	mg/kg	4.00	SW-846 6010B	09/09/2022	10:30	574
Mercury, Total Recoverable	0.519	mg/kg	0.0250	SW-846 7471A	09/12/2022	11:22	574
Copper, Total Recoverable	973	mg/kg	2.00	SW-846 6010B	09/09/2022	10:30	574
Cadmium, Total Recoverable	28.7	mg/kg	2.00	SW-846 6010B	09/09/2022	10:30	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	09/09/2022	10:30	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 460160





December 16, 2022

Mr. G. Lewis  
 FCWSA- Remington WWTP  
 12523 Lucky Hill Road  
 Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Dear Mr. Lewis,

Environmental Systems Service, Ltd. (ESS) conducted the fourth quarter vector (2021) attraction study for the Remington WWTP from 11/22/2021 to 12/21/2021. The original 5- gallon sample was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples collected from Vessels A and B at both the start test date and after the 30-day period. Each vessel mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30- day period, additional distilled water added to each vessel as needed until the original test volume maintained.

After the 30-day period expired a second round of MLSS, MLVSS, and Fecal Coliform samples collected from Vessels A and B.

Vessel A		% Sludge = 1.18%			
Date	MLSS	MLVSS	% Volatile	Fecal Coliform	
11/8/2022	11750	7580	64.6%	4000	
12/7/2022	11800	7570	64.2%	1360	
		Reduction	0.4%		

Vessel B		% Sludge = 1.28%			
Date	MLSS	MLVSS	% Volatile	Fecal Coliform	
11/8/2022	12800	8380	65.3%	1250	
12/7/2022	11300	7210	63.8%	619	
		Reduction	1.5%		

Average Reduction for 30 Day Period **1.0%**



The average total volatile reduction of Vessels A and B during the 30-day period calculated to be 1.0%. According to the bio-solids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case, vector attraction reduction demonstrated by digesting a portion of the previously digested sewage sludge that has a percent of 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period reduced by less than 15%, vector attraction reduction achieved.

Since the volatile solids reduction for the Remington WWTP found to be an average of 1.0% reduction after the additional 30-day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information submitted on your Form S01 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-823-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody





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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date 11/16/2022  
Report # 71456  
Job # 0010693  
Customer # 99R  
Customer PO #  
Collected By: ESS Employee  
Sample Location: Vector Study

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials: TS



### Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton VA 20187-1646

Report Date 11/16/2022  
 Report # 71458  
 Job # 0010693  
 Customer # 99R  
 Customer PO #  
 Collected By ESS Employee  
 Sample Location Vector Study

Sample ID#: 0210601      Sample Source: Vessel A  
 Sample Date/Time: 11/08/2022 / 15:50      Date Received: 11/08/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	4,000	MPN/g	180	SM 9221 E+C-2006	11/08/2022	16:24	SR
Mixed Liquor Susp Solids	11,750	mg/l	1.00	SM 2540 D-2011	11/14/2022	11:40	JL
Mixed Liquor Volatile SS	7,580	mg/l	1.00	SM 2540 E-2011	11/14/2022	16:15	JL

Sample ID#: 0210602      Sample Source: Vessel B  
 Sample Date/Time: 11/08/2022 / 15:50      Date Received: 11/08/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	1,250	MPN/g	180	SM 9221 E+C-2006	11/08/2022	16:30	SR
Mixed Liquor Susp Solids	12,800	mg/l	1.00	SM 2540 D-2011	11/14/2022	11:44	JL
Mixed Liquor Volatile SS	8,380	mg/l	1.00	SM 2540 E-2011	11/14/2022	16:35	JL





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71456

Through Quality Service

www.sss-services.com

Email: info@sss-services.com

### CHAIN OF CUSTODY RECORD

City/County WSA  
 Kennedy Rd.  
 Front, Verona 20182  
 99 347-2789 (Fax)

Additional Notes/ Comments/ Special Instructions: Quarterly Vector Study

Quarterly Vector Study - Remington WWTP P.O.#

### ANALYSES

COLLECTION TIME	SAMPLE LOCATION	CONTAINERS SIZE	BIB	SAMPLE DATE	PRESERVATIVE	ANALYSES		COMMENTS
						MLSS/SS	Fecal	
	Vessel A	125	P 1	X	WW	NA THIOS	X	
	Vessel A	250	P 1	X	WW	none	X	Vector Attraction Study
	Vessel B	125	P 2	X	WW	NA THIOS	X	
	Vessel B	250	P 1	X	WW	none	X	

Fed Ex  Hand Delivery  
 Paid Office  Under 2 hours

Order?  Y  N  
 Received @ 9:00

Normal  Rush   
 Need Results by  Enter changes and save for Rush Tat

Job #   
 Job #

Sample condition OK upon receipt to lab  
 Sample Condition Stamp



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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 12/15/2022  
Report #: 72210  
Job #: 0010693  
Customer #: 99R  
Customer PO #  
Collected By: ESS Employee  
Sample Location: Quarterly Vector

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25 °C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials: AW





## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 12/15/2022  
Report #: 72210  
Job #: 0010693  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector

Sample ID#: 0212160      Sample Source: Vessel A  
Sample Date/Time: 12/07/2022 / 07:15      Date Received: 12/07/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	11,800	mg/l	100	SM 2540 D-2011	12/07/2022	15:25	JJ
Mixed Liquor Volatile SS	7,570	mg/l	100	SM 2540 E-2011	12/08/2022	11:40	JJ
Fecal Coliform	1,360	MPN/g	180	SM 9221 E+C-2006	12/07/2022	11:08	SR

Sample ID#: 0212161      Sample Source: Vessel B  
Sample Date/Time: 12/07/2022 / 07:30      Date Received: 12/07/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	11,300	mg/l	100	SM 2540 D-2011	12/07/2022	15:28	JJ
Mixed Liquor Volatile SS	7,210	mg/l	100	SM 2540 E-2011	12/08/2022	11:40	JJ
Fecal Coliform	618	MPN/g	180	SM 9221 E+C-2006	12/07/2022	11:37	SR

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis





CLINICAL



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### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 12/07/2022  
Report #: 71420  
Job #: 0010757  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials AW

12/11/22





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 12/07/2022  
 Report #: 71420  
 Job #: 0010757  
 Customer #: 99R  
 Customer PO#:  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0210540      Sample Source: Sludge  
 Sample Date/Time: 11/08/2022 / 08:20      Date Received: 11/08/2022

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Total Solids (%)	17.7	%	0.500	SM 2540 G-2011	11/11/2022	16:00	574
Arsenic, Total Recoverable	11.1	mg/kg	4.00	SW-846 6010B	11/14/2022	11:42	574
Molybdenum, Total Recoverable	10.5	mg/kg	4.00	SW-846 6010B	11/14/2022	11:42	574
Zinc, Total Recoverable	969	mg/kg	4.00	SW-846 6010B	11/14/2022	11:42	574
Lead, Total Recoverable	12.4	mg/kg	4.00	SW-846 6010B	11/14/2022	11:42	574
Nickel, Total Recoverable	25.6	mg/kg	4.00	SW-846 6010B	11/14/2022	11:42	574
Mercury, Total Recoverable	0.255	mg/kg	0.0250	SW-846 7471A	11/16/2022	14:32	574
Copper, Total Recoverable	827	mg/kg	2.00	SW-846 6010B	11/14/2022	11:42	574
Cadmium, Total Recoverable	26.2	mg/kg	2.00	SW-846 6010B	11/14/2022	11:42	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	11/14/2022	11:42	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 460160.

71420

**ENVIRONMENTAL SYSTEMS SERVICE, LTD.**

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**CUSTODY RECORD**

Her County Water and Sanitation Authority  
 Manager  
 PO Box 861646  
 Arlington, Virginia 20187  
 9-2092; fax 540-347-7699

Contract # \_\_\_\_\_  
 e Remington  
 and Lepp's  
 (Print Name) \_\_\_\_\_  
 (Signature) \_\_\_\_\_

COLLECTION TIME: \_\_\_\_\_  
 SAMPLE LOCATION: \_\_\_\_\_  
 CONTAINERS: 4  
 SIZE: 5 L  
 SAMPLE PRESERVATIVE: NONE

**ANALYSES**

DATE	TIME	RECEIVED BY	TRAINING BY	TAT	DATE	TIME	RECEIVED BY	COMMENTS
11/8/22	11:45	Richard Calkins	Richard Calkins	Normal	11/8/22	12:18	Richard Calkins	
11/8/22	12:18			Normal	11/8/22	12:18		

Remarks: OT 00  
 Received @ 2.9  
 Under 2 hours

TAT: Normal \_\_\_\_\_ Rush \_\_\_\_\_  
 Need Results by \_\_\_\_\_  
 Extra charges may apply for Rush TAT

W.O.# \_\_\_\_\_  
 W.O.# 10757

Amount Paid \$ \_\_\_\_\_  
 Check # \_\_\_\_\_

revised 04/1/02  
 sample condition "OK"  
 upon receipt to lab



Biosolids notification requirements to comply with 9VAC25-31-530.F - G or 9VAC25-32-313.G - H.

**Part I - To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTP

Permit Number: VA 0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_

Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	11.1	11.1	41	75
Total Cadmium	28.2	28.2	39	85
Total Copper	827	827	1,500	4,300
Total Lead	12.4	12.4	300	840
Total Mercury	0.255	0.255	17	57
Total Molybdenum	10.5	10.5	NL <sup>(3)</sup>	75
Total Nickel	25.6	25.6	420	420
Total Selenium	<4.00	<4.00	100	100
Total Zinc	969	969	2,800	7,500

(1) Values to be reported on a dry weight basis.

(2) Sludge may not be land applied if any pollutant exceeds these values.

(3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

Alternative 1: Fecal coliform testing -geometric mean of 7 samples

Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:

Option 1 - Aerobic digestion

Option 2 - Air drying beds

Option 3 - Anaerobic digestion

Option 4 - Composting

Option 5 - Lime Stabilization

Other: \_\_\_\_\_



**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8 by:

- Option 1:  $\geq$  38% volatile solids reduction
- Option 2: Anaerobic 40 day bench test
- Option 3: Aerobic 30 day bench test
- Option 4: Specific Oxygen Uptake Rate (SOUR) test
- Option 5: Aerobic process, 14 days @ 40°C (45°C)
- Option 6: Alkaline stabilization
- Option 7: Dry to  $\geq$  75% T.S. w/no unstabilized 1<sup>st</sup> sludges
- Option 8: Dry to  $\geq$  90% T.S.

OR

VAR requirements for Class B biosolids were not achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Chief Operator Troy Willingham  
 Signature Troy Willingham Date Signed 12-19-22  
 Telephone number 540-439-2225



# Recyc Systems<sup>®</sup> Inc.

Annual Tonnage Report  
January 1, 2022 to December 31, 2022

## Remington WWTP

Total Wet Tons Land Applied	2487.05
December 2022 % Solids	19.28
Total Dry Tons Land Applied	479.50
Total METRIC Dry Tons Land Applied	435
Approx Acres Utilized	129
Tons to Landfill	0

FAUQUIER COUNTY  
**WATER & SANITATION AUTHORITY**  
7172 Kennedy Road • Vint Hill Farms  
Warrenton, Virginia 20187-3907  
Phone (540) 349-2092 • Fax (540) 347-7689



February 6, 2020

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

Subject: Remington WWTP VA0076805

To Whom It May Concern:

Enclosed please find the 2019 Annual Sludge Program Discharge Monitoring Reports and the Pathogen Reduction Study Summary for the Remington Wastewater Treatment Plant. We have no excursions to report.

Should you have any questions or require additional information please feel free to contact me at (540) 349-2092.

Sincerely,

Cheryl St. Amant  
Associate General Manager Operations

Cc: Ben Shoemaker, Executive Director  
Remington WWTP  
File

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

COMMONWEALTH OF VIRGINIA  
**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)  
 DISCHARGE MONITORING REPORT(DMR)

Municipal Major 02/12/2010

DEPT. OF ENVIRONMENTAL QUALITY  
 (REGIONAL OFFICE)

Northern Regional Office  
 13901 Crown Court

Woodbridge VA 22193

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

NAME Remington Wastewater Treatment Plant  
 ADDRESS c/o Fauquier County Water and Sewer Authority  
 Warrenton VA 20188  
 FACILITY LOCATION 12523 Lucky Hill Rd

VA0076805	S01					
PERMIT NUMBER	DISCHARGE NUMBER					
MONITORING PERIOD						
YEAR	MO	DAY	YEAR	MO	DAY	
2019	01	01	TO	2019	12	31

FROM

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
672 SOLIDS, TOTAL, SLUDGE AS PERCENT	REPORTD	*****	*****		*****	19.3	*****	%		1/YR	Comp
	REQMNT	*****	*****		*****	NL	*****	%		1/YR	COMP
680 ARSENIC, SLUDGE	REPORTD	*****	*****		*****	7.15	10.2	mc/kc		1/YR	Comp
	REQMNT	*****	*****		*****	41	75	MG/KG		1/YR	COMP
681 MOLYBDENUM, SLUDGE	REPORTD	*****	*****		*****	*****	10.0	MG/KC		1/YR	Comp
	REQMNT	*****	*****		*****	*****	75	MG/KG		1/YR	COMP
682 ZINC, SLUDGE	REPORTD	*****	*****		*****	1293	1620	MG/KC		1/YR	Comp
	REQMNT	*****	*****		*****	2800	7500	MG/KG		1/YR	COMP
683 LEAD, SLUDGE	REPORTD	*****	*****		*****	23.9	28.4	MG/KC		1/YR	Comp
	REQMNT	*****	*****		*****	300	840	MG/KG		1/YR	COMP
684 NICKEL, SLUDGE	REPORTD	*****	*****		*****	20.3	26.8	MG/KC		1/YR	Comp
	REQMNT	*****	*****		*****	420	420	MG/KG		1/YR	COMP
685 MERCURY, SLUDGE	REPORTD	*****	*****		*****	0.369	0.624	MG/KC		1/YR	Comp
	REQMNT	*****	*****		*****	17	57	MG/KG		1/YR	COMP
586 COPPER, SLUDGE	REPORTD	*****	*****		*****	924	1070	MG/KC		1/YR	Comp
	REQMNT	*****	*****		*****	1500	4300	MG/KG		1/YR	COMP

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)	OPERATOR IN RESPONSIBLE CHARGE			DATE		
		0	0	0	Raymond Sears	RJ Sears	1965006247	20	02
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.				TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
				PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT			TELEPHONE		
				CHERYL ST. AMANT	[Signature]	540-349-2092	20	02	06
				TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

Municipal Major 02/12/2010

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)  
DISCHARGE MONITORING REPORT(DMR)**

DEPT. OF ENVIRONMENTAL QUALITY  
(REGIONAL OFFICE)

Northern Regional Office  
13901 Crown Court

Woodbridge VA 22193

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS  
BEFORE COMPLETING THIS FORM.

PERMITTEE NAME/ADDRESS(INCLUDE  
FACILITY NAME/LOCATION IF DIFFERENT)

NAME Remington Wastewater Treatment Plant  
ADDRESS c/o Fauquier County Water and Sewer Authority  
Warrenton VA 20188  
FACILITY LOCATION 12523 Lucky Hill Rd

VA0076805	S01				
PERMIT NUMBER	DISCHARGE NUMBER				
MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
2019	01	01	TO	2019	12 31

FROM

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM			
587 CADMIUM, SLUDGE	REPORTD	*****	*****	*****	*****	6.93	10.5	MG/KG	1/YR	Comp
	REQRMNT	*****	*****	*****	*****	39	85	MG/KG	1/YR	CDMP
588 LEVEL OF PATHOGEN REQUIREMENTS ACHIEVED	REPORTD	*****	*****	*****	*****	*****	2	STCL#	1/YR	
	REQRMNT	*****	*****	*****	*****	*****	NL	STCL#	1/YR	*****
589 DESCRIPTION OF PATHOGEN OPTION USED	REPORTD	*****	*****	*****	*****	*****	2	ALTR#	1/YR	
	REQRMNT	*****	*****	*****	*****	*****	NL	ALTR#	1/YR	*****
590 VECTOR ATTRACTION REDUCTION OPTION USED	REPORTD	*****	*****	*****	*****	*****	2	ALTR#	1/YR	
	REQRMNT	*****	*****	*****	*****	*****	NL	ALTR#	1/YR	*****
597 SELENIUM, SLUDGE	REPORTD	*****	*****	*****	*****	LQL	LQL	MG/KG	1/YR	Comp
	REQRMNT	*****	*****	*****	*****	100	100	MG/KG	1/YR	COMP
	REPORTD									
	REQRMNT								*****	
	REPORTD									
	REQRMNT								*****	
	REPORTD									
	REQRMNT								*****	

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)	OPERATOR IN RESPONSIBLE CHARGE			DATE		
		0	0	0	Raymond Sparks	<i>[Signature]</i>	1965006247	20	02
<small>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 INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS MANAGING THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING 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.</small>				TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
				PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT			TELEPHONE		
				CHEVEL ST. AMANT	<i>[Signature]</i>	540-349-2092	20	02	06
				TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)  
DISCHARGE MONITORING REPORT(DMR)**

Municipal Major 02/08/2008

DEPT. OF ENVIRONMENTAL QUALITY  
(REGIONAL OFFICE)

Northern Regional Office  
13901 Crown Court

Woodbridge VA 22193

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS  
BEFORE COMPLETING THIS FORM.

PERMITTEE NAME/ADDRESS(INCLUDE  
FACILITY NAME/LOCATION IF DIFFERENT)

NAME Remington Wastewater Treatment Plant  
ADDRESS c/o Fauquier County Water and Sewer Authority  
Warrenton VA 20188

FACILITY LOCATION 12523 Lucky Hill Rd

VA0076805	SP1					
PERMIT NUMBER	DISCHARGE NUMBER					
MONITORING PERIOD						
YEAR	MO	DAY	YEAR	MO	DAY	
2019	01	01	TO	2019	12	31

FROM

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
693 ANNUAL SLUDGE PRODUCTION TOTAL	REPORTD	*****	466.54	MTLYR	*****	*****	*****			1/YR	CALC
	REQRMNT	*****	NL	MTNYR	*****	*****	*****			1/YR	CALC
694 ANNUAL AMT SLUDGE LAND APPLIED	REPORTD	*****	466.54	MTNYR	*****	*****	*****			1/YR	CALC
	REQRMNT	*****	NL	MTNYR	*****	*****	*****			1/YR	CALC
	REPORTD										
	REQRMNT									*****	
	REPORTD										
	REQRMNT									*****	
	REPORTD										
	REQRMNT									*****	
	REPORTD										
	REQRMNT									*****	
	REPORTD										
	REQRMNT									*****	

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)	OPERATOR IN RESPONSIBLE CHARGE			DATE					
		0	0	0	Raymond Scaris	<i>[Signature]</i>	1965006247	20	02	06		
<small>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 THIS SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION REPORTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. BE AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 S.C. &amp; 1201 AND 33 U.S.C. &amp; 1319. (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.)</small>				<small>TYPED OR PRINTED NAME</small>			<small>SIGNATURE</small>			<small>CERTIFICATE NO.</small>		
				<small>PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT</small>			<small>TELEPHONE</small>					
				<small>TYPED OR PRINTED NAME</small>			<small>SIGNATURE</small>			<small>TELEPHONE</small>		
				<small>CHERYL ST. AMM</small>			<small>[Signature]</small>			<small>540-249-2092</small>		
				<small>YEAR</small>			<small>MO.</small>			<small>DAY</small>		
				<small>YEAR</small>			<small>MO.</small>			<small>DAY</small>		



January 1, 2019 to December 31, 2019

WSA Remington

Total Wet Tons 2,311.89

Dec 2019<sup>9</sup> % Solids 20.18%

Total Dry Tons 466.54

Approx Acres Utilized 231.189

Tons to Landfill 0



1st art

### NOTICE AND NECESSARY INFORMATION

Biosolids notification requirements to comply with 9VAC25-31-530.F - G or 9VAC25-32-313.G - H.

**Part I - To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTP Permit Number: VA-0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_


Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	< 4.00	< 4.00	41	75
Total Cadmium	4.98	4.98	39	85
Total Copper	909	909	1,500	4,300
Total Lead	28.4	28.4	300	840
Total Mercury	0.223	0.223	17	57
Total Molybdenum	8.39	8.39	NL <sup>(3)</sup>	75
Total Nickel	18.7	18.7	420	420
Total Selenium	< 4.00	< 4.00	100	100
Total Zinc	1020	1020	2,800	7,500

- (1) Values to be reported on a dry weight basis.
- (2) Sludge may not be land applied if any pollutant exceeds these values.
- (3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

- Alternative 1: Fecal coliform testing -geometric mean of 7 samples
- Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:
  - Option 1 - Aerobic digestion
  - Option 2 - Air drying beds
  - Option 3 - Anaerobic digestion
  - Option 4 - Composting
  - Option 5 - Lime Stabilization
  - Other: \_\_\_\_\_

 **FAXED**  
4-29-19

**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8 by:

- Option 1:  $\geq 38\%$  volatile solids reduction
- Option 2: Anaerobic 40 day bench test
- Option 3: Aerobic 30 day bench test
- Option 4: Specific Oxygen Uptake Rate (SOUR) test
- Option 5: Aerobic process, 14 days @ 40°C (45°C)
- Option 6: Alkaline stabilization
- Option 7: Dry to  $\geq 75\%$  T.S. w/no unstabilized 1° sludges
- Option 8: Dry to  $\geq 90\%$  T.S.

