COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 Fax (703) 583-3801
www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

December 5, 2008

Mr. H. Barlow Delk
General Manager, Louisa County Water Authority
P.O. Box 9
Louisa, VA 23093

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Reissuance of VPDES Permit No. VA0090743
Zion Crossroads WWTP, Louisa County

Dear Mr. Delk:

The Department of Environmental Quality (DEQ) has approved the enclosed effluent limitations and monitoring requirements for the above-referenced permit. A copy of your permit and the Discharge Monitoring Report (DMR) form is included. Please make additional copies of the DMR for future use. The first DMR for the month of January 2009 is due by February 10, 2009. Please send DMRs to:

Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193-1453

Please note that compliance with the permit's requirements for use and disposal of sewage sludge do not relieve you of your responsibility to comply with federal requirements set forth in 40 CFR Part 503. Until DEQ seeks and is granted authority to administer the Part 503 regulations by EPA, treatment works treating domestic sewage should continue to work directly with EPA to comply with them.

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

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

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

If you have questions about the permit, please contact Anna Westernik at (703) 583-3837 or atwesternik@deq.virginia.gov.

Sincerely,

for Byrant Thomas
Water Permits Manager

Enc.: Permit No. VA0090743

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

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

Municipal Minor 12/05/2008

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

NAME Zion Crossroads WWTP
ADDRESS P.O. Box 9
Louisa VA 23093

FACILITY LOCATION Route 15 (James Madison Highway) N of I-64

VA0090743	001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

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.**

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD				*********	*********	*********				
	REQRMNT	0.10	NL	MGD	*********	*********	*********	MG/D		CONT	MEAS
002 PH	REPORTD	*********	*********			*********					
	REQRMNT	*********	*********		6.0	*********	9.0	SU		1/DAY	GRAB
004 TSS	REPORTD				*********						
	REQRMNT	5.7	8.7	KG/D	*********	15	23	MG/L		5D/W	4HC
007 DO	REPORTD	*********	*********			*********	*********				
	REQRMNT	*********	*********		7.0	*********	*********	MG/L		1/DAY	GRAB
012 PHOSPHORUS, TOTAL (AS P)	REPORTD				*********		*********				
	REQRMNT	1.7	********	LBS/D	*********	2.0	*********	MG/L		1/M	4HC
068 TKN (N-KJEL)	REPORTD				*********						
	REQRMNT	2.5	3.8	LBS/D	*********	3.0	4.5	MG/L		1/W	4HC
120 E.COLI	REPORTD	*********	*********		*********		*********				
	REQRMNT	*********	*********		*********	126	*********	#100M		2D/W	GRAB
137 HARDNESS, TOTAL (AS CACO3)	REPORTD				*********		*********				
	REQRMNT	********	********		*********	NL	*********	MG/L		1/3M	GRAB

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

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

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. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
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

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

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NAME Zion Crossroads WWTP
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13901 Crown Court

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PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
159 CBOD5	REPORTD				*********						
	REQRMNT	3.8	5.7	KG/D	*********	10	15	MG/L		1/W	4HC
196 ZINC, TOTAL RECOVERABLE	REPORTD				*********						
	REQRMNT	********	********		*********	NL	NL	UG/L		1/3M	GRAB
203 COPPER, TOTAL RECOVERABLE	REPORTD				*********						
	REQRMNT	********	********		*********	NL	NL	UG/L		1/3M	GRAB
	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.)

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. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
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

THIS REPORT IS REQUIRED BY LAW (33 U. S. C. § 1318 40 CFR 122.41(l)(4)(i)). FAILURE TO REPORT OR FAILURE TO REPORT TRUTHFULLY CAN RESULT IN CIVIL PENALTIES NOT TO EXCEED $10,000 PER DAY OF VIOLATION: OR IN CRIMINAL PENALTIES NOT TO EXCEED $25,000 PER DAY OF VIOLATION OR BY IMPRISONMENT FOR NOT MORE THAN FIVE YEARS, OR BOTH.