OR

VAR requirements for Class B biosolids were **not** achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

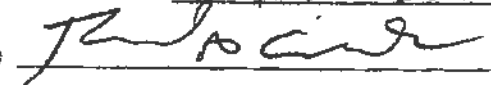
Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Raymond Secaris Chief operator  
 Signature  Date Signed 4-29-19  
 Telephone number 1 540 439 2225



1ST QRT

2-13-19

Sludge

218 North Main St ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel: (540) 825-6660 ♦ Fax (540) 825-4961 ♦ [www.ess-services.com](http://www.ess-services.com)

### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1648

Report Date: 03/04/2019  
Report #: 34480  
Job #: 0007405  
Customer #: 88R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

This laboratory report may not be reproduced, except in full, without the written approval of ESS.

If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 03/04/2019  
 Report #: 34480  
 Job #: 0007405  
 Customer #: 09R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0124477      Sample Source: Sludge  
 Sample Date/Time: 02/13/2019 / 10:55      Date Received: 02/13/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Total Solids (%)	19.2	%	0.500	SM 2540 G-2011	02/19/2019	17:20	574
Arsenic, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	02/19/2019	09:17	574
Molybdenum, Total Recoverable	8.39	mg/kg	4.00	SW-846 6010B	02/19/2019	09:17	574
Zinc, Total Recoverable	1,020	mg/kg	4.00	SW-846 6010B	02/19/2019	09:17	574
Lead, Total Recoverable	28.4	mg/kg	4.00	SW-846 6010B	02/19/2019	09:17	574
Nickel, Total Recoverable	18.7	mg/kg	4.00	SW-846 6010B	02/19/2019	09:17	574
Mercury, Total Recoverable	0.223	mg/kg	0.0280	SW-846 7471A	02/19/2019	12:40	574
Copper, Total Recoverable	909	mg/kg	2.00	SW-846 6010B	02/19/2019	09:17	574
Cadmium, Total Recoverable	4.98	mg/kg	2.00	SW-846 6010B	02/19/2019	09:17	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	02/19/2019	09:17	574

574 Samples subcontracted to VELAP ID# 460160







2nd Qrt 2019

### NOTICE AND NECESSARY INFORMATION

Biosolids notification requirements to comply with 9VAC25-31-530.F – G or 9VAC25-32-313.G – H.

**Part I – To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTP Permit Number: VA 0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	10.2	10.2	41	75
Total Cadmium	10.5	10.5	39	85
Total Copper	1,070	1,070	1,500	4,300
Total Lead	21.6	21.6	300	840
Total Mercury	0.624	0.624	17	57
Total Molybdenum	7.26	7.26	NL <sup>(3)</sup>	75
Total Nickel	20.2	20.2	420	420
Total Selenium	< 4.00	< 4.00	100	100
Total Zinc	1,620	1,620	2,800	7,500

- (1) Values to be reported on a dry weight basis.
- (2) Sludge may not be land applied if any pollutant exceeds these values.
- (3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

- Alternative 1: Fecal coliform testing -geometric mean of 7 samples
- Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:
  - Option 1 - Aerobic digestion
  - Option 2 - Air drying beds
  - Option 3 - Anaerobic digestion
  - Option 4 - Composting
  - Option 5 - Lime Stabilization
  - Other: \_\_\_\_\_

 **FAXED**  
7-1-18

**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8 by:

- Option 1:  $\geq$  38% volatile solids reduction
- Option 2: Anaerobic 40 day bench test
- Option 3: Aerobic 30 day bench test
- Option 4: Specific Oxygen Uptake Rate (SOUR) test
- Option 5: Aerobic process, 14 days @ 40°C (45°C)
- Option 6: Alkaline stabilization
- Option 7: Dry to  $\geq$  75% T.S. w/no unstabilized 1° sludges
- Option 8: Dry to  $\geq$  90% T.S.

OR

VAR requirements for Class B biosolids were not achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Raymond Searls chief operator

Signature  Date Signed 7-1-19

Telephone number 540 439 2225

22 Q-T



218 North Main St ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel: (540) 825-6660 ♦ Fax (540) 825-4961 ♦ [www.ess-services.com](http://www.ess-services.com)

### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 06/25/2019  
Report #: 37389  
Job #: 0007666  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

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If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1848

Report Date: 06/25/2019  
 Report #: 37389  
 Job #: 0007688  
 Customer #: 99R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0130823      Sample Source: Sludge  
 Sample Date/Time: 06/05/2019 / 10:15      Date Received: 06/05/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Total Solids (%)	19.0	%	0.500	SM 2540 G-2011	06/07/2019	13:30	574
Arsenic, Total Recoverable	10.2	mg/kg	4.00	SW-848-6010B	06/11/2019	08:25	574
Molybdenum, Total Recoverable	7.28	mg/kg	4.00	SW-848-6010B	06/11/2019	08:25	574
Zinc, Total Recoverable	1,820	mg/kg	4.00	SW-848-6010B	06/11/2019	08:25	574
Lead, Total Recoverable	21.8	mg/kg	4.00	SW-848-6010B	06/11/2019	08:25	574
Nickel, Total Recoverable	20.2	mg/kg	4.00	SW-848-6010B	06/11/2019	08:25	574
Mercury, Total Recoverable	0.824	mg/kg	0.0250	SW-848-7471A	06/11/2019	12:59	574
Copper, Total Recoverable	1,070	mg/kg	2.00	SW-848-6010B	06/11/2019	08:25	574
Cadmium, Total Recoverable	10.5	mg/kg	2.00	SW-848-6010B	06/11/2019	08:25	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-848-6010B	06/11/2019	08:25	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 460160



# INVOICE OF CUSTODY RECORD

City: Fauquier County Water and Sanitation Authority

Scott Unkefer

P.O. Box 861846

Warrenton, Virginia 20187

540-348-2082; fax 540-347-7689

# ENVIRONMENTAL SYSTEMS SERVICE, LTD.

218 North Main St.

Post Office Box 520

Chapeau, VA 22701

800-541-2116

540-825-6550

Fax 540-825-4961

500 Stone Bl.

Post Office Box 739

Bedford, VA 24623

540-888-5413

Fax 540-888-5530

8321 Leichter Road

Laurel, MD 20723

301-817-8682

Fax 301-817-3428

3917 Westport Blvd.

Suite E

Winston-Salem, NC 27103

810-628-3378

Fax 810-628-3378

## ANALYSES

Contract # \_\_\_\_\_

Name/Site Remington

By: \_\_\_\_\_

(Print Name)

(Signature)

COLLECTOR  
DATE TIME

LOCATION

ANALYSIS  
DATE TIME  
PRESERVATIVE

COMMENTS

COLLECTOR	DATE	TIME	LOCATION	ANALYSIS	DATE	TIME	PRESERVATIVE	COMMENTS
	6-5-15	10:15	Sludge	% solids	5/6	11:57		
				As,Mo,Zn	5/19	11:57		
				Pb,Ni,Hg				
				Cu,Cd,Se				

Date

Time

Received by:

Date

Time

Received by:

Date

Time

Received by:

Date

Time

Received by:

Date

Time

Received by:

Date

Time

Received by:

Date

Time

Received by:

Date

Time

Received by:

Delivery  
 Fed Ex  
 Post Office  
 Standard Delivery

Remarks: office  
 Received @ 0.3  
 Under 2 hours

TAT  
 Normal \_\_\_\_\_ Rush \_\_\_\_\_  
 Need Results by \_\_\_\_\_  
 Extra charges may apply for Rush TAT.

W.O.# \_\_\_\_\_  
 W.O.# 7684

Amount Paid \$ \_\_\_\_\_  
 Check # \_\_\_\_\_

Revised 04/17  
 Sample Condition "OK"  
 Upon Receipt



**NOTICE AND NECESSARY INFORMATION**

3:20 PM  
2019

Biosolids notification requirements to comply with 9VAC25-31-530.F – G or 9VAC25-32-313.G – H.

**Part I – To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTWP Permit Number: VA 0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_


Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	9.47	9.47	41	75
Total Cadmium	6.97	6.97	39	85
Total Copper	1040	1040	1,500	4,300
Total Lead	24.7	24.7	300	840
Total Mercury	0.178	0.178	17	57
Total Molybdenum	10	10	NL <sup>(3)</sup>	75
Total Nickel	26.8	26.8	420	420
Total Selenium	< 4.0	< 4.0	100	100
Total Zinc	1480	1480	2,800	7,500

- (1) Values to be reported on a dry weight basis.
- (2) Sludge may not be land applied if any pollutant exceeds these values.
- (3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

- Alternative 1: Fecal coliform testing -geometric mean of 7 samples
- Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:
  - Option 1 - Aerobic digestion
  - Option 2 - Air drying beds
  - Option 3 - Anaerobic digestion
  - Option 4 - Composting
  - Option 5 - Lime Stabilization
  - Other: \_\_\_\_\_


 REJECT  
9-27-19

**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

- VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8 by:
  - Option 1:  $\geq$  38% volatile solids reduction
  - Option 2: Anaerobic 40 day bench test
  - Option 3: Aerobic 30 day bench test
  - Option 4: Specific Oxygen Uptake Rate (SOUR) test
  - Option 5: Aerobic process, 14 days @ 40°C (45°C)
  - Option 6: Alkaline stabilization
  - Option 7: Dry to  $\geq$  75% T.S. w/no unstabilized 1° sludges
  - Option 8: Dry to  $\geq$  90% T.S.

OR

- VAR requirements for Class B biosolids were **not** achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Ryanne Seals Chief Operator  
 Signature [Signature] Date Signed 9-26-19  
 Telephone number 540439-2225





3rd art  
sludge  
8-20-19

218 North Main St ♦ P.O. Box 520 ♦ Cutpaper, Virginia 22701 ♦ Tel: (540) 825-6660 ♦ Fax (540) 825-4981 ♦ [www.ess-services.com](http://www.ess-services.com)

### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 09/08/2019  
Report # 39472  
Job #: 0007852  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

This laboratory report may not be reproduced, except in full, without the written approval of ESS.

If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW



# OF CUSTODY RECORD

3947

Warner County Water and Sanitation Authority

Post Office

O. Box 861648

Hampton, Virginia 20187

410-349-2092; fax 540-347-7689

216 North Main St. 500 Stone St. 6327 Lehnzer Road 3917 Westport Blvd.  
 Post Office Box 620 Post Office Box 736 Laurel, MD 20773 Suite E  
 Claysport, VA 22704 Bedford, VA 24623 Winton-Salem, NC 27103  
 800-641-2116 540-698-5419 301-617-6632 910-639-3878  
 540-825-8680 Fax 540-698-6330 Fax 301-617-4429 Fax 910-639-3878  
 Fax 540-625-4981

## ENVIRONMENTAL SYSTEMS SERVICE, LTD.

ANALYSES

Contract # \_\_\_\_\_

Client Remington

Address Remington

(Print Name)

Ray Lewis

(Optional)

DATE TIME (Print Name) SAMPLE LOCATION COLOR NOTES SIZE OF SAMPLE PREPARATIVE

DATE	TIME	RECEIVED BY:	STUDGE	8 oz	G	1	X	STUDGE	none	X	X	X	X	COMMENTS
Date	Time	Received By:								% solids	As,Mo,Zn	Pb,Ni,Hg	Cu,Cd,Se	
8-20-19	0715		Studge											
8-20-19	11:34	Alvini Brook												
8-20-19	11:55	Alvini Brook												
8-20-19	11:55	Alvini Brook												

Remarks: 6N VC  
 Received @ 1.3c  
 Under 2 hours

Normal  Rush   
 Need Results by \_\_\_\_\_  
 Extra charges may apply for Rush TAT.

W.O.# 7852 Amount Paid \$ \_\_\_\_\_  
 W.O.# \_\_\_\_\_ Check # \_\_\_\_\_

Sample Condition OK  
 Upon Receipt

REVISED 04/11/02



## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1648

Report Date: 09/06/2019  
 Report #: 39472  
 Job #: 0007852  
 Customer #: 99R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0135261      Sample Source: Sludge  
 Sample Date/Time: 08/20/2019 / 07:15      Date Received: 08/20/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Total Solids (%)	19.8	%	0.500	SM 2540 G-2011	08/23/2019	16:00	574
Arsenic, Total Recoverable	9.42	mg/kg	4.00	SW-846 8010B	08/27/2019	08:41	574
Molybdenum, Total Recoverable	10.0	mg/kg	4.00	SW-846 8010B	08/27/2019	08:41	574
Zinc, Total Recoverable	1,480	mg/kg	4.00	SW-846 8010B	08/27/2019	08:41	574
Lead, Total Recoverable	24.7	mg/kg	4.00	SW-846 8010B	08/27/2019	08:41	574
Nickel, Total Recoverable	26.8	mg/kg	4.00	SW-846 8010B	08/27/2019	08:41	574
Mercury, Total Recoverable	0.178	mg/kg	0.0250	SW-846 7471A	08/29/2019	09:20	574
Copper, Total Recoverable	1,040	mg/kg	2.00	SW-846 8010B	08/27/2019	08:41	574
Cadmium, Total Recoverable	8.97	mg/kg	2.00	SW-846 8010B	08/27/2019	08:41	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 8010B	08/27/2019	08:41	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 460160



4th QRT

### NOTICE AND NECESSARY INFORMATION

Biosolids notification requirements to comply with 9VAC25-31-530.F – G or 9VAC25-32-313.G – H.

**Part I – To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTP Permit Number: VA-0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	8.96	8.96	41	75
Total Cadmium	5.26	5.26	39	85
Total Copper	677	677	1,500	4,300
Total Lead	20.8	20.8	300	840
Total Mercury	0.452	0.452	17	57
Total Molybdenum	7.62	7.62	NL <sup>(3)</sup>	75
Total Nickel	15.6	15.6	420	420
Total Selenium	< 4.00	< 4.00	100	100
Total Zinc	1,050	1,050	2,800	7,500

- (1) Values to be reported on a dry weight basis.
- (2) Sludge may not be land applied if any pollutant exceeds these values.
- (3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

- Alternative 1: Fecal coliform testing -geometric mean of 7 samples
- Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:
  - Option 1 - Aerobic digestion
  - Option 2 - Air drying beds
  - Option 3 - Anaerobic digestion
  - Option 4 - Composting
  - Option 5 - Lime Stabilization
  - Other: \_\_\_\_\_

 **FAXED**  
12-15-19



**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8 by:

- Option 1:  $\geq 38\%$  volatile solids reduction
- Option 2: Anaerobic 40 day bench test
- Option 3: Aerobic 30 day bench test
- Option 4: Specific Oxygen Uptake Rate (SOUR) test
- Option 5: Aerobic process, 14 days @ 40°C (45°C)
- Option 6: Alkaline stabilization
- Option 7: Dry to  $\geq 75\%$  T.S. w/no unstabilized 1° sludges
- Option 8: Dry to  $\geq 90\%$  T.S.

OR

VAR requirements for Class B biosolids were **not** achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Raymond Searls

Signature  Date Signed 12-18-19

Telephone number 540 439 2225

4th QRT



218 North Main St ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel: (540) 825-6660 ♦ Fax (540) 825-4861 ♦ [www.ess-services.com](http://www.ess-services.com)

### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 11/20/2019  
Report #: 41676  
Job #: 0007985  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

This laboratory report may not be reproduced, except in full, without the written approval of ESS.

If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 11/20/2019  
 Report #: 41676  
 Job #: 0007965  
 Customer #: 99R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0139903      Sample Source: Sludge  
 Sample Date/Time: 11/06/2019 / 08:15      Date Received: 11/06/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Total Solids (%)	19.5	%	0.500	SM 2540 G-2011	11/08/2019	12:00	574
Arsenic, Total Recoverable	8.96	mg/kg	4.00	SW-848 6010B	11/11/2019	09:06	574
Cadmium, Total Recoverable	5.26	mg/kg	2.00	SW-848 6010B	11/11/2019	09:06	574
Copper, Total Recoverable	677	mg/kg	2.00	SW-848 6010B	11/11/2019	09:06	574
Lead, Total Recoverable	20.8	mg/kg	4.00	SW-848 6010B	11/11/2019	09:06	574
Molybdenum, Total Recoverable	7.62	mg/kg	4.00	SW-848 6010B	11/11/2019	09:06	574
Nickel, Total Recoverable	15.6	mg/kg	4.00	SW-846 6010B	11/11/2019	09:06	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	11/11/2019	09:06	574
Zinc, Total Recoverable	1,050	mg/kg	4.00	SW-846 6010B	11/11/2019	09:06	574
Mercury, Total Recoverable	0.452	mg/kg	0.0250	SW-846 7471A	11/13/2019	11:55	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 460160







1st quarter

March 20, 2019

Mr. Raymond Searls  
FCWSA- Remington WWTP  
12523 Lucky Hill Road  
Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the first quarter vector (2019) attraction study for the Remington WWTP from 2/11/2019 to 3/13/2019. The original 5 gallon sample which was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels were labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples were collected from Vessels A and B at both the start test date and after the 30 day period. Each vessel was mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30 day period, additional distilled water was added to each vessel as needed until the original test volume was maintained.

After the 30 day period had expired a second round of MLSS, MLVSS, and Fecal Coliform samples were collected from Vessels A and B.

<b>Vessel A</b>		<b>% Sludge = 1.84%</b>		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
2/11/2019	18400	12800	69.6%	59,800
3/13/2019	14600	9760	68.8%	< 180
		Reduction	<b>2.7%</b>	

<b>Vessel B</b>		<b>% Sludge = 1.80%</b>		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
2/11/2019	18000	12600	70.0%	19,400
3/13/2019	17200	11500	66.9%	< 180
		Reduction	<b>3.1%</b>	

Average Reduction for 30 Day Period	<b>2.9%</b>
-------------------------------------	-------------

The average total volatile reduction of Vessels A and B during the 30 day period was calculated to be 2.9%. According to the biosolids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent of 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15%, vector attraction reduction is achieved.

Since the volatile solids reduction for the Remington WWTP was found to be an average of 2.9% reduction after the additional 30 day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information should be submitted on your Form SO1 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody





218 North Main St. ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel: (540) 825-6660 ♦ Fax (540) 825-4961 ♦ [www.ess-services.com](http://www.ess-services.com)

## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 03/19/2019  
Report #: 35192  
Job #: 0007444  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Remington - Quarterly Vector Study

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

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If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 03/19/2019  
 Report #: 35192  
 Job #: 0007444  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Remington - Quarterly Vector Study

Sample ID#: 0126012      Sample Source: Vessel A  
 Sample Date/Time: 03/13/2019 / 15:30      Date Received: 03/13/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	< 180	MPN/g	180	SM 9221 E+C-2008	03/13/2019	17:20	Jl
Mixed Liquor Susp Solids	14,800	mg/l	1.00	SM 2540 D-2011	03/14/2019	13:28	Jl
Mixed Liquor Volatile SS	9,780	mg/l	1.00	SM 2540 E-2011	03/15/2019	11:30	Jl

Sample ID#: 0126013      Sample Source: Vessel B  
 Sample Date/Time: 03/13/2019 / 15:40      Date Received: 03/13/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	< 180	MPN/g	180	SM 9221 E+C-2008	03/13/2019	17:40	Jl
Mixed Liquor Susp Solids	17,200	mg/l	1.00	SM 2540 D-2011	03/14/2019	13:44	Jl
Mixed Liquor Volatile SS	11,500	mg/l	1.00	SM 2540 E-2011	03/15/2019	11:30	Jl

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.





218 North Main Street • Post Office Box 520 • Clapperton, Virginia 22701 •  
 800-541-2116 • 640-825-8860 • Fax: 540-825-4961  
 500 Stone Street • Post Office Box 736 • Bedford, Virginia 24523 •  
 540-898-5413 • Fax: 540-898-5530

35192

**CHAIN OF CUSTODY RECORD**

Additional Notes/ Comments/ Special Instructions:

*Phoretically Vector Study*

**ANALYSES**

PO#

Owner/Client

*Sean H. Hovni*

(Signature)

(Print Name)

COLLECTION DATE TIME	SAMPLE LOCATION	CONTAINERS #	SIZE	TEMP	SAMPLE MATRIX	PRESERVATIVE	COMMENT
03/31/19 1530	Vessel A	125 P	2X	17	WV	SPIN	X
3/31/19 1530	Vessel A	250 P	1X	17	WV	---	X
3/31/19 1540	Vessel B	125 P	1X	17	WV	SPIN	X
3/31/19 1540	Vessel B	250 P	1X	17	WV	---	X

*Fecal Mixed Lipid*

Date	Time	Received by:	Requested by:	TAT:	Date	Time	Received for Laboratory by:
3/31/19	1600			Normal	3/13/19	1600	A. Woodhouse

Fed Ex  
 Hand Delivery  
 Post Office

On Ice?  Y  N  
 Received @ 17.5°C  
 Under 2 hours

Need Results by \_\_\_\_\_  
 Extra charges will apply for Rush TAT.

Job # 7444  
 Job # \_\_\_\_\_

Sample Condition Upon Receipt  
 Sample Condition Status



SO  
# 12/6/19

218 North Main St ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel (540) 825-6660 ♦ Fax (540) 825-4981 ♦ [www.ess-services.com](http://www.ess-services.com)

### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1648

Report Date: 08/01/2019  
Report # 34378  
Job #: 0007554  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

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The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

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*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 03/01/2019  
 Report #: 34378  
 Job #: 0007554  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#: 0124260      Sample Source: Vessel A  
 Sample Date/Time: 02/11/2019 / 09:15      Date Received: 02/11/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	59,800	MPN/g	180	SM 9221 E+C-2008	02/11/2019	12:30	TS
Mixed Liquor Susp Solids	18,400	mg/l	1.00	SM 2540 D-2011	02/15/2019	17:51	JI
Mixed Liquor Volatile SS	12,800	mg/l	1.00	SM 2540 E-2011	02/16/2019	14:35	JI

Sample ID#: 0124261      Sample Source: Vessel B  
 Sample Date/Time: 02/11/2019 / 09:25      Date Received: 02/11/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	19,400	MPN/g	180	SM 9221 E+C-2008	02/11/2019	13:10	TS
Mixed Liquor Susp Solids	18,000	mg/l	1.00	SM 2540 D-2011	02/15/2019	17:54	JI
Mixed Liquor Volatile SS	12,800	mg/l	1.00	SM 2540 E-2011	02/16/2019	14:55	JI

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.