GENERAL INSTRUCTIONS

1. Complete this form in permanent ink or indelible pencil.
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 are blank or a limitation appears, provide data in the "reported" spaces in accordance with your permit.
4. Enter the average and, if appropriate, maximum quantities and units in the "reported" spaces in the columns marked "Quantity or Loading". KG/DAY = Concentration(mg/l) x Flow(MGD) x 3.785.
5. Enter maximum, minimum, and/or average concentrations and units in the "reported" spaces in the columns marked "Quality or Concentration".
6. 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.".
7. Enter the actual frequency of analysis for each parameter (number of times per day, week, month) in the "reported" space in the column marked "Frequency of Analysis".
8. Enter the actual type of sample collected for each parameter in the "reported" space in the column marked "Sample Type".
9. Enter additional required data or comments in the space marked "additional permit requirements or comments".
10. Record the number of bypasses during the month, the total flow in million gallons and BOD5 in kilograms in the proper columns in the section marked "Bypasses and Overflows".
11. The operator in responsible charge of the facility should review the form and sign in the space provided. If the plant is required to have a licensed operator, the operator's certificate number should be reported in the space provided.
12. The principal executive officer should then review the form and sign in the space provided and provide a telephone number where he/she can be reached.
13. You are required to sample at the frequency and type indicated in your permit.
14. Send the completed form to your Dept. of Environmental Quality Regional Office by the 10th of each month.
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 violation by date.
17. If you have any questions, contact the Dept. of Environmental Quality Regional Office.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No. **VA0090743**
Effective Date: **December 4, 2008**
Expiration Date: **December 3, 2013**

AUTHORIZATION TO DISCHARGE UNDER THE
VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM
AND THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, Part I – Effluent Limitations and Monitoring Requirements, and Part II – Conditions Applicable To All VPDES Permits, as set forth herein.

Owner Name: Louisa County Water Authority
Facility Name: Zion Crossroads WWTP
County: Louisa
Facility Location: 9746 James Madison Highway

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

Stream Name: Impoundment of Camp Creek
River Basin: York River
River Subbasin: None
Section: 3C
Class: III
Special Standards: None

Thomas A. Faha
Northern Regional Office
Department of Environmental Quality

12-04-08
Date

A. Limitations and Monitoring Requirements

1. Outfall 001 – 0.1 mgd Facility

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. During the period beginning with permit effective date and lasting until the issuance of the CTO for the 0.311 mgd facility or the permit expiration date, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations						Monitoring Requirements	
	Monthly Average[1]		Weekly Average[1]		Minimum	Maximum[1]	Frequency	Sample Type
Flow[2] (mgd)	NL		NA		NA	NL	Continuous	TIRE
pH	NA		NA		6.0 S.U.	9.0 S.U.	1/D	Grab
$cBOD_5$	10 mg/L	3.8 kg/day	15 mg/L	5.7 kg/day	NA	NA	1/W	4H-C
Total Suspended Solids, TSS	15 mg/L	5.7 kg/day	23 mg/L	8.7 kg/day	NA	NA	5D/W	4H-C
DO	NA		NA		7.0 mg/L	NA	1/D	Grab
Total Kjeldahl Nitrogen, TKN	3.0 mg/L	2.5 lb/day	4.5 mg/L	3.8 lb/day	NA	NA	1/W	4H-C
E. coli (Geometric Mean)	126 n/100 mLs		NA		NA	NA	2D/W (>36 hrs. apart)	Grab
Total Phosphorus	2.0 mg/L	1.7 lb/day	3.0 mg/L	2.5 lb/day	NA	NA	1/W	4H-C
Total Recoverable Copper	5.7 µg/L [3]		5.7 µg/L [3]		NA	NA	1/3M	Grab
Total Recoverable Zinc	50 µg/L [3]		50 µg/L [3]		NA	NA	1/3M	Grab
Total Hardness[4]	NL		NA		NA	NA	1/3M	Grab

[1] See Part I.B.
[2] The design flow is 0.1 mgd.
[3] See Part I.C.
[4] To be measured during metals sampling.

mgd = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report
S.U. = Standard units.
TIRE = Totalizing, indicating and recording equipment.

1/D = Once every day.
1/W = Once per week.
2D/W = Two days per week.
5D/W = Five days per week.
1/3M = Once every quarter Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec

4H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 4-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of four (4) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of four (4) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

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

A. Limitations and Monitoring Requirements

2. Irrigation of Reclaimed Water

a. During the period beginning with the issuance of a Certificate to Operate (CTO) for the reclamation system and ending with the permit expiration date, the permittee is authorized to manage pollutants in the reclaimed water as described below for reuses specified in the Reclaimed Water Management Plan. The standards shall be met at the point of compliance after all treatment as specified in the Operations and Maintenance Manual.

Parameter	Standards				Monitoring Requirements	
	Monthly Average[1]	Weekly Average[1]	Minimum	Maximum[1]	Frequency	Sample Type
Flow (mgd)	NL	NA	NA	NL	Continuous	TIRE
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/D	Grab
$cBOD_5$	8 mg/L	NA	NA	NA	3D/W	8H-C
Turbidity (NTU)[2]	2.0 (Daily Avg.)	NA	NA	5.0	Continuous	Recorded
E. coli (Geometric Mean)	11/100 mls (10 a.m. – 4 p.m.)	NA	NA	35/100 mls (10 a.m. – 4 p.m.)	1/D	Grab
Total Kjeldahl Nitrogen, TKN	NL mg/L	NA	NA	NA	1/M	8HC
$NO_2 + NO_3$ as Nitrogen	NL mg/L	NA	NA	NA	1/M	8HC
Total Nitrogen[3]	6.0 mg/L	NA	NA	NA	1/M	Calculated
Total Phosphorus	0.70 mg/l	NA	NA	NA	1/M	8HC

(1) See Part I.B. and Parts 1.F.3 and 4.

(2) Daily average is the arithmetic mean of hourly or more frequent discrete turbidity measurements recorded during a 24-hour period. Samples may be manually collected at 4-hr. intervals for a maximum of 5 days if the on-line turbidity meter were to go out of service.

(3) Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO_2+NO_3 Nitrogen and shall be calculated from the results of those tests.

(4) See Part I.B.3 for nutrient reporting calculations

mgd = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report
TIRE = .Totalizing, indicating and recording equipment
S.U. = Standard units

NTU = .Nephelometric Turbidity Units.

1/D = Once every day.
3D/W = Three days per week.
1/M = Once per month.

8H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 4-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of four (4) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of four (4) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

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

A. Limitations and Monitoring Requirements

3. Outfall 001 – 0.311 mgd Facility

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. In addition to any Total Nitrogen or Total Phosphorus concentration limits (or monitoring requirements without associated limits), this facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under Registration Number VAN030122, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.

c. During the period beginning with the issuance of a CTO for the 0.311 mgd facility and lasting until the issuance of a CTO for the 0.7 mgd facility or the permit expiration date, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[1]	Weekly Average[1]	Minimum	Maximum[1]	Frequency	Sample Type
Flow[2] (mgd)	NL	NA	NA	NL	Continuous	TIRE
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/D	Grab
$cBOD_5$	10 mg/L 12 kg/day	15 mg/L 18 kg/day	NA	NA	3D/W	8H-C
Total Suspended Solids, TSS	15 mg/L 18 kg/day	23 mg/L 27 kg/day	NA	NA	5D/W	8H-C
DO	NA	NA	7.0 mg/L	NA	1/D	Grab
Total Kjeldahl Nitrogen, TKN	3.0 mg/L 7.8 lb/day	4.5 mg/L 12 lb/day	NA	NA	3D/W	8H-C
E. coli (Geometric Mean)	126 n/100 mLs	NA	NA	NA	3D/W (>36 hrs. apart)	Grab
$NO_2 + NO_3$ as Nitrogen	NL mg/L	NA	NA	NA	2/M	8H-C
Total Nitrogen[3]	NL mg/L	NA	NA	NA	2/M	Calculated
Total Nitrogen – Year to Date[4]	NL mg/L	NA	NA	NA	1/M	Calculated
Total Nitrogen – Calendar Year [4]	6.0 mg/L	NA	NA	NA	1/YR	Calculated
Total Phosphorus	2.0 mg/L 5.2 lb/day	3.0 mg/L 7.8 1b/day	NA	NA	2/M	8H-C
Total Phosphorus – Year to Date[4]	NL	NA	NA	NA	1/M	Calculated
Total Phosphorus – Calendar Year [4]	0.70 mg/L	NA	NA	NA	1/YR	Calculated
Total Recoverable Copper	5.7 µg/L	5.7 µg/L	NA	NA	1/M	Grab
Total Recoverable Zinc	50 µg/L	50 µg/L	NA	NA	1/M	Grab
Total Hardness[5]	NL	NA	NA	NA	1/3M	Grab