Environmental Systems Services Ltd

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34378

### CHAIN OF CUSTODY RECORD

Remington  
 Randy de Raymond

Additional Notes/ Comments/ Special Instructions:  
 Quarterly Vector Study (1st quarter 2019)

ANALYSES

Name/ Site

Sean Minaid

P.O.#

(Signature)

COLLECTION DATE	TIME	SAMPLE LOCATION	CONTAINER SIZE	NO. OF SAMPLES	MATRIX	PRESERVATIVE	COMMENTS
-----------------	------	-----------------	----------------	----------------	--------	--------------	----------

2/11/19	0915	vessel A	125	P 2	✓	WJ	Spec'd	X
2/11/19	0915	vessel A	125	P 1	✓	WJ	---	X
2/11/19	0925	vessel B	125	P 1	✓	WJ	Spec'd	X
2/11/19	0925	vessel B	125	P 1	✓	WJ	---	X

ANALYSES	COMMENTS
Fecal	
Mixed Lipid	

Date	Time	Received by:	Requisitioned by:	Date	Time	Received by:
2/11/19	0930			2/11/19	0930	

Fed Ex     Hand Delivery  
 Overnight     Post Office

On Ice?  Y     N  
 Received @ 9.16 °C  
 Under 2 hours

TAT: Normal \_\_\_\_\_ Rush \_\_\_\_\_  
 Need Results by \_\_\_\_\_  
 Extra charges will apply for Rush TAT.

Job # \_\_\_\_\_  
 Job # 7554

Sample Condition "OK" Upon Receipt  
 Sample Condition Stamp



2nd QTR



June 27, 2019

Mr. Raymond Searls  
FCWSA- Remington WWTP  
12523 Lucky Hill Road  
Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the second quarter vector (2019) attraction study for the Remington WWTP from 5/13/2019 to 6/12/2019. The original 5 gallon sample which was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels were labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples were collected from Vessels A and B at both the start test date and after the 30 day period. Each vessel was mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30 day period, additional distilled water was added to each vessel as needed until the original test volume was maintained.

After the 30 day period had expired a second round of MLSS, MLVSS, and Fecal Coliform samples were collected from Vessels A and B.

<b>Vessel A</b>		<b>% Sludge = 1.27%</b>		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
5/13/2019	12700	8400	66.1%	866
6/12/2019	9100	7220	79.3%	<198
Reduction			<b>-13.2%</b>	

<b>Vessel B</b>		<b>% Sludge = 1.33%</b>		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
5/13/2019	13300	8890	66.8%	1,050
6/12/2019	10300	6670	64.8%	<180
Reduction			<b>2.1%</b>	

Average Reduction for 30 Day Period **-8.6%**

The average total volatile reduction of Vessels A and B during the 30 day period was calculated to be -5.6%. According to the biosolids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15%, vector attraction reduction is achieved.

Since the volatile solids reduction for the Remington WWTP was found to be an average of -5.6% reductions after the additional 30 day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information should be submitted on your Form SO1 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody



## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 05/31/2019  
Report #: 36766  
Job #: 0007595  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Vector Attraction

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

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*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials *AW*





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 05/31/2019  
 Report #: 36766  
 Job #: 0007595  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Vector Attraction

Sample ID#: 0129405      Sample Source: Vessel A  
 Sample Date/Time: 05/13/2019 / 09:50      Date Received: 05/13/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform	866	MPN/g	180	SM 9221 E+C-2006	05/13/2019	13:10	JI
MLSS/MLVSS							
Mixed Liquor Susp Solids	12,700	mg/l	1.00	SM 2540 D-2011	05/16/2019	17:51	JI
Mixed Liquor Volatile SS	8,400	mg/l	1.00	SM 2540 E-2011	05/17/2019	12:15	JI

Sample ID#: 0129406      Sample Source: Vessel B  
 Sample Date/Time: 05/13/2019 / 09:54      Date Received: 05/13/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform	1,050	MPN/g	180	SM 9221 E+C-2006	05/13/2019	13:25	JI
MLSS/MLVSS							
Mixed Liquor Susp Solids	13,300	mg/l	1.00	SM 2540 D-2011	05/16/2019	17:57	JI
Mixed Liquor Volatile SS	8,890	mg/l	1.00	SM 2540 E-2011	05/17/2019	12:15	JI

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.





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36766

High Quality Service

www.sss-services.com

Email: info@sss-services.com

# CHAIN OF CUSTODY RECORD

Neton  
 George

Additional Notes/ Comments/ Special Instructions:

Vecker Attraction PO#  
 Genia Ampton  
 (Print Name) (Signature)

COLLECTION TIME	SAMPLE LOCATION	CONTAINERS			SAMPLE MATRIX	PRESERVATIVE	ANALYSES	COMMENTS
		SIZE	QIP #	# COC				

0950	Vessel A	12	125	P 2	✓	ww	X	
0950	Vessel A	520	125	P 1	✓	ww	Y	
0954	Vessel B	66	125	P 1	✓	ww	X	
0954	Vessel B	500	125	P 1	✓	ww	X	

Fecal (F)  
 Mixed liquor

Date: 5/13/10 Time: 8:15 AM  
 Received by: [Signature]  
 Date: 5/13/10 Time: 0957  
 Received for Laboratory by: [Signature]

Fed Ex:  Hand Delivery  
 Post Office:  Under 2 hours

On Ice?  Y  N  
 Received @ 22.4 °C  
 TAT: Normal \_\_\_\_\_ Rush \_\_\_\_\_  
 Need Results by \_\_\_\_\_ Extra charges will apply for Rush TAT.

Job # 1595  
 Sample Condition "OK" Upon Receipt  
 Sample Condition Stamp



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Quality Service

2011-01-01 08:00:00

Print Report

# CHAIN OF CUSTODY RECORD

Additional Notes/Comments/Special Instructions:

Fauquier County WSA  
 Raymond Seards  
 7172 Kennedy Rd.  
 Warrenton, Virginia 20187  
 349-2092; 347-7689 (fax)

Ref/Site Remington WWTP - 439-2225; -2480 (fax) P.O.#

Collector: Tavis Cash (Print Name) Signature: Tavis Cash

COLLECTION DATE TIME

SAMPLE LOCATION

CONTAINERS: 36 B, 500 mL

MLSS/VSS

Fecal

COMMENTS

5/13/14 9:00 AM

Vessel A  
 Vessel B

2.5 G P 1  
 2.5 G P 1

none  
 none

X X  
 X X

Vector Attraction  
 Slurry

Date	Time	Received by:	Redesignated by:	Date	Time	Received by:	Received for Laboratory by:
5/13/14	9:30 AM	[Signature]					

Fed Ex     Hard Delivery  
 Overnight     Post Office

On last Y N    Received @ \_\_\_\_\_ °C     Under 2 hours

TAT: Normal \_\_\_\_\_ Rush \_\_\_\_\_  
 Need Results by \_\_\_\_\_  
 Extra charges will apply for Rush TAT.

Job # \_\_\_\_\_  
 Job # \_\_\_\_\_

Sample Condition Stamp





### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 06/21/2019  
Report #: 37606  
Job #: 0007595  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Vector Attraction

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

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*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials *AW*





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 06/21/2019  
 Report #: 37606  
 Job #: 0007595  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Vector Attraction

Sample ID#: 0131243      Sample Source: Vessel A  
 Sample Date/Time: 06/12/2019 / 08:30      Date Received: 06/12/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	< 198	MPN/g	180	SM 9221 E+C-2006	06/12/2019	12:05	TS
Mixed Liquor Susp Solids	9,100	mg/l	1.00	SM 2540 D-2011	06/12/2019	13:06	JH
Mixed Liquor Volatile SS	7,220	mg/l	1.00	SM 2540 E-2011	06/13/2019	09:49	JH

Sample ID#: 0131244      Sample Source: Vessel B  
 Sample Date/Time: 06/12/2019 / 08:40      Date Received: 06/12/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	< 180	MPN/g	180	SM 9221 E+C-2006	06/12/2019	12:25	TS
Mixed Liquor Susp Solids	10,300	mg/l	1.00	SM 2540 D-2011	06/12/2019	13:20	JH
Mixed Liquor Volatile SS	6,670	mg/l	1.00	SM 2540 E-2011	06/13/2019	09:49	JH

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.





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**37606**

Through Quality Service

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Email: info@sss-services.com

**CHAIN OF CUSTODY RECORD**

Wilmington WTP

Additional Notes/ Comments/ Special Instructions:

Vector Study

2nd Quarter Vector Study P.O.#

Sean Minio

(Signature)

SECTION TIME	SAMPLE LOCATION	CONTAINERS SIZE	QTY #	LEAD	SAMPLE MATRIX	PRESERVATIVE
--------------	-----------------	-----------------	-------	------	---------------	--------------

Fecal  
Mixed Litter

ANALYSES

COMMENTS

90830	Vessel A	125 P	2	✓	WV	Series	X		
90830	↓	250 P	1	✓	WV	—	X		
90840	Vessel B	125 P	1	✓	WV	Series	X		
90840	↓	250 P	1	✓	WV	—	X		

Date 6-12-2017	Time 0850	Received by:	Requisitioned by:	Date 6/12/17	Time 0850	Received by:	Requisitioned by:
<input type="checkbox"/> Fed Ex	<input checked="" type="checkbox"/> Hand Delivery	On load? <input type="checkbox"/>	Requisitioned by:	Job #	7595	Received by:	Requisitioned by:
<input type="checkbox"/> Post Office	<input type="checkbox"/> Hand Delivery	Received @ 21.0°C	Requisitioned by:	Job #		Received by:	Requisitioned by:
		<input checked="" type="checkbox"/> Under 2 hours	Requisitioned by:	Job #		Received by:	Requisitioned by:

Sample Condition "OK"  
Upon Receipt  
Sample Condition Stamp

Revised 7/19/18



September 24, 2019

Mr. Raymond Searls  
 FCWSA- Remington WWTP  
 12523 Lucky Hill Road  
 Remington, VA 22734

Subject: Remington WWTP- Quarterly Pathogen Reduction Study Summary

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the 2019 third quarter vector attraction study for the Remington WWTP from 8/12/2019 to 9/12/2019. The original 5 gallon sample which was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels were labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples were collected from Vessels A and B at both the start test date and after the 30 day period. Each vessel was mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30 day period, additional distilled water was added to each vessel as needed until the original test volume was maintained.

After the 30 day period had expired a second round of MLSS, MLVSS, and Fecal Coliform samples were collected from Vessels A and B.

<b>Vessel A    % Sludge = 2.64%</b>				
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
8/12/2019	26400	17000	64.4%	348
9/12/2019	23900	14800	61.9%	<180
Reduction			<b>2.5%</b>	
<b>Vessel B    % Sludge = 2.71%</b>				
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
8/12/2019	27100	17400	64.2%	232
9/12/2019	24400	15000	61.5%	<160
Reduction			<b>2.7%</b>	
Average Reduction for 30 Day Period				<b>2.6%</b>

The average total volatile reduction of Vessels A and B during the 30 day period was calculated to be 2.6%. According to the biosolids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15%, vector attraction reduction is achieved.

Since the volatile solids reduction for the Remington WWTP was found to be an average of 2.6% reduction after the additional 30 day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information should be submitted on your Form SO1 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody



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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1648

Report Date: 08/16/2019  
Report #: 39247  
Job #: 0007765  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

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The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

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*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW







## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 08/16/2019  
 Report #: 39247  
 Job #: 0007765  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector

Sample ID#: 0134799      Sample Source: Vessel A  
 Sample Date/Time: 08/12/2019 / 09:30      Date Received: 08/12/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	28,400	mg/l	1.00	SM 2540 D-2011	08/14/2019	11:08	JH
Mixed Liquor Volatile SS	17,000	mg/l	1.00	SM 2540 E-2011	08/15/2019	09:28	JH
Fecal Coliform	348	MPN/g	180	SM 9221 E+C-2006	08/12/2019	12:55	JI

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

Sample ID#: 0134800      Sample Source: Vessel B  
 Sample Date/Time: 08/12/2019 / 09:40      Date Received: 08/12/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	27,100	mg/l	1.00	SM 2540 D-2011	08/14/2019	11:15	JH
Mixed Liquor Volatile SS	17,400	mg/l	1.00	SM 2540 E-2011	08/15/2019	09:28	JH
Fecal Coliform	232	MPN/g	180	SM 9221 E+C-2006	08/12/2019	13:31	JI

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.





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39247

**CHAIN OF CUSTODY RECORD**

Additional Notes/ Comments/ Special Instructions:

Porterly Vector's

ANALYSES

COMMENTS

Porterly Vector 3rd P.O.  
 Sen Hinaw

(Signature)

Mixed Lign  
 Fecal

SECTION TIME	SAMPLE LOCATION	CONCENTRATIONS	ANALYSES	COMMENTS
0930	Vessel A	250 P1 X	Sub	
0930	Vessel A	125 P2 X	Sub. Spent	
0940	Vessel B	250 P1 X	Sub.	
0940	Vessel B	125 P1 X	Sub. Spent	

Date: 8/14/19 Time: 0945 Received by: [Signature]

Date: 8/12/19 Time: 0945 Received for Laboratory by: [Signature]

On Ice?  Y  N

Received @ 23.2c

Normal  Rush

Job # 7765

Sample Condition "OK" Upon Receipt

3/8/2018



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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 09/17/2019  
Report #: 40140  
Job #: 0007765  
Customer #: 89R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

This laboratory report may not be reproduced, except in full, without the written approval of ESS.

If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW



## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 09/17/2019  
 Report #: 40140  
 Job #: 0007765  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#: 0136632      Sample Source: Vessel A  
 Sample Date/Time: 09/12/2019 / 09:30      Date Received: 09/12/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	23,900	mg/l	1.00	SM 2540 D-2011	09/12/2019	13:19	JF
Mixed Liquor Volatile SS	14,800	mg/l	1.00	SM 2540 E-2011	09/13/2019	09:48	JF
Fecal Coliform	< 180	MPN/g	180	SM 9221 E+C-2006	09/12/2019	11:30	J

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

Sample ID#: 0136633      Sample Source: Vessel B  
 Sample Date/Time: 09/12/2019 / 09:45      Date Received: 09/12/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	24,400	mg/l	1.00	SM 2540 D-2011	09/12/2019	13:26	JF
Mixed Liquor Volatile SS	15,000	mg/l	1.00	SM 2540 E-2011	09/12/2019	09:48	JF
Fecal Coliform	< 180	MPN/g	180	SM 9221 E+C-2006	09/12/2019	11:55	J

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

# ESS

Environmental Services America, Inc.

218 North Main Street • Post Office Box 520 • Clipping, Virginia 22701 •  
800-541-2118 • 540-825-8680 • Fax: 540-825-4951  
500 Stone Street • Post Office Box 736 • Bedford, Virginia 24523 •  
540-586-5413 • Fax: 540-586-5530

40140

Environmental Services America, Inc.

Environmental Services America, Inc.

Environmental Services America, Inc.

## CHAIN OF CUSTODY RECORD

Additional Notes/ Comments/ Special Instructions:

Parvity Vector Study

ANALYSES

COMMENTS

Mixed Liq. Fecals

P.O.#

3rd Quarter 2019

Remington WWP

Client Name/Address

Sancti Maria

(Signature)

COLLECTION DATE TIME

SAMPLE LOCATION

CONTAINERS

SIZE QUANTITY

REMARKS

033 9/12/19 0945 VESSEL B

500 P 1 ✓ WU ---

X

X

033 9/12/19 0945 VESSEL A

125 P 1 ✓ WU ---

X

X

Shipped by: [Signature]

Date: 9/11/19 Time: 0950

Retransmitted by:

Date: 9/12/19 Time: 0950

Received for Laboratory Use: [Signature]

Received by:

Retransmitted by:

Date: 9/12/19 Time: 0950

Received for Laboratory Use: [Signature]

Delivery:  Fed Ex  Standard Delivery

On test?  Yes  No

Received @ 20.8 °C

Job # 7765

UPS Overnight  Post Office

Received @ 20.8 °C

Normal  Next Results by Extra charges will apply for Rush TAT.

Job # 7765

Sample Condition Status



December 17, 2019

Mr. Raymond Searls  
 FCWSA- Remington WWTP  
 12523 Lucky Hill Road  
 Remington, VA 22734

Subject: Remington WWTP- Fourth Quarter Pathogen Reduction Study Summary

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the 2019 fourth quarter vector attraction study for the Remington WWTP from 11/4/2019 to 12/4/19. The original 5 gallon sample which was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels were labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples were collected from Vessels A and B at both the start test date and after the 30 day period. Each vessel was mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30 day period, additional distilled water was added to each vessel as needed until the original test volume was maintained.

After the 30 day period had expired a second round of MLSS, MLVSS, and Fecal Coliform samples were collected from Vessels A and B.

<b>Vessel A</b>	<b>% Sludge = 2.02%</b>			
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
11/4/2019	20,200	13,400	66.3%	4,550
12/4/2019	19,300	12,800	66.3%	< 180
		Reduction	<b>0.0%</b>	

<b>Vessel B</b>	<b>% Sludge = 2.03%</b>			
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
11/4/2019	20,300	13,500	66.5%	8,630
12/4/2019	17,500	11,600	66.3%	< 180
		Reduction	<b>0.2%</b>	

Average Reduction for 30 Day Period	<b>0.1%</b>
-------------------------------------	-------------

The average total volatile reduction of Vessels A and B during the 30 day period was calculated to be 0.1%. According to the biosolids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15%, vector attraction reduction is achieved.

Since the volatile solids reduction for the Remington WWTP was found to be an average of 0.1% reduction after the additional 30 day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information should be submitted on your Form SO1 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form SO1 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody





131222

218 North Main St. ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel: (540) 825-6660 ♦ Fax (540) 825-4961 ♦ [www.ess-services.com](http://www.ess-services.com)

### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 11/08/2019  
Report #: 41569  
Job #: 0008049  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: 4th Quarter Vector Study

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

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If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials *AW*





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 11/08/2019  
 Report #: 41569  
 Job #: 0008049  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: 4th Quarter Vector Study

Sample ID#: 0139710      Sample Source: Vessel A  
 Sample Date/Time: 11/04/2019 / 09:45      Date Received: 11/04/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INI
MLSS/MLVSS							
Mixed Liquor Susp Solids	20,200	mg/l	1.00	SM 2540 D-2011	11/06/2019	15:32	J
Mixed Liquor Volatile SS	13,400	mg/l	1.00	SM 2540 E-2011	11/07/2019	09:28	J
Fecal Coliform	4,550	MPN/g	180	SM 9221 E+C-2006	11/04/2019	12:00	.

COMMENT:  
 Results reported as mg/kg or MPN/g are reported on a dry weight basis.

Sample ID#: 0139711      Sample Source: Vessel B  
 Sample Date/Time: 11/04/2019 / 09:55      Date Received: 11/04/2019

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INI
MLSS/MLVSS							
Mixed Liquor Susp Solids	20,300	mg/l	1.00	SM 2540 D-2011	11/08/2019	15:41	J
Mixed Liquor Volatile SS	13,500	mg/l	1.00	SM 2540 E-2011	11/07/2019	09:28	J
Fecal Coliform	1,080	MPN/g	180	SM 9221 E+C-2006	11/04/2019	12:25	.

COMMENT:  
 Results reported as mg/kg or MPN/g are reported on a dry weight basis.





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500 Stone Street • Post Office Box 736 • Bedford, Virginia 24523 •  
540-586-5413 • Fax: 540-586-5530

41569

Providing Solutions Through Quality Service

www.ess-services.com

Email: info@ess-services.com

### CHAIN OF CUSTODY RECORD

Company Pam W&T P  
Contact \_\_\_\_\_  
Address \_\_\_\_\_  
Address \_\_\_\_\_  
Phone \_\_\_\_\_

Additional Notes/ Comments/ Special Instructions:  
Ram Quarry Vector Study (4<sup>th</sup> Quarter)

Project Name/Site 4<sup>th</sup> Quarter P.O.# \_\_\_\_\_  
Sampled By: Sean Minavio [Signature]  
(Print Name) (Signature)

ESS SAMPLE ID	COLLECTION		SAMPLE LOCATION	CONTAINERS				SAMPLE MATRIX	PRESERVATIVE	ANALYSES		COMMENTS
	DATE	TIME		SIZE	Q	#	GROUP			COMP	Metallic	
139710	11/4/19	0945	Vessel A	250	P	1	✓	WW	—	X		
	↓	0945	↓	125	P	2	✓	WW	Starch		X	
139711	11/4/19	0955	Vessel B	250	P	1	✓	WW	—	X		
	↓	0955	↓	125	P	1	✓	WW	Starch		X	

Relinquished by: [Signature] Date: 11/4/2019 Time: 1000 Received by: \_\_\_\_\_  
Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_  
Relinquished by: \_\_\_\_\_ Date: 11/4/19 Time: 1000 Received for Laboratory by: [Signature]

Method of Delivery:  UPS  Fed Ex  Hand Delivery  UPS Overnight  Post Office  
On Ice? Y  N  
Received @ 23.0 °C  Under 2 hours  
TAT: Normal \_\_\_\_\_ Rush \_\_\_\_\_  
Need Results by \_\_\_\_\_  
Extra charges will apply for Rush TAT.  
Job # 8049  
Job # \_\_\_\_\_  
Sample Condition "OK" Upon Receipt  
Sample Condition Stamp





218 North Main St ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel: (540) 825-6660 ♦ Fax (540) 825-4961 ♦ [www.ess-services.com](http://www.ess-services.com)

## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 12/10/2019  
Report #: 42433  
Job #: 0008049  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: 4th Quarter Vector Study

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

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If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW



VELAP Lab ID #460019 VA DW Lab ID# 00115

Page 1 of 2



**Analytical Report**

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 12/10/2019  
 Report #: 42433  
 Job #: 0008049  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: 4th Quarter Vector Study

---

Sample ID#: 0141412      Sample Source: Vessel A  
 Sample Date/Time: 12/04/2019 / 08:45      Date Received: 12/04/2019

---

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	< 180	MPN/g	180	SM 9221 E+C-2006	12/04/2019	11:45	JF
Mixed Liquor Susp Solids	19,300	mg/l	1.00	SM 2540 D-2011	12/04/2019	14:23	JF
Mixed Liquor Volatile SS	12,800	mg/l	1.00	SM 2540 E-2011	12/05/2019	09:17	JF

COMMENT:  
 Results reported as mg/kg or MPN/g are reported on a dry weight basis.