(1) See Part I.B.
(2) The design flow is 0.311 mgd.
(3) Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO_2+NO_3 Nitrogen and shall be calculated from the results of those tests.
(4) See Part 1.B.4. for nutrient reporting calculations
(5) To be measured during metals sampling.

mgd = Million gallons per day.
TIRE = Totalizing, indicating and recording equipment.
NL= No limit; monitor and report.
NA = Not applicable.
S.U. = Standard units.

1/D = Once every day.
3D/W = Three days a week.
5D/W = Five days a week.
2/M = Twice every month. (7 days apart)
1/YR = Once every year.
1/M = Once every month.

8H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the Monitored 8-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of 8 (eight) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of 8 (eight) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

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

A. Limitations and Monitoring Requirements

4. Outfall 001 – 0.7 mgd Facility

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. In addition to any Total Nitrogen or Total Phosphorus concentration limits (or monitoring requirements without associated limits), this facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under Registration Number VAN030122, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.

c. During the period beginning with the issuance of a CTO for the 0.7 mgd facility and lasting until the permit expiration date, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations						Monitoring Requirements	
	Monthly Average[1]		Weekly Average[1]		Minimum	Maximum[1]	Frequency	Sample Type
Flow[2] (mgd)	NL		NA		NA	NL	Continuous	TIRE
pH	NA		NA		6.0 S.U.	9.0 S.U.	1/D	Grab
$cBOD_5$	10 mg/L	26 kg/day	15 mg/L	40 kg/day	NA	NA	3D/W	8H-C
Total Suspended Solids, TSS	15 mg/L	40 kg/day	23 mg/L	61 kg/day	NA	NA	5D/W	8H-C
DO	NA		NA		7.0 mg/L	NA	1/D	Grab
Total Kjeldahl Nitrogen, TKN	3.0 mg/L	18 lb/day	4.5 mg/L	26 lb/day	NA	NA	3D/W	8H-C
E. coli (Geometric Mean)	126 n/100 mLs		NA		NA	NA	3D/W (>36 hrs. apart)	Grab
$NO_2 + NO_3$ as Nitrogen	NL mg/L		NA		NA	NA	2/M	8H-C
Total Nitrogen[3]	NL mg/L		NA		NA	NA	2/M	Calculated
Total Nitrogen – Year to Date[4]	NL mg/L		NA		NA	NA	1/M	Calculated
Total Nitrogen – Calendar Year [4]	3.0 mg/L		NA		NA	NA	1/YR	Calculated
Total Phosphorus	2.0 mg/L	12 lb/day	3.0 mg/L	18 lb/day	NA	NA	2/M	8H-C
Total Phosphorus – Year to Date[4]	NL		NA		NA	NA	1/M	Calculated
Total Phosphorus – Calendar Year [4]	0.30 mg/L		NA		NA	NA	1/YR	Calculated
Total Recoverable Copper	5.7 µg/L		5.7 µg/L		NA	NA	1/M	Grab
Total Recoverable Zinc	50 µg/L		50 µg/L		NA	NA	1/M	Grab
Total Hardness[5]	NL		NA		NA	NA	1/3M	Grab

(1) See Part I.B.
(2) The design flow is 0.311 mgd.
(3) Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO_2+NO_3 Nitrogen and shall be calculated from the results of those tests.
(4) See Part I.B.4. for nutrient reporting calculations
(5) To be measured during metals sampling.

mgd = Million gallons per day.
TIRE = Totalizing, indicating and recording equipment.
NL= No limit; monitor and report.
NA = Not applicable.
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2/M = Twice every month. (7 days apart)
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8H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the Monitored 8-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of 8 (eight) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of 8 (eight) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

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

B. Additional Monitoring Requirements, Quantification Levels and Compliance Reporting

1. Quantification Levels

   a. Maximum quantification levels (QLs) shall be as follows:

Characteristic	Quantification Level
TSS	1.0 mg/L
BOD_5	5 mg/L
TKN	0.50 mg/L
Total Phosphorus	0.10 mg/L
Dissolved Oxygen	0.20 mg/L
Nitrate-Nitrite	0.50 mg/L
Copper	1.6 µg/l
Zinc	14 µg/l

   b. The permittee may use any approved method, which has a QL equal to or lower than the QL listed in B.1.a. above. The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method.

   c. It is the responsibility of the permittee to ensure that proper quality assurance/quality control (QA/QC) protocols are followed during the sampling and analytical procedures. QA/QC information shall be documented to confirm that appropriate analytical procedures have been used and the required QLs have been attained.

   d. An appropriate analytical method for metals shall be selected from the following list of EPA methods or any approved method in 40 CFR Part 136, which will achieve a QL that is less than or equal to the QL specified in B.1.a. above.

Metal	**Analytical Methods**
Copper	1638; 1640
Zinc	1638; 1639

2. Compliance Reporting for parameters in Part I.A.

   a. Monthly Average – Compliance with the monthly average limitations and/or reporting requirements for the parameters, except for nitrogen and phosphorus parameters, listed in Part I. A shall be determined as follows: All concentration data below the QL listed above shall be treated as zero. All concentration data equal to or above the QL listed in a. above shall be treated as it is reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, for the month. This arithmetic average shall be reported on the DMR as calculated. If all data are below the QL then the average shall be reported as <QL. If reporting for quantity is required on the DMR and the calculated concentration is <QL then report <QL for the quantity, otherwise use the calculated concentration to determine the monthly average quantity.

   b. Maximum Weekly Average – Compliance with the weekly average limitations and/or reporting requirements for the parameters, except for nitrogen and phosphorus parameters, listed in Part I. A. shall be determined as follows: All concentration data below the QL listed above shall be treated as zero. All concentration data equal to or above the QL shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each complete calendar week entirely contained within the reporting month. The maximum value of the weekly averages thus

determined shall be reported on the DMR. If all data reported is less than the QL then <QL shall be reported on the DMR. If reporting for quantity is required on the DMR and the calculated concentration is <QL then report <QL for the quantity, otherwise use the calculated concentration to determine the weekly average quantity.

c. Any single datum required shall be reported as <QL if it is less than the QL in a. above. Otherwise the numerical value shall be reported.

d. The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used (i.e., 5 always rounding up or to the nearest even number) by the permittee, the permittee shall use the convention consistently, and shall ensure that consulting laboratories employed by the permittee use the same convention.

3. Nutrient Reporting Calculations for Part I. A.

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

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

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

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

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

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

c. For Total Phosphorus, all daily concentration data below the quantification level (QL) for the analytical method used should be treated as half the QL. All daily concentration data equal to or above the QL for the analytical method used shall be treated as it is reported.

d. For Total Nitrogen (TN), if none of the daily concentration data for the respective species (i.e., TKN, Nitrates/Nitrites) are equal to or above the QL for the respective analytical methods used, the daily TN concentration value reported shall equal one half of the largest QL used for the respective species. If one of the data is equal to or above the QL, the daily TN concentration value shall be treated as that data point is reported. If more than one of the datum is above the QL, the daily TN concentration value shall equal the sum of the data points as reported.

C. Schedule of Compliance for Total Recoverable Copper and Total Recoverable Zinc

1. The permittee shall achieve compliance with the final limits specified in Part I.A of this permit in accordance with the following schedule:

a. Submit a proposed plan to achieve compliance with the final limits.	Within 90 days after the effective date of the permit.
b. Report of progress on attainment of final limits.	January 10, 2010, 2011, 2012, 2013.
c. Achieve compliance with final limits	Within 4 years from the effective date of the permit.

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit to the Department of Environmental Quality, Northern Regional Office (DEQ-NRO) either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next schedule requirement.

3. During the compliance period the permittee must continue to operate the facility in a manner that will minimize or avoid degradation of the effluent from current operating levels, and notify DEQ prior to making any substantial process control modifications that might degrade the quality of the effluent.

D. Pretreatment Requirements

1. The permittee's pretreatment program has been conditionally approved. The program is an enforceable part of this permit. The permittee shall:

   a. Within 180 days of the effective date of this permit, submit to the DEQ Northern Regional Office a survey of all Industrial Users discharging to the POTW. The information shall be submitted to the POTW on the DEQ's Discharger Survey Form or an equivalent form that includes the quantity and quality of the wastewater. Survey results shall include the identification of significant industrial users of the POTW.