---

Sample ID#: 0141414      Sample Source: Vessel B  
 Sample Date/Time: 12/04/2019 / 08:55      Date Received: 12/04/2019

---

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	< 180	MPN/g	180	SM 9221 E+C-2006	12/04/2019	12:00	JF
Mixed Liquor Susp Solids	17,500	mg/l	1.00	SM 2540 D-2011	12/04/2019	14:26	JF
Mixed Liquor Volatile SS	11,600	mg/l	1.00	SM 2540 E-2011	12/05/2019	09:17	JF

COMMENT:  
 Results reported as mg/kg or MPN/g are reported on a dry weight basis.





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 500 Stone Street • Post Office Box 736 • Bedford, Virginia 24523 •  
 540-596-5413 • Fax: 540-596-5530

42433

### CHAIN OF CUSTODY RECORD

Additional Notes/ Comments/ Special Instructions:  
 parently veter Shly

Postmaster  
 Please Seal

4th Quarter veter  
 Sean Minnis

PO#  
 [Signature]

SECTION TIME	SAMPLE LOCATION	CONTAINERS				SAMPLE QUALITY	PRESERVATIVE
		SIZE	QTY	NO.	NO.		

ANALYSES  
 Fecal 1  
 Mixed Lipids 2

COMMENTS

Date	Time	Received by:	Relinquished by:	Date	Time	Received by:	Relinquished by:
12/11/19	0900			12/14/19	0900	J. Smith	
08/15		Vessel A					
		125 P 2					
		✓					
		low					
		Shaw					
		X					
		08/15					
		Vessel B					
		125 P 1					
		✓					
		low					
		Shaw					
		X					
		08/15					
		Vessel B					
		250 P 1					
		✓					
		low					
		Shaw					
		X					

Fed Ex  
 Hand Delivery  
 Post Office

On boat  
 Received @ 18:30  
 Under 2 hours

TAT: Normal \_\_\_\_\_ Rush \_\_\_\_\_  
 Need Results by \_\_\_\_\_  
 Extra charges will apply for Rush TAT.

Job # 8049  
 Job # \_\_\_\_\_

Sample Condition "OK"  
 Upon Receipt  
 Sample Condition Stamp



FAUQUIER COUNTY

**WATER & SANITATION AUTHORITY**

7172 Kennedy Road • Vint Hill Farms

Warrenton, Virginia 20187-3907

Phone (540) 349-2092 • Fax (540) 347-7689



February 5, 2021

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

Subject: Remington WWTP VA0076805

To Whom It May Concern:

Enclosed please find the 2020 Annual Sludge Program Discharge Monitoring Reports and the Pathogen Reduction Study Summary for the Remington Wastewater Treatment Plant. We have no excursions to report.

Should you have any questions or require additional information please feel free to contact me at (540) 349-2092.

Sincerely,

Cheryl St. Amant  
Associate Executive Director

Cc: Ben Shoemaker, Executive Director  
Remington WWTP  
File

ADDRESS (INCLUDE LOCATION IF DIFFERENT)

Wilmington Wastewater Treatment Plant  
 Fauquier Co. Water & Sanitation Authority  
 Warrenton VA 20187

223 Lucky Hill Road

COMMONWEALTH OF VIRGINIA  
 DEPARTMENT OF ENVIRONMENTAL QUALITY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

VAL075605	S01
PERMIT NUMBER	DISCHARGE NUMBER


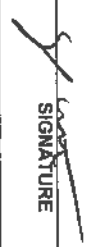
MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
2020	01	01		2020	12	31

Municipal Major 02/12/2010  
 DEPT. OF ENVIRONMENTAL QUALITY  
 (REGIONAL OFFICE)  
 Northern Regional Office  
 13901 Crown Court  
 Woodbridge VA 22192

NOTE: READ PERMIT AND GENERAL INSTR. BEFORE COMPLETING THIS FORM.

POLLUTANT	REPORTING PERIOD	QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX.	FREQUENCY OF ANALYSIS
		AVERAGE	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM		
L. SLUDGE	REPORTD	*****	*****	*****	18.8	*****	*****		1/YR
	REQMINT	*****	*****	*****	Nil	*****	*****	%	1/YR
DGE	REPORTD	*****	*****	*****	20.03	46.1	*****	MG/KG	1/YR
	REQMINT	*****	*****	*****	41	75	*****	MG/KG	1/YR
SLUDGE	REPORTD	*****	*****	*****	*****	23.3	*****	MG/KG	1/YR
	REQMINT	*****	*****	*****	*****	75	*****	MG/KG	1/YR
	REPORTD	*****	*****	*****	1196	1700	*****	MG/KG	1/YR
	REQMINT	*****	*****	*****	2800	7500	*****	MG/KG	1/YR
	REPORTD	*****	*****	*****	24.3	32.8	*****	MG/KG	1/YR
	REQMINT	*****	*****	*****	300	840	*****	MG/KG	1/YR
GE	REPORTD	*****	*****	*****	42.4	126	*****	MG/KG	1/YR
	REQMINT	*****	*****	*****	420	420	*****	MG/KG	1/YR
UDGE	REPORTD	*****	*****	*****	0.602	0.840	*****	MG/KG	1/YR
	REQMINT	*****	*****	*****	17	57	*****	MG/KG	1/YR
	REPORTD	*****	*****	*****	830	1150	*****	MG/KG	1/YR
	REQMINT	*****	*****	*****	1500	4300	*****	MG/KG	1/YR

PERMIT REQUIREMENTS OR COMMENTS

TOTAL OCCURRENCES	TOTAL FLOW (M.G.)	TOTAL BOD5 (K.G.)	OPERATOR IN RESPONSIBLE CHARGE		DATE
0	0	0	Raymond Sears		2021 02
			TYPED OR PRINTED NAME	SIGNATURE	
			PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		
			CHEVAL STANLEY		
			TYPED OR PRINTED NAME	SIGNATURE	
			CERTIFICATE NO.	TELEPHONE	
			1965006247	540-344-2092	2021 02
			YEAR	MO.	

of law that this document and all attachments were prepared under supervision in accordance with a system designed to assure that qualified persons who manage the system or those persons directly responsible for information, the information submitted is to the best of my knowledge and complete. I am aware that there are significant penalties for information, including the possibility of fine and imprisonment for knowing

ADDRESS (INCLUDE LOCATION IF DIFFERENT)

Kingston Wastewater Treatment Plant  
 Fauquier Co. Water & Sanitation Authority  
 Attention VA 20187

COMMONWEALTH OF VIRGINIA  
 DEPARTMENT OF ENVIRONMENTAL QUALITY  
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

VAL076805	S01
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
2020	01	01	2020	12	31

Municipal Major 02/12/2010  
 DEPT. OF ENVIRONMENTAL QUALITY  
 (REGIONAL OFFICE)  
 Northern Regional Office  
 13901 Crown Court  
 Woodbridge VA 22222

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

LETTER	CODE	REPORTD	QUANTITY OR LOADING			QUALITY OR CONCENTRATION			UNITS	NO. EX.	FREQUENCY OF ANALYSIS
			AVERAGE	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM			
		REPORTD	*****	*****	*****	6.19	*****			1/YR	
		REQRMNT	*****	*****	*****	39	*****	MG/KG		1/YR	
		REPORTD	*****	*****	*****		*****	MG/KG		1/YR	
		REQRMNT	*****	*****	*****		*****	MG/KG		1/YR	
		REPORTD	*****	*****	*****		*****	MG/KG		1/YR	
		REQRMNT	*****	*****	*****		*****	MG/KG		1/YR	
		REPORTD	*****	*****	*****		*****	MG/KG		1/YR	
		REQRMNT	*****	*****	*****		*****	MG/KG		1/YR	
		REPORTD	*****	*****	*****	<4.00	<4.00	MG/KG		1/YR	
		REQRMNT	*****	*****	*****	100	100	MG/KG		1/YR	

PERMIT REQUIREMENTS OR COMMENTS

TOTAL OCCURRENCES	0	TOTAL FLOW (M.G.)	0	TOTAL BOD5 (K.G.)	0	OPERATOR IN RESPONSIBLE CHARGE	DATE
Raymond Searts TYPED OR PRINTED NAME Raymond Searts SIGNATURE PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT CHECKED BY: ST. AMER TYPED OR PRINTED NAME SIGNATURE						1965006247 CERTIFICATE NO. 2021 YEAR 02 MO.	540-349-2092 TELEPHONE 2021 YEAR 02 MO.

I hereby certify that this document and all attachments were prepared under supervision in accordance with a system designed to assure that qualified personnel who manage the system or those persons directly responsible for gathering and evaluating the information submitted. Based on my inquiry of the information submitted is to the best of my knowledge and belief, and complete. I am aware that there are significant penalties for providing false information, including the possibility of fine and imprisonment for knowing

LOCATION IF DIFFERENT)

Arlington Wastewater Treatment Plant  
 Fauquier Co. Water & Sanitation Authority  
 Arlington VA 20187

523 Lucky Hill Road

COMMONWEALTH OF VIRGINIA  
 DEPARTMENT OF ENVIRONMENTAL QUALITY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

Municipal Major 02/08/2008  
 DEPT. OF ENVIRONMENTAL QUALITY  
 (REGIONAL OFFICE)

VAL076805	SP1
PERMIT NUMBER	DISCHARGE NUMBER

Northern Regional Office  
 13901 Crown Court  
 Woodbridge

VA 22

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
2020	01	01	2020	12	31

NOTE: READ PERMIT AND GENERAL INSTR  
 BEFORE COMPLETING THIS FORM.

POLLUTANT	REPORTING METHOD	QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX.	FREQUENCY OF ANALYSIS
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM		
SOLID	REPORTD	*****	495.31	MTNYR	*****	*****	*****	1/YR	
	REQRMNT	*****	NL	MTNYR	*****	*****	*****	1/YR	
	REPORTD	*****	495.31	MTNYR	*****	*****	*****	1/YR	
	REQRMNT	*****	NL	MTNYR	*****	*****	*****	1/YR	
	REPORTD								
	REPORTD								
	REQRMNT								
	REPORTD								
	REQRMNT								
	REPORTD								
	REQRMNT								
	REPORTD								
	REQRMNT								
	REPORTD								
	REQRMNT								
	REPORTD								
	REQRMNT								
	REPORTD								
	REQRMNT								

PERMIT REQUIREMENTS OR COMMENTS

TOTAL OCCURRENCES	TOTAL FLOW (M.G.)	TOTAL BOD5 (K.G.)	OPERATOR IN RESPONSIBLE CHARGE		DATE
0	0	0	Raymond Searis	2/1/2021	02
			TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.
			PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		1965006247
			TYPED OR PRINTED NAME	SIGNATURE	TELEPHONE
			CHERRY ST. SHAW		540-364-2092
					2021
					02

of law that this document and all attachments were prepared under supervision in accordance with a system designed to assure that qualified persons who manage the system or those persons directly responsible for information, the information submitted is to the best of my knowledge and information, including the possibility of fine and imprisonment for knowing



# Recyc Systems<sup>®</sup> Inc.

---

**Annual Tonnage Report**  
January 1 2020 to December 31, 2020

**Remington WWTP**

Total Wet Tons Land Applied	2703.68
December 2020 % Solids	18.32
Total Dry Tons Land Applied	495.314
Approx Acres Utilized	180
Tons to Landfill	0.0

**NOTICE AND NECESSARY INFORMATION**

Biosolids notification requirements to comply with 9VAC25-31-530.F – G or 9VAC25-32-313.G – H.

**Part I – To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTP Permit Number: Va 0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	< 4.00	< 4.00	41	75
Total Cadmium	2.26	2.26	39	85
Total Copper	446	446	1,500	4,300
Total Lead	14.0	14.0	300	840
Total Mercury	0.469	0.469	17	57
Total Molybdenum	4.98	4.98	NL <sup>(3)</sup>	75
Total Nickel	11.0	11.0	420	420
Total Selenium	< 4.00	< 4.00	100	100
Total Zinc	633	633	2,800	7,500

- (1) Values to be reported on a dry weight basis.
- (2) Sludge may not be land applied if any pollutant exceeds these values.
- (3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

- Alternative 1: Fecal coliform testing -geometric mean of 7 samples
- Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:
  - Option 1 - Aerobic digestion
  - Option 2 - Air drying beds
  - Option 3 - Anaerobic digestion
  - Option 4 - Composting
  - Option 5 - Lime Stabilization
  - Other: \_\_\_\_\_

597  
3-16-20

**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8 by:

- Option 1:  $\geq$  38% volatile solids reduction
- Option 2: Anaerobic 40 day bench test
- Option 3: Aerobic 30 day bench test
- Option 4: Specific Oxygen Uptake Rate (SOUR) test
- Option 5: Aerobic process, 14 days @ 40°C (45°C)
- Option 6: Alkaline stabilization
- Option 7: Dry to  $\geq$  75% T.S. w/no unstabilized 1° sludges
- Option 8: Dry to  $\geq$  90% T.S.

OR

VAR requirements for Class B biosolids were **not** achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Raymond Searls chief operator

Signature  Date Signed 3-16-2020

Telephone number 540-439-2225





March 12, 2020

Mr. Raymond Searls  
 FCWSA- Remington WWTP  
 12523 Lucky Hill Road  
 Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the first quarter vector (2020) attraction study for the Remington WWTP from 2/3/2020 to 3/4/2020. The original 5 gallon sample which was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels were labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples were collected from Vessels A and B at both the start test date and after the 30 day period. Each vessel was mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30 day period, additional distilled water was added to each vessel as needed until the original test volume was maintained.

After the 30 day period had expired a second round of MLSS, MLVSS, and Fecal Coliform samples were collected from Vessels A and B.

<b>Vessel A</b>	<b>% Sludge =</b>	<b>2.13%</b>		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
2/3/2020	21300	15700	73.7%	65700
3/4/2020	17700	12300	69.5%	904
		Reduction	<b>4.2%</b>	

<b>Vessel B</b>	<b>% Sludge =</b>	<b>2.11%</b>		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
2/3/2020	21100	15400	73.0%	256000
3/4/2020	16700	11600	69.5%	1020
		Reduction	<b>3.5%</b>	

Average Reduction for 30 Day Period **3.9%**

The average total volatile reduction of Vessels A and B during the 30 day period was calculated to be 3.9%. According to the biosolids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent of 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15%, vector attraction reduction is achieved.

Since the volatile solids reduction for the Remington WWTP was found to be an average of 3.9% reduction after the additional 30 day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information should be submitted on your Form S01 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody



218 North Main St. ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel: (540) 825-6660 ♦ Fax (540) 825-4961 ♦ [www.ess-services.com](http://www.ess-services.com)

## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 02/07/2020  
Report #: 43979  
Job #: 0008183  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Quarterly Vector Study -  
Remington WWTP

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

This laboratory report may not be reproduced, except in full, without the written approval of ESS.

If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials *AW*





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 02/07/2020  
 Report #: 43979  
 Job #: 0008183  
 Customer #: 99R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Quarterly Vector Study -  
 Remington WWTP

Sample ID#: 0144765      Sample Source: Vessel A  
 Sample Date/Time: 02/03/2020 / 08:43      Date Received: 02/03/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	21,300	mg/l	1.00	SM 2540 D-2011	02/04/2020	09:12	JH
Mixed Liquor Volatile SS	15,700	mg/l	1.00	SM 2540 E-2011	02/04/2020	09:12	JH
Fecal Coliform	65,700	MPN/g	180	SM 9221 E+C-2006	02/03/2020	10:40	JH

Sample ID#: 0144766      Sample Source: Vessel B  
 Sample Date/Time: 02/03/2020 / 08:45      Date Received: 02/03/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	21,100	mg/l	1.00	SM 2540 D-2011	02/05/2020	09:32	JH
Mixed Liquor Volatile SS	15,400	mg/l	1.00	SM 2540 E-2011	02/06/2020	10:01	JH
Fecal Coliform	258,000	MPN/g	180	SM 9221 E+C-2006	02/03/2020	10:45	JH

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.





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 540-586-5413 • Fax: 540-586-5530

43979

Quincy County WSA

Raymond Searls  
 172 Kennedy Rd.  
 Hartrenton, Virginia 20187  
 49-2092; 347-7689 (fax)

## CHAIN OF CUSTODY RECORD

Additional Notes/ Comments/ Special Instructions:

Quarterly Vector Study

### ANALYSES

Site: Quarterly Vector Study - Remington WWTP P.O.# \_\_\_\_\_  
 Name: Valeria Capstan (Print Name)  
 Signature:

COLLECTION DATE	TIME	SAMPLE LOCATION	CONTAINERS		SAMPLE TYPE	ANALYSES	COMMENTS
			57	P #			
3-20	8:43	Vessel A	125	P 1	WW	NA THIOS	Vector Attraction Study
3-20	8:43	Vessel A	250	P 1	WW	none	
3-20	8:45	Vessel B	125	P 2	WW	NA THIOS	
3-20	8:45	Vessel B	250	P 1	WW	none	

Date	Time	Received by:	Refrigerated by:	TAT:	Job #	Date	Time	Received for Laboratory by:
3-20	8:49			Normal _____ Need Results by _____ Extra charges will apply for Rush TAT	8183	3/20	0849	
On Ice? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N		Received @ <u>14.6</u> °C		Rush _____		Sample Condition "OK" Upon Receipt		
Post Office <input type="checkbox"/>		Hand Delivery <input checked="" type="checkbox"/>		Under 2 hours <input checked="" type="checkbox"/>		Sample Condition Stamp		



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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 03/10/2020  
Report # 44809  
Job #: 0008183  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

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*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 03/11/2020  
 Report #: 44809  
 Job #: 0008183  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#: 0146497      Sample Source: Vessel A  
 Sample Date/Time: 03/04/2020 / 07:30      Date Received: 03/04/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	17,700	mg/l	1.00	SM 2540 D-2011	03/05/2020	11:52	JH
Mixed Liquor Volatile SS	12,300	mg/l	1.00	SM 2540 E-2011	03/05/2020	16:30	JH
Fecal Coliform	904	MPN/g	180	SM 9221 E+C-2006	03/04/2020	11:30	Jl

Sample ID#: 0146498      Sample Source: Vessel B  
 Sample Date/Time: 03/04/2020 / 07:40      Date Received: 03/04/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	16,700	mg/l	1.00	SM 2540 D-2011	03/05/2020	11:57	JH
Mixed Liquor Volatile SS	11,600	mg/l	1.00	SM 2540 E-2011	03/05/2020	16:30	DI
Fecal Coliform	1,020	MPN/g	180	SM 9221 E+C-2006	03/04/2020	12:00	Jl

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.







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44809

General Through-County Service

www.ess-services.com

Email: info@ess-services.com

Essexive Quality Lab  
 Payment Details

**CHAIN OF CUSTODY RECORD**

Additional Notes/ Comments/ Special Instructions:

Paralyze water

Sample Condition "OK"  
 Upon Receipt  
 Sample Condition Stamp

Site Procter Vector Study P.O.# \_\_\_\_\_

COLLECTION DATE	TIME	SAMPLE LOCATION	CONTAINERS		SAMPLE MATRIX	PRESERVATIVE
			SIZE	QIP #		

(Print Name)

(Signature)

Mass/Vol  
 Fecl

COMMENTS

Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
12/20/20	0730	VESELIA				
12/20/20	0730	VESELIA				
12/20/20	0740	VESELIA				
12/20/20	0740	VESELIA				
3/4/2021	0805			3/11/2021	0805	

Fed Ex  Hand Delivery  
 Post Office  Under 2 hours  
 Received @ 22.0°C  
 Normal \_\_\_\_\_ Rush \_\_\_\_\_  
 Need Results by \_\_\_\_\_  
 Extra charges will apply for Rush TAT.  
 Job # 8183  
 Amount Paid: \_\_\_\_\_  
 Cash \_\_\_\_\_ CC \_\_\_\_\_ Check # \_\_\_\_\_



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### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1846

Report Date: 02/26/2020  
Report #: 43978  
Job #: 0008208  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

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If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1648

Report Date: 02/26/2020  
 Report #: 43978  
 Job #: 0008208  
 Customer #: 99R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0144764      Sample Source: Sludge  
 Sample Date/Time: 02/03/2020 / 08:05      Date Received: 02/03/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Total Solids (%)	20.3	%	0.500	SM 2540 G-2011	02/06/2020	11:00	574
Arsenic, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	02/08/2020	09:04	574
Molybdenum, Total Recoverable	4.98	mg/kg	4.00	SW-846 6010B	02/08/2020	09:04	574
Zinc, Total Recoverable	633	mg/kg	4.00	SW-846 6010B	02/08/2020	09:04	574
Lead, Total Recoverable	14.0	mg/kg	4.00	SW-846 6010B	02/08/2020	09:04	574
Nickel, Total Recoverable	11.0	mg/kg	4.00	SW-846 6010B	02/08/2020	09:04	574
Mercury, Total Recoverable	0.469	mg/kg	0.0250	SW-846 7471A	02/11/2020	10:28	574
Copper, Total Recoverable	446	mg/kg	2.00	SW-846 6010B	02/06/2020	09:04	574
Cadmium, Total Recoverable	2.26	mg/kg	2.00	SW-846 6010B	02/08/2020	09:04	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	02/08/2020	09:04	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 460180





## NOTICE AND NECESSARY INFORMATION

Biosolids notification requirements to comply with 9VAC25-31-530.F – G or 9VAC25-32-313.G – H.