   In lieu of the survey, the permittee may elect to develop and submit for approval a plan to continuously survey the industrial community in their jurisdiction. This plan must be implemented within 90 days of its approval by DEQ.

   The SIU list or a statement verifying there are no SIU's to the system shall be updated annually and submitted to DEQ no later than January 31 of each year.

2. Upon determination of receiving process wastewater from a Significant Industrial User* to this treatment works, the permittee shall:

   a. Notify the DEQ, in writing within five (5) days;

   b. Implement the approved pretreatment program that complies with the Clean Water Act, Water Control Law and State regulations;

   c. Submit to the DEQ Northern Regional Office, an annual report that describes the permittee's program activities over the previous year. The annual report shall be submitted no later than January 31 of each year and shall include:

1) An updated list of the Significant Industrial Usersshowing the categorical standards and local limits applicable to each.

2) A summary of the compliance status of each Significant Industrial User with pretreatment standards and permit requirements.

3) A summary of the number and types of Significant Industrial User sampling and inspections performed by the POTW.

4) All information concerning any interference, upset, VPDES permit or Water Quality Standards violations directly attributable to Significant Industrial Users and enforcement actions taken to alleviate said events.

5) A description of all enforcement actions taken against Significant Industrial Users over the previous 12 months.

6) A summary of any changes to the submitted pretreatment program that has not been previously reported to the DEQ Northern Regional Office.

7) A summary of the permits issued to Significant Industrial Users since the last annual report.

8) POTW and self-monitoring results for Significant Industrial Users determined to be in significant non-compliance during the reporting period.

9) Results of the POTW's influent/effluent/sludge sampling, not previously submitted to DEQ.

10) Copies of newspaper publications of all Significant Industrial Users in significant non-compliance during the reporting period. This is due no later than March 31 of each year.

11) Signature of an authorized representative.

d. Submit any changes to the approved pretreatment program to the DEQ Northern Regional Office and obtain approval before implementation of the changes.

e. Ensure all Significant Industrial User's permits are issued and reissued in a timely manner and that the Significant Industrial User permits issued or reissued by the POTW are effective and enforceable.

f. Inspect and sample all Significant Industrial Users at a minimum of once a year.

1) Sampling shall include all regulated parameters, and shall be representative of the wastewater discharged.

2) Inspection of the Significant Industrial Users shall cover all areas which could result in wastewater discharge to the treatment works including manufacturing, chemical storage, pretreatment facilities, spill prevention and control procedures, hazardous waste generation and Significant Industrial User's self-monitoring and records.

g. Implement the reporting requirements of Part VII of the VPDES Permit Regulation.

h. Review the Enforcement Response Plan (ERP) and ensure it meets state and federal regulatory requirements. The approved ERP is an enforceable part of this permit and shall be implemented.

i. Develop local limits or reevaluate local limits using current influent, effluent and sludge monitoring data and submit the data and results of the evaluation to the DEQ Northern Regional Office within one year of the effective or modification date. All Significant Industrial Users shall be sampled at the end of any categorical process and at the entrance to the treatment works.

j. Ensure that adequate resources are available to implement the approved program.

k. Meet all public participation requirements and annually public notice Significant Industrial Users in significant non-compliance with pretreatment standards and requirements for the previous 12 months.

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

   a. If the approved program is not implemented in a way satisfying the requirements of the Clean Water Act, Water Control Law or State regulations;

   b. If problems such as pass-through, interference, water quality standards violations or sludge contamination develop or continue; and

   c. If federal, state or local requirements change.

*Note: A significant industrial user is one that:

1. Has a process wastewater flow of 25,000 gallons or more per average workday;

2. Contributes a process wastestream which makes up 5-percent or more of the average dry weather hydraulic or organic capacity of the POTW;

3. Is subject to the categorical pretreatment standards; or

4. Has significant impact, either singularly or in combination with other Significant Dischargers, on the treatment works or the quality of its effluent.

This excludes sanitary, non-contact cooling water and boiler blowdown wastes.