**Part I – To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTP Permit Number: Va. 0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	20.8	20.8	41	75
Total Cadmium	5.28	5.28	39	85
Total Copper	665	665	1,500	4,300
Total Lead	23.9	23.9	300	840
Total Mercury	0.638	0.638	17	57
Total Molybdenum	7.40	7.40	NL <sup>(3)</sup>	75
Total Nickel	12.4	12.4	420	420
Total Selenium	<4.00	<4.00	100	100
Total Zinc	961	961	2,800	7,500

- (1) Values to be reported on a dry weight basis.
- (2) Sludge may not be land applied if any pollutant exceeds these values.
- (3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

- Alternative 1: Fecal coliform testing -geometric mean of 7 samples
- Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:
  - Option 1 - Aerobic digestion
  - Option 2 - Air drying beds
  - Option 3 - Anaerobic digestion
  - Option 4 - Composting
  - Option 5 - Lime Stabilization
  - Other: \_\_\_\_\_

 **FAXED**  
7-6-20

**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8 by:

- Option 1:  $\geq 38\%$  volatile solids reduction
- Option 2: Anaerobic 40 day bench test
- Option 3: Aerobic 30 day bench test
- Option 4: Specific Oxygen Uptake Rate (SOUR) test
- Option 5: Aerobic process, 14 days @ 40°C (45°C)
- Option 6: Alkaline stabilization
- Option 7: Dry to  $\geq 75\%$  T.S. w/no unstabilized 1° sludges
- Option 8: Dry to  $\geq 90\%$  T.S.

OR

VAR requirements for Class B biosolids were **not** achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_

Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Raymond Secris Chief Operator

Signature  Date Signed 7-6-2020

Telephone number 540-439-2225



July 1, 2020

Mr. Raymond Searls  
 FCWSA- Remington WWTP  
 12523 Lucky Hill Road  
 Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the second quarter vector (2020) attraction study for the Remington WWTP from 5/12/2020 to 6/11/2020. The original 5 gallon sample which was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels were labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples were collected from Vessels A and B at both the start test date and after the 30 day period. Each vessel was mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30 day period, additional distilled water was added to each vessel as needed until the original test volume was maintained.

After the 30 day period had expired a second round of MLSS, MLVSS, and Fecal Coliform samples were collected from Vessels A and B.

<b>Vessel A % Sludge = 1.28%</b>				
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
5/12/2020	12,800	8,940	69.8%	5,470
6/11/2020	9,970	6,920	69.4%	<180
Reduction			<b>0.4%</b>	

<b>Vessel B % Sludge = 1.29%</b>				
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
5/12/2020	12,900	8,980	69.6%	8,530
6/11/2020	10,200	7,170	70.3%	<180
Reduction			<b>-0.7%</b>	

Average Reduction for 30 Day Period **-0.1%**



The average total volatile reduction of Vessels A and B during the 30 day period was calculated to be -0.1%. According to the biosolids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent of 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15%, vector attraction reduction is achieved.

Since the volatile solids reduction for the Remington WWTP was found to be an average of -0.1% reduction after the additional 30 day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information should be submitted on your Form S01 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody



218 North Main St ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel: (540) 825-6660 ♦ Fax (540) 825-4961 ♦ <www.ess-services.com>

## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 05/20/2020  
Report # 46567  
Job #: 0008359  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Vector 2nd Quarter

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*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials \_\_\_\_\_





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 05/20/2020  
 Report #: 46567  
 Job #: 0008359  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Vector 2nd Quarter

Sample ID#: 0152545      Sample Source: Vessel A  
 Sample Date/Time: 05/12/2020 / 11:15      Date Received: 05/12/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform	5,470	MPN/g	180	SM 9221 E+C-2006	05/12/2020	12:47	JL
MLSS/MLVSS							
Mixed Liquor Susp Solids	12,800	mg/l	1.00	SM 2540 D-2011	05/13/2020	15:26	DI
Mixed Liquor Volatile SS	8,940	mg/l	1.00	SM 2540 E-2011	05/14/2020	13:10	JL

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

Sample ID#: 0152546      Sample Source: Vessel B  
 Sample Date/Time: 05/12/2020 / 11:20      Date Received: 05/12/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform	8,530	MPN/g	180	SM 9221 E+C-2006	05/12/2020	12:55	JL
MLSS/MLVSS							
Mixed Liquor Susp Solids	12,900	mg/l	1.00	SM 2540 D-2011	05/13/2020	15:37	DI
Mixed Liquor Volatile SS	8,980	mg/l	1.00	SM 2540 E-2011	05/14/2020	13:10	JL

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.







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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 06/29/2020  
Report #: 47432  
Job #: 0008359  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

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*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials *AW*





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 06/29/2020  
 Report #: 47432  
 Job #: 0008359  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#: 0155707      Sample Source: Vessel A  
 Sample Date/Time: 06/11/2020 / 08:10      Date Received: 06/11/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	9,970	mg/l	1.00	SM 2540 D-2011	06/12/2020	17:02	JI
Mixed Liquor Volatile SS	6,920	mg/l	1.00	SM 2540 E-2011	06/13/2020	12:45	JI
Fecal Coliform	< 180	MPN/g	180	SM 9221 E+C-2006	06/11/2020	11:17	JH

Sample ID#: 0155708      Sample Source: Vessel B  
 Sample Date/Time: 06/11/2020 / 08:20      Date Received: 06/11/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	10,200	mg/l	1.00	SM 2540 D-2011	06/12/2020	17:07	JI
Mixed Liquor Volatile SS	7,170	mg/l	1.00	SM 2540 E-2011	06/13/2020	13:00	JI
Fecal Coliform	< 180	MPN/g	180	SM 9221 E+C-2006	06/11/2020	11:35	JI

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.







2nd qtr



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### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 05/29/2020  
Report #: 46560  
Job #: 0008577  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington Sludge

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

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*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 05/29/2020  
 Report #: 46560  
 Job #: 0008577  
 Customer #: 99R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Remington Sludge

Sample ID#: 0152534      Sample Source: Sludge  
 Sample Date/Time: 05/12/2020 / 08:45      Date Received: 05/12/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Total Solids (%)	18.5	%	0.500	SM 2540 G-2011	05/15/2020	09:11	574
Arsenic, Total Recoverable	20.8	mg/kg.	4.00	SW-846 6010B	05/19/2020	09:28	574
Molybdenum, Total Recoverable	7.40	mg/kg.	4.00	SW-846 6010B	05/19/2020	09:28	574
Zinc, Total Recoverable	961	mg/kg.	4.00	SW-846 6010B	05/19/2020	09:28	574
Lead, Total Recoverable	23.9	mg/kg.	4.00	SW-846 6010B	05/19/2020	09:28	574
Nickel, Total Recoverable	12.4	mg/kg.	4.00	SW-846 6010B	05/19/2020	09:28	574
Mercury, Total Recoverable	0.638	mg/kg.	0.0250	SW-846 7471A	05/20/2020	11:23	574
Copper, Total Recoverable	665	mg/kg.	2.00	SW-846 6010B	05/19/2020	09:28	574
Cadmium, Total Recoverable	5.28	mg/kg.	2.00	SW-846 6010B	05/19/2020	09:28	574
Selenium, Total Recoverable	< 4.00	mg/kg.	4.00	SW-846 6010B	05/19/2020	09:28	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 460160





**NOTICE AND NECESSARY INFORMATION**

Biosolids notification requirements to comply with 9VAC25-31-530.F – G or 9VAC25-32-313.G – H.

**Part I – To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTP Permit Number: Va. 0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	46.1	46.1	41	75
Total Cadmium	9.31	9.31	39	85
Total Copper	1,150	1,150	1,500	4,300
Total Lead	32.8	32.8	300	840
Total Mercury	0.840	0.840	17	57
Total Molybdenum	23.3	23.3	NL <sup>(3)</sup>	75
Total Nickel	126	126	420	420
Total Selenium	<4.00	<4.00	100	100
Total Zinc	1,700	1,700	2,800	7,500

- (1) Values to be reported on a dry weight basis.
- (2) Sludge may not be land applied if any pollutant exceeds these values.
- (3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

- Alternative 1: Fecal coliform testing -geometric mean of 7 samples
- Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:
  - Option 1 - Aerobic digestion
  - Option 2 - Air drying beds
  - Option 3 - Anaerobic digestion
  - Option 4 - Composting
  - Option 5 - Lime Stabilization
  - Other: \_\_\_\_\_

57 mm  
11-3-20

**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

- VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8 by:
- Option 1:  $\geq$  38% volatile solids reduction
  - Option 2: Anaerobic 40 day bench test
  - Option 3: Aerobic 30 day bench test
  - Option 4: Specific Oxygen Uptake Rate (SOUR) test
  - Option 5: Aerobic process, 14 days @ 40°C (45°C)
  - Option 6: Alkaline stabilization
  - Option 7: Dry to  $\geq$  75% T.S. w/no unstabilized 1° sludges
  - Option 8: Dry to  $\geq$  90% T.S.

OR

- VAR requirements for Class B biosolids were not achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_


Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Raymond Searls Chief Operator

Signature  Date Signed 11-2-2020

Telephone number 540 - 439 - 2225



October 1, 2020

Mr. Raymond Searls  
 FCWSA- Remington WWTP  
 12523 Lucky Hill Road  
 Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the third quarter vector (2020) attraction study for the Remington WWTP from 8/25/2020 to 9/24/2020. The original 5-gallon sample that was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels were labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples were collected from Vessels A and B at both the start test date and after the 30-day period. Each vessel was mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30-day period, additional distilled water was added to each vessel as needed until the original test volume was maintained.

After the 30 day period had expired a second round of MLSS, MLVSS, and Fecal Coliform samples were collected from Vessels A and B.

<b>Vessel A      % Sludge = 1.80%</b>				
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
8/25/2020	18,000	11,500	63.9%	2,220
9/24/2020	17,000	10,600	62.4%	5,410
		Reduction	<b>1.5%</b>	

<b>Vessel B      % Sludge = 1.79%</b>				
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
8/25/2020	17,900	11,400	63.7%	3,020
9/24/2020	16,700	10,400	62.3%	<180
		Reduction	<b>1.4%</b>	

Average Reduction for 30 Day Period **1.5%**

The average total volatile reduction of Vessels A and B during the 30-day period was calculated to be 1.5%. According to the bio solids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent of 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15%, vector attraction reduction is achieved.

Since the volatile solids reduction for the Remington WWTP was found to be an average of 1.5% reduction after the additional 30-day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information should be submitted on your Form S01 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody





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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 09/01/2020  
Report #: 49407  
Job #: 0008681  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

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*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials TS





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 09/01/2020  
 Report #: 49407  
 Job #: 0008681  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

---

<b>Sample ID#:</b>	0160679	<b>Sample Source:</b>	Vessel A
<b>Sample Date/Time:</b>	08/25/2020 / 09:00	<b>Date Received:</b>	08/25/2020

---

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	18,000	mg/l	1.00	SM 2540 D-2011	08/27/2020	13:26	JH
Mixed Liquor Volatile SS	11,500	mg/l	1.00	SM 2540 E-2011	08/28/2020	14:30	JI
Fecal Coliform	2,220	MPN/g	180	SM 9221 E+C-2006	08/25/2020	12:30	JI

---

<b>Sample ID#:</b>	0160680	<b>Sample Source:</b>	Vessel B
<b>Sample Date/Time:</b>	08/25/2020 / 09:10	<b>Date Received:</b>	08/25/2020

---

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	17,900	mg/l	1.00	SM 2540 D-2011	08/27/2020	13:29	JH
Mixed Liquor Volatile SS	11,400	mg/l	1.00	SM 2540 E-2011	08/28/2020	14:30	JI
Fecal Coliform	3,020	MPN/g	180	SM 9221 E+C-2006	08/25/2020	12:55	JI

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.







## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 09/30/2020  
Report #: 50263  
Job #: 0008681  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: 3rd Quarter Vector

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Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials TS





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1648

Report Date: 09/30/2020  
 Report #: 50263  
 Job #: 0008881  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: 3rd Quarter Vector

Sample ID#: 0162367      Sample Source: Vessel A  
 Sample Date/Time: 09/24/2020 / 06:45      Date Received: 09/24/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	17,000	mg/l	1.00	SM 2540 D-2011	09/25/2020	11:42	Jl
Mixed Liquor Volatile SS	10,600	mg/l	1.00	SM 2540 E-2011	09/25/2020	17:15	Jl
Fecal Coliform	5,410	MPN/g	180	SM 9221 E+C-2008	09/24/2020	12:50	Jl

Sample ID#: 0162368      Sample Source: Vessel B  
 Sample Date/Time: 09/24/2020 / 07:00      Date Received: 09/24/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	16,700	mg/l	1.00	SM 2540 D-2011	09/25/2020	11:45	Jl
Mixed Liquor Volatile SS	10,400	mg/l	1.00	SM 2540 E-2011	09/25/2020	17:15	Jl
Fecal Coliform	< 180	MPN/g	180	SM 9221 E+C-2008	09/24/2020	13:10	Jl

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.







200 411

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### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 10/28/2020  
Report #: 50286  
Job #: 0008805  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

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*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials *AW*







## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 10/28/2020  
 Report #: 50286  
 Job #: 0008805  
 Customer #: 99R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0162415      Sample Source: Sludge  
 Sample Date/Time: 09/24/2020 / 10:36      Date Received: 09/24/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Total Solids (%)	17.3	%	0.500	SM 2540 G-2011	10/06/2020	15:00	574
Arsenic, Total Recoverable	46.1	mg/kg	4.00	SW-846 6010B	10/07/2020	09:14	574
Molybdenum, Total Recoverable	23.3	mg/kg	4.00	SW-846 6010B	10/07/2020	09:14	574
Zinc, Total Recoverable	1,700	mg/kg	4.00	SW-846 6010B	10/07/2020	09:14	574
Lead, Total Recoverable	32.8	mg/kg	4.00	SW-846 6010B	10/07/2020	09:14	574
Nickel, Total Recoverable	126	mg/kg	4.00	SW-846 6010B	10/07/2020	09:14	574
Mercury, Total Recoverable	0.840	mg/kg	0.0250	SW-846 7471A	10/07/2020	12:21	574
Copper, Total Recoverable	1,150	mg/kg	2.00	SW-846 6010B	10/07/2020	09:14	574
Cadmium, Total Recoverable	9.31	mg/kg	2.00	SW-846 6010B	10/07/2020	09:14	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	10/07/2020	09:14	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 460160





## NOTICE AND NECESSARY INFORMATION

Biosolids notification requirements to comply with 9VAC25-31-530.F – G or 9VAC25-32-313.G – H.

**Part I – To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTP Permit Number: VA. 0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	13.2	13.2	41	75
Total Cadmium	7.89	7.89	39	85
Total Copper	1,060	1,060	1,500	4,300
Total Lead	26.6	26.6	300	840
Total Mercury	0.462	0.462	17	57
Total Molybdenum	7.32	7.32	NL <sup>(3)</sup>	75
Total Nickel	20.3	20.3	420	420
Total Selenium	< 4.00	< 4.00	100	100
Total Zinc	1,490	1,490	2,800	7,500

(1) Values to be reported on a dry weight basis.

(2) Sludge may not be land applied if any pollutant exceeds these values.

(3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

Alternative 1: Fecal coliform testing -geometric mean of 7 samples

Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:

Option 1 - Aerobic digestion

Option 2 - Air drying beds

Option 3 - Anaerobic digestion

Option 4 - Composting

Option 5 - Lime Stabilization

Other: \_\_\_\_\_

1-21

**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

- VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8 by:
  - Option 1:  $\geq$  38% volatile solids reduction
  - Option 2: Anaerobic 40 day bench test
  - Option 3: Aerobic 30 day bench test
  - Option 4: Specific Oxygen Uptake Rate (SOUR) test
  - Option 5: Aerobic process, 14 days @ 40°C (45°C)
  - Option 6: Alkaline stabilization
  - Option 7: Dry to  $\geq$  75% T.S. w/no unstabilized 1° sludges
  - Option 8: Dry to  $\geq$  90% T.S.

OR

- VAR requirements for Class B biosolids were not achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_


Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Raymond Searis

Signature  Date Signed 1-4-2021

Telephone number 540-439-2225



December 29, 2020

Mr. Raymond Searls  
 FCWSA- Remington WWTP  
 12523 Lucky Hill Road  
 Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the fourth quarter vector (2020) attraction study for the Remington WWTP from 11/10/2020 to 12/10/2020. The original 5-gallon sample that was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels were labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples were collected from Vessels A and B at both the start test date and after the 30-day period. Each vessel was mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30-day period, additional distilled water was added to each vessel as needed until the original test volume was maintained.

After the 30 day period had expired a second round of MLSS, MLVSS, and Fecal Coliform samples were collected from Vessels A and B.

<b>Vessel A      % Sludge = 1.80%</b>				
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
11/10/2020	18,000	11,500	67.2%	77,800
12/10/2020	16,600	10,900	65.7%	1,020
		Reduction	<b>1.6%</b>	

<b>Vessel B      % Sludge = 1.90%</b>				
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
11/10/2020	19,000	12,700	66.8%	24,200
12/10/2020	15,400	10,200	66.2%	1,040
		Reduction	<b>0.6%</b>	

**Average Reduction for 30 Day Period      1.1%**

The average total volatile reduction of Vessels A and B during the 30-day period was calculated to be 1.1%. According to the bio solids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent of 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period was reduced by less than 15%, vector attraction reduction is achieved.

Since the volatile solids reduction for the Remington WWTP was found to be an average of 1.1% reduction after the additional 30-day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information should be submitted on your Form S01 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody



218 North Main St. ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel (540) 825-6660 ♦ Fax (540) 825-4961 ♦ [www.ess-services.com](http://www.ess-services.com)

## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 11/13/2020  
Report #: 51610  
Job #: 0008882  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

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If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW







## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 11/13/2020  
 Report #: 51610  
 Job #: 0008882  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

---

<b>Sample ID#:</b>	0165346	<b>Sample Source:</b>	Vessel A
<b>Sample Date/Time:</b>	11/10/2020 / 10:50	<b>Date Received:</b>	11/10/2020

---

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	77,800	MPN/g	180	SM 9221 E+C-2006	11/10/2020	12:50	JI
Mixed Liquor Susp Solids	18,000	mg/l	1.00	SM 2540 D-2011	11/11/2020	12:01	JI
Mixed Liquor Volatile SS	12,100	mg/l	1.00	SM 2540 E-2011	11/12/2020	14:30	JI

---

<b>Sample ID#:</b>	0165347	<b>Sample Source:</b>	Vessel B
<b>Sample Date/Time:</b>	11/10/2020 / 11:00	<b>Date Received:</b>	11/10/2020

---

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	24,200	MPN/g	180	SM 9221 E+C-2006	11/10/2020	13:20	JI
Mixed Liquor Susp Solids	19,000	mg/l	1.00	SM 2540 D-2011	11/11/2020	12:05	JI
Mixed Liquor Volatile SS	12,700	mg/l	1.00	SM 2540 E-2011	11/12/2020	14:45	JI

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.







218 North Main St. ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel: (540) 825-8660 ♦ Fax (540) 825-4961 ♦ [www.ess-services.com](http://www.ess-services.com)

## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 12/22/2020  
Report #: 52480  
Job #: 0008882  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

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The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

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If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 12/22/2020  
 Report #: 52480  
 Job #: 0008882  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#: 0167128      Sample Source: Vessel A  
 Sample Date/Time: 12/10/2020 / 07:00      Date Received: 12/10/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	1,020	MPN/g	180	SM 9221 E+C-2006	12/10/2020	11:40	JI
Mixed Liquor Susp Solids	16,600	mg/l	1.00	SM 2540 D-2011	12/14/2020	12:33	JI
Mixed Liquor Volatile SS	10,900	mg/l	1.00	SM 2540 E-2011	12/15/2020	11:00	JI

Sample ID#: 0167129      Sample Source: Vessel B  
 Sample Date/Time: 12/10/2020 / 07:15      Date Received: 12/10/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	1,040	MPN/g	180	SM 9221 E+C-2006	12/10/2020	11:50	JI
Mixed Liquor Susp Solids	15,400	mg/l	1.00	SM 2540 D-2011	12/14/2020	12:36	JI
Mixed Liquor Volatile SS	10,200	mg/l	1.00	SM 2540 E-2011	12/15/2020	11:20	JI

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.