E. Other Requirements and Special Conditions

1. 95% Capacity Reopener
   A written notice and a plan of action for ensuring continued compliance with the terms of this permit shall be submitted to DEQ-NRO when the monthly average flow influent to the sewage treatment plant reaches 95% of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at DEQ-NRO no later than 90 days from the third consecutive month for which the flow reached 95% of the design capacity. The plan shall include the necessary steps and a prompt schedule of implementation for controlling any current or reasonably anticipated problem resulting from high influent flows. Failure to submit an adequate plan in a timely manner shall be deemed a violation of this permit.

2. Indirect Dischargers
   The permittee shall provide adequate notice to the Department of the following:
   a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Section 301 or 306 of Clean Water Act and the State Water Control Law if it were directly discharging those pollutants; and

b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of this permit.

c. Adequate notice shall include information on (i) the quality and quantity of effluent introduced into the treatment works, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment works.

3. Operation and Maintenance (O&M) Manual Requirement
The permittee shall review the existing Operations and Maintenance (O&M) Manual and notify DEQ-NRO, in writing by December 31, 2008 if it is still accurate and complete. If the O&M Manual is no longer accurate and complete, a revised O&M Manual shall be submitted for approval to DEQ-NRO by December 31, 2008. The permittee shall maintain an accurate, approved O&M Manual for the treatment works. This manual shall include at the minimum:

a. Treatment system design, treatment system operation, routine preventative maintenance of units within the treatment system, critical spare parts inventory and record keeping;

b. Techniques to be employed in the collection, preservation and analysis of effluent and sludge samples;

c. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants that will prevent these materials from reaching state waters;

d. A description of staffing levels; and

e. A plan for the management and/or disposal of sludge (i.e., Sludge Management and Disposal Plan).

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the O&M Manual shall be deemed a violation of the permit.

4. CTC and CTO Requirement
The permittee shall, in accordance with the Sewage Collection and Treatment regulation (9 VAC 25-790), and the Water Reclamation and Reuse Regulation (9 VAC 25-740-120.B.1) obtain a Certificate to Construct (CTC) and a Certificate to Operate (CTO) from DEQ prior to constructing wastewater treatment works and/or reclamation systems and operating the treatment works and/or reclamation systems. Noncompliance with the CTC or CTO shall be deemed a violation of the permit.

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

6. Reliability Class
The permitted treatment works shall meet Reliability Class I.

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

8. Sludge Use and Disposal The permittee shall conduct all sewage sludge use or disposal activities in accordance with the Sludge Management Plan (SMP) approved with the issuance of this permit. Any proposed changes in the sewage sludge use or disposal practices or procedures followed by the permittee shall be documented and submitted for DEQ and Department of Health approval 90 days prior to the effective date of the changes. Upon approval, the revised SMP becomes an enforceable part of the permit. The permit may be modified or alternatively revoked and reissued to incorporate limitations or conditions necessitated by substantive changes in sewage sludge use or disposal practices.

9. Nutrient Offsets
Any annual Total Nitrogen and/or Total Phosphorus loadings above and beyond those permitted prior to July 1, 2005 shall be offset subject to a DEQ-approved trading contract prepared in accordance with sections 62.1-44.19:12 - :19 of the law and 9 VAC 25-820-10 et seq., and including, but not limited to the following:

   a. Discussion of the source of the acquired allocations,

   b. Discussion of other permitted facilities involved in the trade, and

   c. Discussion of any non-point source allocations acquired.

   This proposal shall provide for the waste loads that are projected to be discharged on an annual basis for the term of this permit, and shall be approved prior to the commencement of discharge from the new or expanded facility. Once approved, the conditions of the proposal pertaining to verification of non-point allocations acquired, or self-offsetting practices implemented, become an enforceable part of this permit.

10. E3/E4
The annual average concentration limitations for Total Nitrogen and/or Total Phosphorus are suspended during any calendar year in which the facility is considered by DEQ to be a participant in the Virginia Environmental Excellence Program in good standing at either the Exemplary Environmental Enterprise (E3) level or the Extraordinary Environmental Enterprise (E4) level, provided that the following conditions have also been met:

   a. The facility has applied for (or renewed) participation, been accepted, maintained a record of sustained compliance and submitted an annual report according to the program guidelines;

   b. The facility has demonstrated that they have in place a fully implemented environmental management system (EMS) with an alternative compliance method that includes operation of installed nutrient removal technologies to achieve the annual average concentration limitations; and

   c. The E3/E4 designation from DEQ and implementation of the EMS has been in effect for the full calendar year.