218 North Main Street • Post Office Box 520 • Clipping, Virginia 22701 •  
 800-541-2116 • 540-825-6660 • Fax: 540-925-4961  
 500 Stone Street • Post Office Box 736 • Bedford, Virginia 24523 •  
 540-598-5413 • Fax: 540-598-5530

52480

Remington MULTIP  
 Raymond Seards

**CHAIN OF CUSTODY RECORD**

Additional Notes/ Comments/ Special Instructions:

ANALYSES

Site Quarterny Vector Study P.O.# \_\_\_\_\_

Seas Mixio See Type 1

COLLECTION DATE	TIME	SAMPLE LOCATION	CONTAINERS				SAMPLE PREPARATIVE
			SIZE	GP #	RE	C	

0706		Vessel A	125	P	Z	X	WV	Shake												
0709		Vessel A	500	P	1	X	WV	—												
0715		Vessel B	125	P	1	X	WV	Shake												
0715		Vessel B	500	P	1	X	WV	—												

Mix Liquors  
 Fecal P

COMMENTS

Date 12/01/2020 Time 0725 Received by: \_\_\_\_\_

Date 12/10/20 Time 0800 Received for Laboratory by: [Signature]

On test?  Y  N DA

Received @ 18.1 °C

Normal — Rush —

Job # 5882

Sample Condition "OK" Upon Receipt



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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 12/03/2020  
Report # 51602  
Job #: 0008958  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

The test results submitted in this report relate only to the samples submitted and as received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that results meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com/resources](http://www.ess-services.com/resources).

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If you have received this report in error, please notify ESS immediately at (540) 825-6660.

*Angie Woodward*

Approved by: \_\_\_\_\_

A. Woodward/Technical Director

Reviewers Initials *AW*





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 12/03/2020  
 Report #: 51602  
 Job #: 0008956  
 Customer #: 99R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0165327      Sample Source: Sludge  
 Sample Date/Time: 11/10/2020 / 07:50      Date Received: 11/10/2020

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Total Solids (%)	19.1	%	0.600	SM 2540 G-2011	11/16/2020	17:20	574
Arsenic, Total Recoverable	13.2	mg/kg	4.00	SW-846 6010B	11/12/2020	09:36	574
Molybdenum, Total Recoverable	7.32	mg/kg	4.00	SW-846 6010B	11/12/2020	09:36	574
Zinc, Total Recoverable	1,490	mg/kg	4.00	SW-846 6010B	11/12/2020	09:36	574
Lead, Total Recoverable	26.6	mg/kg	4.00	SW-846 6010B	11/12/2020	09:36	574
Nickel, Total Recoverable	20.3	mg/kg	4.00	SW-846 6010B	11/12/2020	09:36	574
Mercury, Total Recoverable	0.462	mg/kg	0.0250	SW-846 7471A	11/17/2020	10:09	574
Copper, Total Recoverable	1,060	mg/kg	2.00	SW-846 6010B	11/12/2020	09:36	574
Cadmium, Total Recoverable	7.89	mg/kg	2.00	SW-846 6010B	11/12/2020	09:36	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	11/12/2020	09:36	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 460160







FAUQUIER COUNTY  
**WATER & SANITATION AUTHORITY**  
7172 Kennedy Road • Vint Hill Farms  
Warrenton, Virginia 20187-3907  
Phone (540) 349-2092 • Fax (540) 347-7689



February 11, 2022

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

Subject: Remington WWTP VA0076805

To Whom It May Concern:

Enclosed please find the 2021 Annual Sludge Program Discharge Monitoring Reports and the Pathogen Reduction Study Summary for the Remington Wastewater Treatment Plant. We have no excursions to report.

Should you have any questions or require additional information please feel free to contact me at (540) 349-2092.

Sincerely,

Cheryl St. Amant  
Associate Executive Director

Cc: Ben Shoemaker, Executive Director  
Remington WWTP  
File

**PERMITTED FACILITY**

Remington Wastewater Treatment Plant  
 c/o Fauquier County Water and Sewer Authority, Warrenton VA  
 20188

Permit Number: VA0076805

Permit Type: Major Municipal

No Discharge:

**COMMONWEALTH OF VIRGINIA  
 DEPARTMENT OF ENVIRONMENTAL QUALITY  
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)**

**RETURN TO**

Department of Environmental Quality  
 Northern Regional Office  
 13801 Crown Court, Woodbridge VA 22193  
 (703) 583-3800

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE  
 COMPLETING THIS FORM AND RETURNING IT.

MONITORING PERIOD							
YEAR	MO	DAY		YEAR	MO	DAY	
FROM	2021	01	01	TO	2021	12	31

Outfall Num: S01

Reporting Frequency: Annual

Run Date: Mar 16, 2021

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
672 SOLIDS, TOTAL, SLUDGE AS PERCENT	REPORTD	*****	*****		*****	20.1	*****	%	0	1/YR	COMP
	REQMNT	*****	*****		*****	NL	*****	%	0	1/YR	COMP
680 ARSENIC, SLUDGE	REPORTD	*****	*****		*****	781	111	MG/KG	0	1/YR	COMP
	REQMNT	*****	*****		*****	41	75	MG/KG	0	1/YR	COMP
681 MOLYBDENUM, SLUDGE	REPORTD	*****	*****		*****	799	148	MG/KG	0	1/YR	COMP
	REQMNT	*****	*****		*****	NL	75	MG/KG	0	1/YR	COMP
682 ZINC, SLUDGE	REPORTD	*****	*****		*****	1266	1580	MG/KG	0	1/YR	COMP
	REQMNT	*****	*****		*****	2900	7500	MG/KG	0	1/YR	COMP
683 LEAD, SLUDGE	REPORTD	*****	*****		*****	22.73	243	MG/KG	0	1/YR	COMP
	REQMNT	*****	*****		*****	300	840	MG/KG	0	1/YR	COMP
684 NICKEL, SLUDGE	REPORTD	*****	*****		*****	1625	211	MG/KG	0	1/YR	COMP
	REQMNT	*****	*****		*****	420	420	MG/KG	0	1/YR	COMP
685 MERCURY, SLUDGE	REPORTD	*****	*****		*****	0.260	0.480	MG/KG	0	1/YR	COMP
	REQMNT	*****	*****		*****	17	57	MG/KG	0	1/YR	COMP
686 COPPER, SLUDGE	REPORTD	*****	*****		*****	874	1080	MG/KG	0	1/YR	COMP
	REQMNT	*****	*****		*****	1500	4300	MG/KG	0	1/YR	COMP
687 CADMIUM, SLUDGE	REPORTD	*****	*****		*****	7.42	111	MG/KG	0	1/YR	COMP
	REQMNT	*****	*****		*****	39	85	MG/KG	0	1/YR	COMP
689 LEVEL OF PATHOGEN REQUIREMENTS ACHIEVED	REPORTD	*****	*****		*****		2	STCL#	0	1/YR	COMP
	REQMNT	*****	*****		*****		NL	STCL#	0	1/YR	*****

Additional Permit Requirements (Outfall S01):

Comments:



**PERMITTED FACILITY**

Remington Wastewater Treatment Plant  
 c/o Fauquier County Water and Sewer Authority, Warrenton VA  
 20189

Permit Number: VA0076805

Permit Type: Major Municipal

No Discharge:

**COMMONWEALTH OF VIRGINIA  
 DEPARTMENT OF ENVIRONMENTAL QUALITY  
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)**

**RETURN TO**

Department of Environmental Quality  
 Northern Regional Office  
 13901 Crown Court, Woodbridge VA 22193  
 (703) 583-3800

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE  
 COMPLETING THIS FORM AND RETURNING IT.

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
FROM 2021	01	01	TO 2021	12	31

Outfall Num: S01

Reporting Frequency: Annual

Run Date: Mar 18, 2021

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
689 DESCRIPTION OF PATHOGEN OPTION USED	REPORTD	*****	*****		*****	*****	2	ALTR#	0	1/YR	
	REQMNT	*****	*****		*****	*****	NL	ALTR#	0	1/YR	*****
690 VECTOR ATTRACTION REDUCTION OPTION USED	REPORTD	*****	*****		*****	*****	2	ALTR#	0	1/YR	
	REQMNT	*****	*****		*****	*****	NL	ALTR#	0	1/YR	*****
697 SELENIUM, SLUDGE	REPORTD	*****	*****		*****	4.00	4.00	MG/KG	0	1/YR	COMP
	REQMNT	*****	*****		*****	100	100	MG/KG	0	1/YR	COMP

Additional Permit Requirements (Outfall S01):

Comments:

**PERMITTED FACILITY**

Remington Wastewater Treatment Plant  
 c/o Fauquier County Water and Sewer Authority, Warrenton VA  
 20188

Permit Number: VA0076806

Permit Type: Major Municipal

No Discharge:

**COMMONWEALTH OF VIRGINIA  
 DEPARTMENT OF ENVIRONMENTAL QUALITY  
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)**

**RETURN TO**

Department of Environmental Quality  
 Northern Regional Office  
 13901 Crown Court, Woodbridge VA 22193  
 (703) 583-3800

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE  
 COMPLETING THIS FORM AND RETURNING IT.

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 2021	01	01	TO	2021	12	31

Outfall Num: SP1

Reporting Frequency: Annual

Run Date: Mar 18, 2021

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM			
693 ANNUAL SLUDGE PRODUCTION TOTAL	REPORTD	*****	528.36	MTNYR	*****	*****	*****	0	1/YR	CALC
	REQDANT	*****	NL	MTNYR	*****	*****	*****	0	1/YR	CALC
694 ANNUAL AMT SLUDGE LAND APPLIED	REPORTD	*****	528.36	MTNYR	*****	*****	*****	0	1/YR	CALC
	REQDANT	*****	NL	MTNYR	*****	*****	*****	0	1/YR	CALC

Additional Permit Requirements (Outfall SP1):

Comments:



Remington Wastewater Treatment Plant  
 c/o Fauquier County Water and Sewer Authority, Warrenton VA  
 20189  
 Permit Number: VA0076006  
 Permit Type: Major Municipal

DEPARTMENT OF ENVIRONMENTAL QUALITY  
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

Department of Environmental Quality  
 Northern Regional Office  
 18901 Crown Court, Woodbridge VA 22191  
 (703) 583-3800  
 NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE  
 COMPLETING THIS FORM AND RETURNING IT.

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.

BYPASS AND OVERFLOWS		
TOTAL OCCURRENCES	TOTAL FLOW (M.G.)	TOTAL BOOS (K.G.)
0	0	0

OPERATOR IN RESPONSIBLE CHARGE			DATE		
Raymond A Scovils TYPED OR PRINTED NAME	 SIGNATURE	1965006247 CERTIFICATE NO.	2022 YEAR	02 MO.	09 DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT			TELEPHONE		
CHELSEA STAMANT TYPED OR PRINTED NAME	 SIGNATURE	340-345-2092 TELEPHONE	2022 YEAR	02 MO.	11 DAY

## DISCHARGE MONITORING REPORT (DMR) - GENERAL INSTRUCTIONS

1. Complete this form in permanent ink or indelible pencil. The use of 'correction fluid/tape' is not allowed.
2. Be sure to enter the dates for the first and last day of the period covered by the report on the form in the space marked "Monitoring Period".
3. For those parameters where the "permit requirement" spaces have a requirement or limitation, provide data in the "reported" spaces in accordance with your permit.
4. Enter the average and maximum quantities and units in the "reported" spaces in the columns marked "Quantity or Loading"  $KG/DAY = Concentration (mg/L) \times Flow (MGD) \times 3.785 G/D (Grams/Day) = Concentration (mg/L) \times Flow (MGD) \times 3785$
5. Enter maximum, minimum, and/or average concentrations and units in the "reported" spaces in the columns marked "Quality or Concentration".
6. For all parameters enter the number of samples which do not comply with the maximum and/or minimum permit requirements in the "reported" space in the column marked "No. Ex." (Number of Exceedances). If none, enter "0". Do NOT include monthly average violations in this field. Include any Maximum 7-Day Average and Maximum Weekly Average violations in this field. Permits with continuous pH or temperature monitoring requirements should consult the permit for what constitutes an exceedance and report accordingly.
7. You are required to sample (at a minimum) according to the Sample Frequencies and Sample Types specified in your permit.
8. Enter the actual frequency of analysis for each parameter (number of times per day, week, month, etc.) in the "reported" space in the column marked "Frequency of Analysis".
9. Enter the actual type of sample (Grab, BHC, 24 HC, etc) collected for each parameter in the "reported" space in the column marked "Sample Type".
10. Enter additional required data or comments in the space marked "additional permit requirements or comments". If additional required data or comments are appended to the DMR, reference appended information in this field.
11. Record the number of bypasses during the month, the total flow in million gallons (MG) and BOD5 in kilograms (KG) in the proper columns in the section marked "Bypasses and Overflows".
12. The operator in responsible charge of the facility should review this form and sign in the space provided. If the plant is required to have a licensed operator or if the operator in responsible charge of the facility is a licensed operator, the operator's signature and certificate number must be reported in the spaces provided.
13. The principal executive officer then reviews the form and must sign in the space provided and provide a telephone number where he/she can be reached. The final page of the DMR must have an original signature.
14. Send the completed form(s) with original signatures to your Department of Environmental Quality Regional Office by the 10th of each month unless otherwise specified in the permit.
15. You are required to retain a copy of the report for your records.
16. Where violations of permit requirements are reported, attach a brief explanation in accordance with the permit requirements describing causes and corrective actions taken. Reference each separate violation by date.
17. If you have any questions, contact the Department of Environmental Quality Regional Office listed on the DMR.





218 North Main St. \* P.O. Box 523 \* Culpeper, Virginia 22701 \* Tel: (540) 825-6680 \* Fax: (540) 825-4961 \* [www.ess-services.com](http://www.ess-services.com)

### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 02/12/2021  
Report #: 53772  
Job #: 0009158  
Customer #: 89R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that methods used meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com](http://www.ess-services.com).

This laboratory report may not be reproduced, except in full, without the written approval of ESS. If you have received this report in error, please notify ESS immediately at (540) 825-6680.

- Definitions:
- QL = Quantitation limit is the lowest concentration of analyte that the lab can report with confidence
  - INIT = Analyst Initials
  - ug/l = micrograms per liter (1 ug/l = 1 part per billion or ppb)
  - mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)
  - SU = Standard unit
  - umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials AW







100-205

### Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1648

Report Date: 02/12/2021  
 Report #: 53772  
 Job #: 0009158  
 Customer #: 99R  
 Customer PO #:   
 Collected By: Customer  
 Sample Location: Remington

Sample ID#: 0170036      Sample Source: Sludge  
 Sample Date/Time: 02/02/2021 / 08:30      Date Received: 02/02/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Total Solids (%)	19.5	%	0.600	SM 2540 G-2011	02/08/2021	16:10	574
Arsenic, Total Recoverable	7.82	mg/kg	4.00	SW-846 8010B	02/03/2021	09:01	574
Molybdenum, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 8010B	02/03/2021	09:01	574
Zinc, Total Recoverable	692	mg/kg	4.00	SW-846 8010B	02/03/2021	09:01	574
Lead, Total Recoverable	18.7	mg/kg	4.00	SW-846 8010B	02/03/2021	09:01	574
Nickel, Total Recoverable	11.2	mg/kg	4.00	SW-846 8010B	02/03/2021	09:01	574
Mercury, Total Recoverable	0.247	mg/kg	0.0250	SW-846 7471A	02/04/2021	09:52	574
Copper, Total Recoverable	508	mg/kg	2.00	SW-846 8010B	02/03/2021	09:01	574
Cadmium, Total Recoverable	3.39	mg/kg	2.00	SW-846 8010B	02/03/2021	09:01	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 8010B	02/03/2021	09:01	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 480180

CERTIFICATION  
 REPORT ID IS  
 6233263





### NOTICE AND NECESSARY INFORMATION

Biosolids notification requirements to comply with 9VAC25-31-530.F-G or 9VAC25-32-313.G-H.

Part I - To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids

Facility Name: Remington WWTP Permit Number: VA 0076805

A. Metals Limitations

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	7.62	7.62	41	75
Total Cadmium	3.39	3.39	39	85
Total Copper	506	506	1,500	4,300
Total Lead	16.7	16.7	300	840
Total Mercury	0.247	0.247	17	57
Total Molybdenum	<4.00	<4.00	NL <sup>(3)</sup>	75
Total Nickel	11.2	11.2	420	420
Total Selenium	<4.00	<4.00	100	100
Total Zinc	692	692	2,800	7,500

- (1) Values to be reported on a dry weight basis.
- (2) Sludge may not be land applied if any pollutant exceeds these values.
- (3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

B. Class B Pathogen Reduction

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

- Alternative 1: Fecal coliform testing -geometric mean of 7 samples
- Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:
  - Option 1 - Aerobic digestion
  - Option 2 - Air drying beds
  - Option 3 - Anaerobic digestion
  - Option 4 - Composting
  - Option 5 - Lime Stabilization
  - Other: \_\_\_\_\_

**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8 by:

- Option 1:  $\geq 38\%$  volatile solids reduction
- Option 2: Anaerobic 40 day bench test
- Option 3: Aerobic 30 day bench test
- Option 4: Specific Oxygen Uptake Rate (SOUR) test
- Option 5: Aerobic process, 14 days @ 40°C (45°C)
- Option 6: Alkaline stabilization
- Option 7: Dry to  $\geq 75\%$  T.S. w/no unstabilized 1<sup>o</sup> sludges
- Option 8: Dry to  $\geq 90\%$  T.S.

OR

VAR requirements for Class B biosolids were not achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Raymond Seails Chief Operator  
 Signature [Signature] Date Signed 3-15-21  
 Telephone number 540439 2225



March 11, 2021

Mr. Raymond Searls  
 FCWSA- Remington WWTP  
 12523 Lucky Hill Road  
 Remington, VA 22734

**Subject: Remington WWTP- Pathogen Reduction Study Summary**

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the first quarter vector (2021) attraction study for the Remington WWTP from 2/2/2021 to 3/3/2021. The original 5 gallon sample which was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels were labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples were collected from Vessels A and B at both the start test date and after the 30 day period. Each vessel was mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30 day period, additional distilled water was added to each vessel as needed until the original test volume was maintained.

After the 30 day period had expired a second round of MLSS, MLVSS, and Fecal Coliform samples were collected from Vessels A and B.

Vessel A	% Sludge =	2.09%		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
2/3/2020	20900	15400	73.7%	44000
3/3/2020	17700	12300	70.7%	338
		Reduction	<b>3.7%</b>	

Vessel B	% Sludge =	2.16%		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
2/3/2020	21500	15800	73.5%	32600
3/3/2020	17400	12200	70.1%	2010
		Reduction	<b>3.4%</b>	

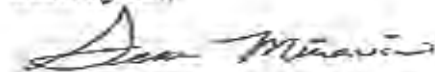
Average Reduction for 30 Day Period **3.5%**

The average total volatile reduction of Vessels A and B during the 30 day period was calculated to be 3.5%. According to the biosolids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent of 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15%, vector attraction reduction is achieved.

Since the volatile solids reduction for the Remington WWTP was found to be an average of 3.5% reduction after the additional 30 day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information should be submitted on your Form S01 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody







1st 0-7

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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1546

Report Date: 02/09/2021  
Report #: 53778  
Job #: 0009072  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that methods used meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com](http://www.ess-services.com).

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Definitions: QL = Quantitation limit is the lowest concentration of analyte that the lab can report with confidence  
INIT = Analyst Initials  
ug/l = micrograms per liter (1 ug/l = 1 part per billion or ppb)  
mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 02/06/2021  
 Report #: 53776  
 Job #: 0009072  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#: 0170061      Sample Source: Vessel A  
 Sample Date/Time: 02/02/2021 / 11:20      Date Received: 02/02/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	20,900	mg/l	1.00	SM 2540 D-2011	02/05/2021	13:15	J1
Mixed Liquor Volatile SS	15,400	mg/l	1.00	SM 2540 E-2011	02/06/2021	13:25	J1
Fecal Coliform	44,000	MPN/g	180	SM 9221 E+C-2006	02/02/2021	12:50	J1

Sample ID#: 0170062      Sample Source: Vessel B  
 Sample Date/Time: 02/02/2021 / 11:30      Date Received: 02/02/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	21,600	mg/l	1.00	SM 2540 D-2011	02/05/2021	13:20	J1
Mixed Liquor Volatile SS	15,800	mg/l	1.00	SM 2540 E-2011	02/06/2021	13:25	J1
Fecal Coliform	32,800	MPN/g	180	SM 9221 E+C-2006	02/02/2021	13:05	J1

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.





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 540-596-5413 • Fax: 540-596-5590

53778

**CHAIN OF CUSTODY RECORD**

Remington WCTP

Additional Notes/ Comments/ Special Instructions:

Quaternary Vector Study

Name/Title

Sean Hunsie

P.O.#

*[Signature]*

(Print Name)

(Signature)

COLLECTION DATE	TIME	SAMPLE LOCATION	CONTAINER SIZE	QTY	SCALE	ANALYSIS
-----------------	------	-----------------	----------------	-----	-------	----------

Date	Time	Received by	Requisitioned by	Date	Time	Received by	Comments
12/21	1120	Vessel A	500 P1 X	12/21	1125	WV	Wood Wa
12/21	1120	Vessel A	125 P 2 X	12/21	1125	WV	Swick
12/21	1130	Vessel B	500 P 1 X	12/21	1130	WV	Swick
12/21	1130	Vessel B	125 P 1 X	12/21	1130	WV	Swick

Fed Ex  Air Mail Delivery

On user received @ 7.4 c

Normal  Rush   
 Need Results by:  Extra charges will apply for Rush TAT.

Job # 9072

Sample comparison OK upon receipt for lab  
 Sample Condition Stamp



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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 03/09/2021  
Report #: 54508  
Job #: 0009072  
Customer #: 99R  
Customer PO#:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that methods used meet the requirements of either 1VAC30-48 and the 2000 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com](http://www.ess-services.com).

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by:

Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials:

AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 03/09/2021  
 Report #: 54508  
 Job #: 0009072  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#: 0171675      Sample Source: Vessel A  
 Sample Date/Time: 03/03/2021 / 07:00      Date Received: 03/03/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	18,000	mg/l	1.00	SM 2540 D-2011	03/08/2021	18:28	JL
Mixed Liquor Volatile SS	11,200	mg/l	1.00	SM 2540 E-2011	03/08/2021	11:40	JL
Fecal Coliform	338	MPN/g	180	SM 9221 E+C-2008	03/03/2021	12:35	JL

Sample ID#: 0171676      Sample Source: Vessel B  
 Sample Date/Time: 03/03/2021 / 07:10      Date Received: 03/03/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	17,400	mg/l	1.00	SM 2540 D-2011	03/08/2021	18:32	JL
Mixed Liquor Volatile SS	12,200	mg/l	1.00	SM 2540 E-2011	03/08/2021	11:40	JL
Fecal Coliform	2,010	MPN/g	180	SM 9221 E+C-2008	03/03/2021	13:00	JL

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.







2nd qtr  
Storage material



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### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1846

Report Date: 06/01/2021  
Report #: 56445  
Job #: 0009352  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that methods used meet the requirements of either 1VAC30-46 and the 2009 FNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com](http://www.ess-services.com).

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Definitions: QL = Quantitation limit is the lowest concentration of analyte that the lab can report with confidence  
INIT = Analyst Initials  
ug/l = micrograms per liter (1 ug/l = 1 part per billion or ppb)  
mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials: AW









## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 05/01/2021  
 Report #: 56445  
 Job #: 0009352  
 Customer #: 89R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0175965      Sample Source: Sludge  
 Sample Date/Time: 05/10/2021 / 08:00      Date Received: 05/10/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Total Solids (%)	23.5	%	0.500	SM 2540 G-2011	05/14/2021	12:12	574
Arsenic, Total Recoverable	7.88	mg/kg	4.00	SW-846 6010B	05/13/2021	09:31	574
Molybdenum, Total Recoverable	5.97	mg/kg	4.00	SW-846 6010B	05/13/2021	09:31	574
Zinc, Total Recoverable	1,480	mg/kg	4.00	SW-846 6010B	05/13/2021	09:31	574
Lead, Total Recoverable	21.1	mg/kg	4.00	SW-846 6010B	05/13/2021	08:31	574
Nickel, Total Recoverable	14.3	mg/kg	4.00	SW-846 6010B	05/13/2021	09:31	574
Mercury, Total Recoverable	0.312	mg/kg	0.0250	SW-846 7471A	05/18/2021	08:28	574
Copper, Total Recoverable	923	mg/kg	2.00	SW-846 6010B	05/13/2021	09:31	574
Cadmium, Total Recoverable	7.82	mg/kg	2.00	SW-846 6010B	05/13/2021	09:31	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	05/13/2021	09:31	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP Lab ID# 460160



### NOTICE AND NECESSARY INFORMATION

Biosolids notification requirements to comply with 9VAC25-31-530.F - G or 9VAC25-32-313.G - H.

Part I - To be completed by PREPARERS of biosolids and provided to the person who applies or receives these biosolids

Facility Name: Remington WWTP Permit Number: VA 0076805

A. Metals Limitations

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	7.58	7.58	41	75
Total Cadmium	7.82	7.82	39	85
Total Copper	923	923	1,500	4,300
Total Lead	21.1	21.1	300	840
Total Mercury	0.312	0.312	17	57
Total Molybdenum	5.97	5.97	NL <sup>(3)</sup>	75
Total Nickel	14.3	14.3	420	420
Total Selenium	54.00	54.00	100	100
Total Zinc	1460	1460	2,800	7,500

(1) Values to be reported on a dry weight basis.

(2) Sludge may not be land applied if any pollutant exceeds these values.

(3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

B. Class B Pathogen Reduction

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

Alternative 1: Fecal coliform testing -geometric mean of 7 samples

Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:

Option 1 - Aerobic digestion

Option 2 - Air drying beds

Option 3 - Anaerobic digestion

Option 4 - Composting

Option 5 - Lime Stabilization

Other: \_\_\_\_\_

2-26-21



**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8 by:

- Option 1:  $\geq 38\%$  volatile solids reduction
- Option 2: Anaerobic 40 day bench test
- Option 3: Aerobic 30 day bench test
- Option 4: Specific Oxygen Uptake Rate (SOUR) test
- Option 5: Aerobic process, 14 days @ 40°C (45°C)
- Option 6: Alkaline stabilization
- Option 7: Dry to  $\geq 75\%$  T.S. w/no unstabilized 1° sludge
- Option 8: Dry to  $\geq 90\%$  T.S.

OR

VAR requirements for Class B biosolids were not achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title RAYMOND SEARLS CHIEF OPERATOR

Signature  Date Signed 6-28-21

Telephone number 540-439-2225



218 North Main St. ♦ P.O. Box 520 ♦ Culpeper, Virginia 22701 ♦ Tel: (540) 825-8860 ♦ Fax: (540) 825-4961 ♦ [www.ess-service.com](http://www.ess-service.com)

### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 05/18/2021  
Report #: 56451  
Job #: 0009284  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that methods used meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com](http://www.ess-services.com).

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- QL = Quantitation limit is the lowest concentration of analyte that the lab can report with confidence
  - INIT = Analyst Initials
  - ug/l = micrograms per liter (1 ug/l = 1 part per billion or ppb)
  - mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)
  - SU = Standard unit
  - umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials IS



2nd B-1



June 21, 2021

Mr. Raymond Searls  
FCWSA- Remington WWTP  
12523 Lucky Hill Road  
Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the second quarter vector (2021) attraction study for the Remington WWTP from 5/10/2021 to 6/9/2021. The original 5-gallon sample was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples collected from Vessels A and B at both the start test date and after the 30-day period. Each vessel mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30- day period, additional distilled water added to each vessel as needed until the original test volume maintained.

After the 30-day period had expired a second round of MLSS, MLVSS, and Fecal Coliform samples collected from Vessels A and B.

Vessel A		% Sludge = 2.36%		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
2/3/2020	23600	16600	70.3%	14800
3/3/2020	16700	11800	69.5%	551
Reduction			0.9%	

Vessel B		% Sludge = 2.33%		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
2/3/2020	23200	16400	70.4%	15100
3/3/2020	17200	11800	68.6%	930
Reduction			1.8%	

Average Reduction for 30 Day Period 1.3%

The average total volatile reduction of Vessels A and B during the 30-day period calculated to be 1.3%. According to the bio-solids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies the vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent of 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period reduced by less than 15%, vector attraction reduction achieved.

Since the volatile solids reduction for the Remington WWTP found to be an average of 1.3% reduction after the additional 30-day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information submitted on your Form S01 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody







## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 05/18/2021  
 Report #: 56451  
 Job #: 0009284  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#: 0175978      Sample Source: Vessel A  
 Sample Date/Time: 05/10/2021 / 10:30      Date Received: 05/10/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Fecal Coliform	14,800	MPN/g	180	SM 9221 E+C-2006	05/10/2021	13:05	J
MLSS/MLVSS							
Mixed Liquor Susp Solids	23,600	mg/l	1.00	SM 2540 D-2011	05/13/2021	14:35	J
Mixed Liquor Volatile SS	16,600	mg/l	1.00	SM 2540 E-2011	05/14/2021	13:15	J

Sample ID#: 0175979      Sample Source: Vessel B  
 Sample Date/Time: 05/10/2021 / 10:40      Date Received: 05/10/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Fecal Coliform	15,100	MPN/g	180	SM 9221 E+C-2006	05/10/2021	13:30	J
MLSS/MLVSS							
Mixed Liquor Susp Solids	23,200	mg/l	1.00	SM 2540 D-2011	05/13/2021	14:38	J
Mixed Liquor Volatile SS	16,400	mg/l	1.00	SM 2540 E-2011	05/14/2021	13:15	J







read out  
work

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### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 08/16/2021  
Report #: 57260  
Job #: 0009284  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

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ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

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  - mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)
  - SU = Standard unit
  - umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials JS





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1846

Report Date: 08/16/2021  
 Report #: 57250  
 Job #: 0009284  
 Customer #: 59R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#:	0177792	Sample Source:	Vessel A				
Sample Date/Time:	06/09/2021 / 05:40	Date Received:	06/09/2021				
Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	551	MPN/g	180	SM 8221 E+C-2006	06/09/2021	11:16	J1
Mixed Liquor Susp Solids	16,700	mg/l	1.00	SM 2540 D-2011	08/10/2021	14:28	J1
Mixed Liquor Volatile SS	11,600	mg/l	1.00	SM 2540 E-2011	08/11/2021	18:00	J1

Sample ID#:	0177793	Sample Source:	Vessel B				
Sample Date/Time:	06/09/2021 / 05:50	Date Received:	06/09/2021				
Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	930	MPN/g	180	SM 8221 E+C-2006	06/09/2021	12:10	J1
Mixed Liquor Susp Solids	17,200	mg/l	1.00	SM 2540 D-2011	08/10/2021	14:35	J1
Mixed Liquor Volatile SS	11,600	mg/l	1.00	SM 2540 E-2011	08/11/2021	18:00	J1

COMMENT:  
 Results reported as mg/kg or MPN/g are reported on a dry weight basis





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57250

**CHAIN OF CUSTODY RECORD**

Additional Notes/ Comments/ Special Instructions:

Property vector study  
 Please see  
 Sample 11

**ANALYSES**

Company: Ramington WWP  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_  
 State: \_\_\_\_\_  
 Zip: \_\_\_\_\_  
 Project Name/ Site: 2<sup>nd</sup> Grd. 2021 P.O.# \_\_\_\_\_  
 Collected By: Sean Hawkins (Print Name)  
 Signature: \_\_\_\_\_

ESS P.E.U.	COLLECTION DATE	TIME	SRM# LOCATION	CONTAINERS	SAMPLE METHOD	ANALYSIS
---------------	--------------------	------	------------------	------------	------------------	----------

1792619121	0510		WESSLP	125 P 2	1	sewa	X					
1925619121	0550		WESSLP	500 P 1	1	sewa	X					
193			WESSLP	125 P 1	1	sewa	X					
			WESSLP	500 P 1	1	sewa	X					

Delivered by: \_\_\_\_\_ Date: 05/11/21 Time: 0600 Received by: RAY-Box (Seale)

Requested by: \_\_\_\_\_ Requisitioned by: \_\_\_\_\_

Requested by: \_\_\_\_\_ Requisitioned by: \_\_\_\_\_

Job # 9284





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### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20167-1848

Report Date: 08/10/2021  
Report #: 59400  
Job #: 0009660  
Customer #: 89R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

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- mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)
- SU = Standard unit
- umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials TS









2021  
Metals Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 09/10/2021  
Report #: 59400  
Job #: 0009660  
Customer #: 99R  
Customer PO #:   
Collected By: Customer  
Sample Location: Remington WWTP

### Analytical Report

Sample ID#: 0182485      Sample Source: Sludge  
Sample Date/Time: 08/23/2021 / 08:10      Date Received: 08/23/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Total Solids (%)	20.0	%	0.500	SM 2540 G-2011	08/27/2021	18:30	574
Arsenic, Total Recoverable	4.53	mg/kg	4.00	SW-846 6010B	08/31/2021	08:46	574
Molybdenum, Total Recoverable	11.2	mg/kg	4.00	SW-846 6010B	08/31/2021	09:46	574
Zinc, Total Recoverable	1,580	mg/kg	4.00	SW-846 6010B	08/31/2021	09:46	574
Lead, Total Recoverable	23.8	mg/kg	4.00	SW-846 6010B	08/31/2021	09:46	574
Nickel, Total Recoverable	18.4	mg/kg	4.00	SW-846 6010B	08/31/2021	09:46	574
Mercury, Total Recoverable	0.480	mg/kg	0.0250	SW-846 7471A	08/31/2021	12:23	574
Copper, Total Recoverable	1,080	mg/kg	2.00	SW-846 6010B	08/31/2021	09:46	574
Cadmium, Total Recoverable	7.35	mg/kg	2.00	SW-846 6010B	08/31/2021	09:46	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	08/31/2021	09:46	574

574 Samples subcontracted to VELAP ID# 460160



**NOTICE AND NECESSARY INFORMATION**

Biosolids notification requirements to comply with 9VAC25-31-530.F - G or 9VAC25-32-313.G - H.

**Part I - To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTP Permit Number: Va. 0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	4.53	4.53	41	75
Total Cadmium	7.35	7.35	39	85
Total Copper	1,080	1,080	1,500	4,300
Total Lead	23.8	23.8	300	840
Total Mercury	0.480	0.480	17	57
Total Molybdenum	11.2	11.2	NL <sup>(3)</sup>	75
Total Nickel	18.4	18.4	420	420
Total Selenium	< 4.00	< 4.00	100	100
Total Zinc	1,580	1,580	2,800	7,500

- (1) Values to be reported on a dry weight basis.
- (2) Sludge may not be land applied if any pollutant exceeds these values.
- (3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

- Alternative 1: Fecal coliform testing -geometric mean of 7 samples
- Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:
  - Option 1 - Aerobic digestion
  - Option 2 - Air drying beds
  - Option 3 - Anaerobic digestion
  - Option 4 - Composting
  - Option 5 - Lime Stabilization
  - Other: \_\_\_\_\_

**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8 by:

- Option 1:  $\geq 38\%$  volatile solids reduction
- Option 2: Anaerobic 40 day bench test
- Option 3: Aerobic 30 day bench test
- Option 4: Specific Oxygen Uptake Rate (SOUR) test
- Option 5: Aerobic process, 14 days @ 40°C (45°C)
- Option 6: Alkaline stabilization
- Option 7: Dry to  $\geq 75\%$  T.S. w/no unstabilized i° sludges
- Option 8: Dry to  $\geq 90\%$  T.S.

OR

VAR requirements for Class B biosolids were not achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(2)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Raymond Seals Chief Operator  
 Signature [Signature] Date Signed 10/26/2021  
 Telephone number 540-439-2225

3-2-418



September 30, 2021

Mr. Raymond Searls  
FCWSA- Remington WWTP  
12523 Lucky Hill Road  
Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the third quarter vector (2021) attraction study for the Remington WWTP from 8/23/2021 to 9/22/2021. The original 5-gallon sample was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples collected from Vessels A and B at both the start test date and after the 30-day period. Each vessel mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30- day period, additional distilled water added to each vessel as needed until the original test volume maintained.

After the 30-day period expired a second round of MLSS, MLVSS, and Fecal Coliform samples collected from Vessels A and B.

Vessel A		% Sludge = 0.52%		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
8/23/2021	5240	3340	63.7%	13400
9/22/2021	9210	5500	59.7%	999
Reduction			4.0%	

Vessel B		% Sludge = 0.40%		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
8/23/2021	3960	2510	63.4%	23200
9/22/2021	9670	5850	60.5%	< 180
Reduction			2.9%	


Average Reduction for 30 Day Period		3.5%
-------------------------------------	--	------

The average total volatile reduction of Vessels A and B during the 30-day period calculated to be 3.5%. According to the bio-solids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case, vector attraction reduction demonstrated by digesting a portion of the previously sewage sludge that has a percent of 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period reduced by less than 15%, vector attraction reduction achieved.

Since the volatile solids reduction for the Remington WWTP found to be an average of 3.5% reduction after the additional 30-day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information submitted on your Form S01 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Sean Minavio, Project Manager  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody







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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 08/13/2021  
Report #: 59403  
Job #: 0009536  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
BU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 09/13/2021  
 Report #: 59403  
 Job #: 0009535  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#: 0182491      Sample Source: Vessel A  
 Sample Date/Time: 08/23/2021 / 10:45      Date Received: 08/23/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	5,240	mg/l	1.00	SM 2540 D-2011	08/26/2021	14:50	JC
Mixed Liquor Volatile SS	3,340	mg/l	1.00	SM 2540 E-2011	08/27/2021	09:43	JC
Fecal Coliform	13,400	MPN/g	100	SM 9221 E+C-2006	08/24/2021	12:40	CW

Sample ID#: 0182494      Sample Source: Vessel B  
 Sample Date/Time: 08/23/2021 / 11:00      Date Received: 08/23/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	3,960	mg/l	1.00	SM 2540 D-2011	08/26/2021	15:00	JC
Mixed Liquor Volatile SS	2,510	mg/l	1.00	SM 2540 E-2011	08/27/2021	09:43	JC
Fecal Coliform	23,200	MPN/g	100	SM 9221 E+C-2006	08/24/2021	13:50	CW

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis







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59403

### CHAIN OF CUSTODY RECORD

Additional Notes/ Comments/ Special Instructions:

PURDNEY VECTOR STRONG

Remix for use  
 Raymon G.

Printed Site:

Sean M. Hani

P.O.#

ANALYSES

COLLECTION DATE

SAMPLE LOCATION

CONTAINER

SAMPLE PRESERVATIVE

COMMENTS

COLLECTION DATE	SAMPLE LOCATION	CONTAINER	SAMPLE PRESERVATIVE	Received by:	Date	Time	Received by:	Preservative	Comments
10/15	VESSERA	500 P	1						
10/15	↓	125 P	2					Steno	X
11/0	VESSERA B	500 P	1					Steno	X
11/0	↓	125 P	1					Steno	X

Date: 10/15/10 Time: 11:00 AM Received by: [Signature]

Date: 11/0/10 Time: 11:00 AM Received by: [Signature]

Date: 11/23/10 Time: 11:00 AM Received by: [Signature]

Job #: 9536



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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1545

Report Date: 09/28/2021  
Report #: 80235  
Job #: 0009536  
Customer #: 99R  
Customer PO #:   
Collected By: ESS Employee  
Sample Location: Quarterly Vector

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 09/28/2021  
 Report #: 60235  
 Job #: 0009536  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector

<b>Sample ID#:</b>	0184231	<b>Sample Source:</b>	Vessel A				
<b>Sample Date/Time:</b>	09/22/2021 / 08:05	<b>Date Received:</b>	09/22/2021				
Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	3,210	mg/l	1.00	SM 2540 D-2011	09/24/2021	14:58	JL
Mixed Liquor Volatile SS	5,500	mg/l	1.00	SM 2540 E-2011	09/27/2021	12:55	JL
Fecal Coliform	999	MPN/g	180	SM 9221 E+C-2008	09/22/2021	11:45	JL

<b>Sample ID#:</b>	0184232	<b>Sample Source:</b>	Vessel B				
<b>Sample Date/Time:</b>	09/22/2021 / 08:16	<b>Date Received:</b>	09/22/2021				
Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
MLSS/MLVSS							
Mixed Liquor Susp Solids	9,670	mg/l	1.00	SM 2540 D-2011	09/24/2021	15:06	JL
Mixed Liquor Volatile SS	5,850	mg/l	1.00	SM 2540 E-2011	09/27/2021	12:55	JL
Fecal Coliform	< 180	MPN/g	180	SM 9221 E+C-2008	09/22/2021	12:00	JL

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.





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60235

**CHAIN OF CUSTODY RECORD**

Remington WPT  
 Raymond Sears

Quarterly Vector

PLEASE GIVE  
 STEW REPORT

Transfer to:

Seon Minnis

P.O.#  
 (Signature)

**ANALYSES**

6. LISTENING DATE TIME	SAMPLE LOCATION	OBTAINERS	SURVE
------------------------	-----------------	-----------	-------

9/22/21 0805	VESSELLA	125 P 2 X	X
9/22/21 0815	VESSELLA	500 P 1 X	X
9/22/21 0815	VESSELLB	125 P 1 X	X
9/22/21 0815	VESSELLB	500 P 1 X	X

STEPS	BY	TIME	REMARKS

Date	Time	Received by:	Relinquished by:	Relinquished to:	Date	Time	Received by:
9/22/21	0830				9/22/21	0830	

Paid Ex  Hand Delivery  
 Post Office  On foot  Y  N  
 Received @ 19.0 °C  
 Under 2 hours  
 Normal  Rush  
 Need Results by \_\_\_\_\_  
 Extra charges will apply for Rush TAT.

Job # 9536  
 Date 9/22/21 Time 0830  
 Received for Laboratory by: AGW

Sample conditions upon receipt for analysis

Sample Condition Sheet



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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1846

Report Date: 12/23/2021  
Report #: 81997  
Job #: 0009930  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by:

Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials

AW





**NOTICE AND NECESSARY INFORMATION**

Biosolids notification requirements to comply with 9VAC25-31-530.F - G or 9VAC25-32-313.G - H.

**Part I - To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids**

Facility Name: Remington WWTP

Permit Number: VA 0076805

**A. Metals Limitations**

Sample Date(s): \_\_\_\_\_

Number of Samples: \_\_\_\_\_

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations <sup>(2)</sup>
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Arsenic	11.1	11.1	41	75
Total Cadmium	11.1	11.1	39	85
Total Copper	985	985	1,500	4,300
Total Lead	29.3	29.3	300	840
Total Mercury	<0.076	<0.076	17	57
Total Molybdenum	14.8	14.8	NL <sup>(3)</sup>	75
Total Nickel	21.1	21.1	420	420
Total Selenium	<4.00	<4.00	100	100
Total Zinc	1,330	1,330	2,800	7,500

(1) Values to be reported on a dry weight basis.

(2) Sludge may not be land applied if any pollutant exceeds these values.