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

11. Nutrient Reopener
This permit may be modified or, alternatively, revoked and reissued:

a. If any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements;

b. To incorporate technology-based effluent concentration limitations for nutrients in conjunction with the installation of nutrient control technology, whether by new construction, expansion or upgrade, or

c. To incorporate alternative nutrient limitations and/or monitoring requirements, should:
i. the State Water Control Board adopt new nutrient standards for the water body receiving the discharge, including the Chesapeake Bay or its tributaries, or
ii.a future water quality regulation or statute requiring new or alternative nutrient control.

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

F. Water Reclamation and Reuse Special Conditions

1. Application for Reclamation and Reuse and Reclaimed Water Management Plan -- In accordance with 9 VAC 25-740-100 of the Water Reclamation and Reuse Regulation, the permittee shall submit for approval a detailed Reclaimed Water Management (RWM) Plan and a Soil-Moisture Monitoring Plan 90 days prior to commencing reuse and/or when the monthly average flow of the Zion Crossroads WWTP reaches 90% of 311,000 gpd (279,000 gpd).

2. Operations and Maintenance Manual -- When the flow of the facility reaches 279,000 gpd and/or 90 days prior to commencing reuse, the permittee shall submit a revised O&M manual to DEQ-NRO for review and approval that encompasses reclamation and reuse. Upon approval, these revisions to the O&M Manual shall become an enforceable part of the permit. The O&M Manual shall contain at a minimum the information described in 9 VAC 25-740-140.D.1.

3. Turbidity Monitoring -- The daily average turbidity measurement shall be less than or equal to 2 NTUs. If the turbidity measurement exceeds the Corrective Action Threshold (CAT) of 5 NTU and continuous sampling or resampling within one hour of the initial measurement shows that the turbidity measurement still exceeds the CAT, the reclaimed wastewater shall be deemed substandard or reject water and sent to storage for additional treatment, returned to the head of the plant for retreatment, discharged to another permitted reuse system requiring a lower level of treatment not less than Level 2, or sent to a VPDES permitted effluent disposal system provided the reject water meets the effluent limits of the permit. Failure to divert substandard reclaimed wastewater is considered a violation of this permit.

4. Bacteriological Monitoring -- The monthly geometric mean for *E. coli* shall be less than or equal to 11 colonies/100 ml. If the level of *E. coli* in the reclaimed water exceeds the *E. coli* CAT of 35 colonies/100 ml, the operator of the reclamation system shall immediately initiate a review of treatment operations and data as outlined in the approved Operations and Maintenance Manual to identify the cause of the exceedance. If two consecutive bacterial monitoring results reach or exceed the CAT, the facility shall be deemed in violation of the permit.

5. Access Control and Advisory Signs -- There shall be no uncontrolled public access to the reclamation system or system storage facilities. Advisory signs or placards shall be posted within and at the boundaries of the

golf course. The advisory signs or placards shall, at a minimum, state "CAUTION: RECLAIMED WATER – DO NOT DRINK" and shall display the international symbol for non-potable water and state the nature of the reuse. Detailed procedures for posting the golf course shall be described in the O&M Manual.

6. Operational Limitations -- The irrigation reuse site shall be operated so that reclaimed water is not conveyed from the site (e.g., no runoff). This may involve reduction and/or cessation of irrigation during inclement weather. Operational limitations are:

   a. Reclaimed water shall not be applied when the ground is saturated or during periods of rainfall;
   b. Reclaimed water shall not be applied to ground that is frozen or covered with ice or snow;
   c. Effluent shall not be applied within 24 hours of severe weather forecasts;
   d. Overspray of reclaimed water onto wetlands, surface waters, drinking fountains, water coolers, or eating surfaces is prohibited; and
   e. The chosen method of irrigation shall minimize human contact with the reclaimed water.

7. Setback Distances -- The following setback distances are required for irrigation with Level 1 reclaimed water:

a. Potable water supply wells and springs; public water supply intakes	100 feet
b. Non-potable water supply wells	10 feet