(3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

**B. Class B Pathogen Reduction**

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

Alternative 1: Fecal coliform testing -geometric mean of 7 samples

Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:

Option 1 - Aerobic digestion

Option 2 - Air drying beds

Option 3 - Anaerobic digestion

Option 4 - Composting

Option 5 - Lime Stabilization

Other: \_\_\_\_\_

1-5-22



**NOTICE AND NECESSARY INFORMATION**

**C. Vector Attraction Reduction (VAR)**

VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8 by:

- Option 1:  $\geq 38\%$  volatile solids reduction
- Option 2: Anaerobic 40 day bench test
- Option 3: Aerobic 30 day bench test
- Option 4: Specific Oxygen Uptake Rate (SOUR) test
- Option 5: Aerobic process, 14 days @ 40°C (45°C)
- Option 6: Alkaline stabilization
- Option 7: Dry to  $\geq 75\%$  T.S. w/no unstabilized 1<sup>o</sup> sludges
- Option 8: Dry to  $\geq 90\%$  T.S.

OR

VAR requirements for Class B biosolids were not achieved in accordance with 9VAC25-31-720.B.1 - 8 or 9VAC25-32-685.B.1 - 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

**D. Nutrient Concentrations**

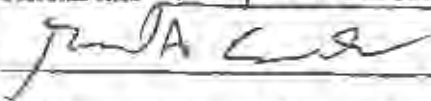
Sample Date(s): \_\_\_\_\_ Number of Samples: \_\_\_\_\_

Parameters	Concentrations	
	Monthly Average (mg/kg) <sup>(1)</sup>	Maximum (mg/kg) <sup>(1)</sup>
Total Nitrogen as N	N/A	N/A
Total Phosphorus as P	N/A	N/A

\*Values to be reported on a dry weight basis.

**E. 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 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.*

Name and official title Raymond Searts Chief Operator  
 Signature  Date Signed 1-5-2022  
 Telephone number 540-439-2225



12/23/2021

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### Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 12/23/2021  
Report #: 61997  
Job #: 0009930  
Customer #: 99R  
Customer PO #:  
Collected By: Customer  
Sample Location: Remington WWTP

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by: Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials AW





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 12/23/2021  
 Report #: 61997  
 Job #: 0009930  
 Customer #: 99R  
 Customer PO #:  
 Collected By: Customer  
 Sample Location: Remington WWTP

Sample ID#: 0187982      Sample Source: Sludge  
 Sample Date/Time: 11/12/2021 / 08:10      Date Received: 11/22/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INT
Total Solids (%)	17.4	%	0.500	SM 2540 G-2011	11/24/2021	16:53	SLV
Arsenic, Total Recoverable	11.1	mg/kg	4.00	SW-846 6010B	12/03/2021	10:05	574
Molybdenum, Total Recoverable	14.8	mg/kg	4.00	SW-846 6010B	12/03/2021	10:05	574
Zinc, Total Recoverable	1,330	mg/kg	4.00	SW-846 6010B	12/03/2021	10:05	574
Lead, Total Recoverable	28.3	mg/kg	4.00	SW-846 6010B	12/03/2021	10:05	574
Nickel, Total Recoverable	21.1	mg/kg	4.00	SW-846 6010B	12/03/2021	10:05	574
Mercury, Total Recoverable	< 0.076	mg/kg	0.078	SW7471B	12/20/2021	08:49	674
Copper, Total Recoverable	985	mg/kg	2.00	SW-846 6010B	12/03/2021	10:05	574
Cadmium, Total Recoverable	11.1	mg/kg	2.00	SW-846 6010B	12/03/2021	10:05	574
Selenium, Total Recoverable	< 4.00	mg/kg	4.00	SW-846 6010B	12/03/2021	10:05	574

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

574 Samples subcontracted to VELAP ID# 460180





January 4, 2022

Mr. Raymond Searls  
FCWSA- Remington WWTP  
12523 Lucky Hill Road  
Remington, VA 22734

Subject: Remington WWTP- Pathogen Reduction Study Summary

Dear Raymond,

Environmental Systems Service, Ltd. (ESS) conducted the fourth quarter vector (2021) attraction study for the Remington WWTP from 11/22/2021 to 12/21/2021. The original 5- gallon sample was received from FCWSA was immediately mixed and poured off into two (2) sample vessels. These two vessels labeled Vessel A and Vessel B (duplicate) which was contained in 4000 mL glass Erlenmeyer flasks. Mixed liquor suspended solids (MLSS), mixed liquor volatile suspended solids (MLVSS), and Fecal Coliform samples collected from Vessels A and B at both the start test date and after the 30-day period. Each vessel mixed and aerated with a small air compressor and diffuser stone for the duration of the test period. As water evaporated out of the vessel over the course of the 30- day period, additional distilled water added to each vessel as needed until the original test volume maintained.

After the 30-day period expired a second round of MLSS, MLVSS, and Fecal Coliform samples collected from Vessels A and B.

Vessel A		% Sludge = 1.46%		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
11/22/2021	14600	9440	64.7%	11,000
12/21/2021	11700	7320	62.6%	2,990
Reduction			<b>2.1%</b>	

Vessel B		% Sludge = 1.47%		
Date	MLSS	MLVSS	% Volatile	Fecal Coliform
11/22/2021	14700	9420	64.1%	10,900
12/21/2021	12500	7760	62.1%	736
Reduction			<b>2.0%</b>	

Average Reduction for 30 Day Period **2.0%**

The average total volatile reduction of Vessels A and B during the 30-day period calculated to be 2.0%. According to the bio-solids use regulations of 9VAC 25-31 720 section B.3 the sludge satisfies vector attraction reduction requirements for land application when 38% volatile solids reduction from subdivision 1 cannot be met for an aerobically digested sludge. In this case, vector attraction reduction demonstrated by digesting a portion of the previously digested sewage sludge that has a percent of 2.0% or less aerobically in the laboratory bench scale for a period of 30 days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period reduced by less than 15%, vector attraction reduction achieved.

Since the volatile solids reduction for the Remington WWTP found to be an average of 2.0% reduction after the additional 30-day period, the sludge does meet the vector attraction reduction requirements of 9VAC 25-31 720. The following information submitted on your Form S01 discharge monitoring report. This data supports the alternative method you selected during the permit application process (Alternative 2). On a Quarterly basis, you are required to perform a bench scale demonstration of your facility's sludge quality. Copies of the bench sheets for this demonstration must be submitted with your Form S01 DMR.

Should you have any questions or concerns please feel free to contact me at 540-825-6660.

Best regards,



Cody J. Hoehna, Environmental Services Director  
Environmental Services Division

Attachment – Analytical Report & Chains of Custody



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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 12/02/2021  
Report #: 81998  
Job #: 0009817  
Customer #: 89R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

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mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)  
SU = Standard unit  
umhos/cm = micromhos per centimeter @25°C

Approved by:

Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials:

AW







## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1648

Report Date: 12/02/2021  
 Report #: 61998  
 Job #: 0009817  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#: 0187983      Sample Source: Vessel A  
 Sample Date/Time: 11/22/2021 / 08:45      Date Received: 11/22/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	11,000	MPN/g	180	SM 9221 E+C-2006	11/22/2021	11:20	JJ
Mixed Liquor Susp Solids	14,600	mg/l	1.00	SM 2540 D-2011	11/22/2021	18:26	JJ
Mixed Liquor Volatile SS	9,440	mg/l	1.00	SM 2540 E-2011	11/23/2021	11:20	JJ

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.

Sample ID#: 0187994      Sample Source: Vessel B  
 Sample Date/Time: 11/22/2021 / 08:55      Date Received: 11/22/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	10,900	MPN/g	180	SM 9221 E+C-2006	11/22/2021	11:40	JJ
Mixed Liquor Susp Solids	14,700	mg/l	1.00	SM 2540 D-2011	11/22/2021	18:31	JJ
Mixed Liquor Volatile SS	9,420	mg/l	1.00	SM 2540 E-2011	11/23/2021	11:20	JJ

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.







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61998

### CHAIN OF CUSTODY RECORD

Additional Notes/ Comments/ Special Instructions:

Porterly Vector Study

Rampson WJTB

Analyst

Sean Nave

PO#

*[Signature]*

COLLECTION DATE TIME

SAMPLE DESCRIPTION

CONTAINERS (Quantity)

SAMPLE PRESERVATION

Anal ①  
Mixed Lp ②

ANALYSES

COMMENTS

COLLECTION DATE TIME	SAMPLE DESCRIPTION	CONTAINERS (Quantity)	SAMPLE PRESERVATION	ANALYSES	COMMENTS
12/13 0845	VESSC LA	500 P1 ✓			
12/14 0845	VESSC LA	125 P2 ✓			
12/121 0855	VESSC LB	500 P1 ✓			
12/21 0855	VESSC LB	125 P1 ✓			

Date	Time	Received by:	Requisitioned by:	Normal	Rush	Lab #	Time	Received by:
1/12/21 2021	0900			Normal	Rush	9817	0900	<i>[Signature]</i>

ON 159?  Y  N

Received @ 13.5 °C

Under 2 hours

Normal  Rush

Need Results by \_\_\_\_\_  
 Even columns will apply for Rush TAT

Lab # \_\_\_\_\_

Sample condition "OK" upon receipt to lab

Sample Condition Stamp



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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 12/28/2021  
Report #: 62808  
Job #: 0009817  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

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ug/l = micrograms per liter (1 ug/l = 1 part per billion or ppb)

mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)

STU = Standard unit

umhos/cm = micromhos per centimeter @25°C

Approved by:

Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials JS





## Analytical Report

Fauquier County WSA  
 Remington WWTP  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 12/28/2021  
 Report #: 62808  
 Job #: 0009817  
 Customer #: 99R  
 Customer PO #:   
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

<b>Sample ID#:</b>	0189734	<b>Sample Source:</b>	Vessel A
<b>Sample Date/Time:</b>	12/21/2021 10:07:20	<b>Date Received:</b>	12/21/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	2,980	MPN/g	180	SM 9221 E+C-2008	12/21/2021	11:30	JL
Mixed Liquor Susp Solids	11,700	mg/l	1.00	SM 2540 D-2011	12/21/2021	14:36	JC
Mixed Liquor Volatile SS	7,320	mg/l	1.00	SM 2540 E-2011	12/22/2021	13:00	JL

<b>Sample ID#:</b>	0189735	<b>Sample Source:</b>	Vessel B
<b>Sample Date/Time:</b>	12/21/2021 10:07:30	<b>Date Received:</b>	12/21/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	738	MPN/g	180	SM 9221 E+C-2008	12/21/2021	12:00	JL
Mixed Liquor Susp Solids	12,500	mg/l	1.00	SM 2540 D-2011	12/21/2021	14:43	JC
Mixed Liquor Volatile SS	7,760	mg/l	1.00	SM 2540 E-2011	12/22/2021	13:00	JL

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.







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## Analytical Report

Fauquier County WSA  
Remington WWTP  
7172 Kennedy Road  
Warrenton, VA 20187-1646

Report Date: 12/28/2021  
Report #: 52808  
Job #: 0009817  
Customer #: 99R  
Customer PO #:  
Collected By: ESS Employee  
Sample Location: Quarterly Vector Study

The test results issued in this report relate only to the samples received by Environmental Systems Service, Ltd (ESS).

ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.

The signature on this analytical report certifies that methods used meet the requirements of either 1VAC30-46 and the 2009 TNI Standard for non-potable water and solid and chemical materials or 1VAC30-41 for drinking water, unless otherwise noted. For a complete list of accredited methods, visit our website at [www.ess-services.com](http://www.ess-services.com).

This laboratory report may not be reproduced, except in full, without the written approval of ESS. If you have received this report in error, please notify ESS immediately at (540) 825-6660.

Definitions: QL = Quantitation limit is the lowest concentration of analyte that the lab can report with confidence.

INIT = Analyst Initials

ug/l = micrograms per liter (1 ug/l = 1 part per billion or ppb)

mg/l = milligrams per liter (1 mg/l = 1 part per million or ppm)

SU = Standard unit

umhos/cm = micromhos per centimeter @25°C

Approved by:

Angie Woodward

A. Woodward/Technical Director

Reviewer's Initials

IS







## Analytical Report

Fauquier County WSA  
 Remington WWTF  
 7172 Kennedy Road  
 Warrenton, VA 20187-1646

Report Date: 12/28/2021  
 Report #: 62808  
 Job #: 0009817  
 Customer #: 99R  
 Customer PO #:  
 Collected By: ESS Employee  
 Sample Location: Quarterly Vector Study

Sample ID#: 0189734      Sample Source: Vessel A  
 Sample Date/Time: 12/21/2021 / 07:20      Date Received: 12/21/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	2,990	MPN/g	180	SM 9221 E+C-2006	12/21/2021	11:30	JL
Mixed Liquor Susp Solids	11,700	mg/l	1.00	SM 2540 D-2011	12/21/2021	14:36	JC
Mixed Liquor Volatile SS	7,320	mg/l	1.00	SM 2540 E-2011	12/22/2021	13:00	JL

Sample ID#: 0189735      Sample Source: Vessel B  
 Sample Date/Time: 12/21/2021 / 07:30      Date Received: 12/21/2021

Parameter	Results	Unit	QL	Method	Analysis Date	Time	INIT
Fecal Coliform MLSS/MLVSS	736	MPN/g	180	SM 9221 E+C-2006	12/21/2021	12:00	JL
Mixed Liquor Susp Solids	12,500	mg/l	1.00	SM 2540 D-2011	12/21/2021	14:43	JC
Mixed Liquor Volatile SS	7,780	mg/l	1.00	SM 2540 E-2011	12/22/2021	13:00	JL

**COMMENT:**

Results reported as mg/kg or MPN/g are reported on a dry weight basis.









# Recyc Systems<sup>®</sup> Inc.

**Annual Tonnage Report**  
January 1 2021 to December 31, 2021

## Remington WWTP

Total Wet Tons Land Applied	2,548.76
December 2021 % Solids	20.73
Total Dry Tons Land Applied	528.36
Approx Acres Utilized	220
Tons to Landfill	0.0

FAUQUIER COUNTY

**WATER & SANITATION AUTHORITY**

7172 Kennedy Road • Vint Hill Farms

Warrenton, Virginia 20187-3907

Phone (540) 349-2092 • Fax (540) 347-7689



January 19, 2023

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

Subject: Remington WWTP VA0076805

To Whom It May Concern:

Enclosed please find the 2022 Annual Sludge Program Discharge Monitoring Reports and the Pathogen Reduction Study Summary for the Remington Wastewater Treatment Plant. We have no excursions to report.

Should you have any questions or require additional information please feel free to contact me at (540) 349-2092.

Sincerely,

*Milas Smith*

Milas Smith  
Director of Operation

Cc: Ben Shoemaker, Executive Director  
Remington WWTP  
File

PERMITTEE NAME/ADDRESS (INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

13901 Crown Court

NAME Remington Wastewater Treatment Plant  
 ADDRESS c/o Fauquier Co. Water & Sanitation Authority  
 Warrenton VA 20187  
 FACILITY 12523 Lucky Hill Road  
 LOCATION

COMMONWEALTH OF VIRGINIA  
 DEPARTMENT OF ENVIRONMENTAL QUALITY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

Municipal Major 02/12/2010

DEPT. OF ENVIRONMENTAL QUALITY  
 (REGIONAL OFFICE)

Northern Regional Office

Woodbridge VA 22913

VAL076805			S01		
PERMIT NUMBER			DISCHARGE NUMBER		
YEAR	MO	DAY	YEAR	MO	DAY
2022	01	01	2022	12	31

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
672 SOLIDS, TOTAL SLUDGE AS PERCENT	REPORTD	0.000000	0.000000		0.000000	18.7	0.000000	%	0	1/YR	COMP
	REQMNT	0.000000	0.000000		0.000000	NL	0.000000	%	0	1/YR	COMP
680 ARSENIC, SLUDGE	REPORTD	0.000000	0.000000		0.000000	11.2	19.4	MG/KG	0	1/YR	COMP
	REQMNT	0.000000	0.000000		0.000000	41	75	MG/KG	0	1/YR	COMP
681 MOLYBDENUM, SLUDGE	REPORTD	0.000000	0.000000		0.000000	7.26	12.2	MG/KG	0	1/YR	COMP
	REQMNT	0.000000	0.000000		0.000000	NL	75	MG/KG	0	1/YR	COMP
682 ZINC, SLUDGE	REPORTD	0.000000	0.000000		0.000000	911	1390	MG/KG	0	1/YR	COMP
	REQMNT	0.000000	0.000000		0.000000	2800	7500	MG/KG	0	1/YR	COMP
683 LEAD, SLUDGE	REPORTD	0.000000	0.000000		0.000000	11.83	16.5	MG/KG	0	1/YR	COMP
	REQMNT	0.000000	0.000000		0.000000	300	840	MG/KG	0	1/YR	COMP
684 NICKEL, SLUDGE	REPORTD	0.000000	0.000000		0.000000	16.03	25.6	MG/KG	0	1/YR	COMP
	REQMNT	0.000000	0.000000		0.000000	420	420	MG/KG	0	1/YR	COMP
685 MERCURY, SLUDGE	REPORTD	0.000000	0.000000		0.000000	0.2907	0.519	MG/KG	0	1/YR	COMP
	REQMNT	0.000000	0.000000		0.000000	17	57	MG/KG	0	1/YR	COMP
686 COPPER, SLUDGE	REPORTD	0.000000	0.000000		0.000000	682	973	MG	0	1/YR	COMP
	REQMNT	0.000000	0.000000		0.000000	1500	4300	MG/KG	0	1/YR	COMP

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW (M.G.)	TOTAL BOD5 (K.G.)	OPERATOR IN RESPONSIBLE CHARGE			DATE		
				TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
	0	0	0	Troy W. Hingham	<i>Troy W. Hingham</i>	1965086730	2023	01	18
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.				PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
				TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY



PERMITTEE NAME/ADDRESS (INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

13901 Crown Court

NAME Remington Wastewater Treatment Plant  
 ADDRESS c/o Fauquier Co. Water & Sanitation Authority  
 Warrenton VA 20187

FACILITY 12523 Lucky Hill Road  
 LOCATION

COMMONWEALTH OF VIRGINIA  
 DEPARTMENT OF ENVIRONMENTAL QUALITY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

Municipal Major 02/13/2010  
 DEPT. OF ENVIRONMENTAL QUALITY  
 (REGIONAL OFFICE)  
 Northern Regional Office  
 Woodbridge VA 22913

VAL076805			S01		
PERMIT NUMBER			DISCHARGE NUMBER		
YEAR	MO	DAY	YEAR	MO	DAY
2022	01	01	2022	12	31

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
687 CADMIUM, SLUDGE	REPORTD	*****	*****		*****	16.7	28.7	MG/KG	0	1/YR	COMP
	REQMNT	*****	*****		*****	33	85	MG/KG	0	1/YR	COMP
688 LEVEL OF PATHOGEN REQUIREMENTS ACHIEVED	REPORTD	*****	*****		*****		2	STCL#	0	1/YR	
	REQMNT	*****	*****		*****		NL	STCL#	0	1/YR	*****
689 DESCRIPTION OF PATHOGEN OPTION USED	REPORTD	*****	*****		*****		2	ALTR#	0	1/YR	
	REQMNT	*****	*****		*****		NL	ALTR#	0	1/YR	*****
890 VECTOR ATTRACTION REDUCTION OPTION USED	REPORTD	*****	*****		*****		2	ALTR#	0	1/YR	
	REQMNT	*****	*****		*****		NL	ALTR#	0	1/YR	*****
697 SELENIUM, SLUDGE	REPORTD	*****	*****		*****	<4.00	<4.00	MG/KG	0	1/YR	COMP
	REQMNT	*****	*****		*****	100	100	MG/KG	0	1/YR	COMP

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW (M.G.)	TOTAL BOD5 (K.G.)	OPERATOR IN RESPONSIBLE CHARGE			DATE				
		0	0	0	Troy Willingham	<i>Troy Willingham</i>	1465006730	2023	01	19	
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.				TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY		
				PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT				TELEPHONE			
				TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY		

PERMITTEE NAME/ADDRESS (INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

13901 Crown Court

NAME Remington Wastewater Treatment Plant  
 ADDRESS c/o Fauquier Co. Water & Sanitation Authority  
 Warrenton VA 20187  
 FACILITY LOCATION 12523 Lucky Hill Road

COMMONWEALTH OF VIRGINIA  
 DEPARTMENT OF ENVIRONMENTAL QUALITY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

Municipal Major 02/08/2008

DEPT. OF ENVIRONMENTAL QUALITY  
 (REGIONAL OFFICE)

Northern Regional Office

Woodbridge VA 22913

VALD76805			S01		
PERMIT NUMBER			DISCHARGE NUMBER		
YEAR	MO	DAY	YEAR	MO	DAY
2022	01	01	2022	12	31

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
693 ANNUAL SLUDGE PRODUCTION TOTAL	REPORTD	-----	479.5	MTNYR	-----	-----	-----		0	1/YR	CALC
	REQMNT	-----	NL	MTNYR	-----	-----	-----		0	1/YR	CALC
694 ANNUAL AMT SLUDGE LAND APPLIED	REPORTD	-----	479.5	MTNR	-----	-----	-----		0	1/YR	CALC
	REQMNT	-----	NL	MTNYR	-----	-----	-----		0	1/YR	CALC
	REPORTD										
	REQMNT										
	REPORTD										
	REQMNT										
	REPORTD										
	REQMNT										
	REPORTD										
	REQMNT										
	REPORTD										
	REQMNT										

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW (M.G.)	TOTAL BODS (K.G.)	OPERATOR IN RESPONSIBLE CHARGE			DATE		
		0	0	0	Troy Wiltington	Troy Wiltington	1965006730	2023	01
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 this 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.				TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
				PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT			TELEPHONE		
				TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY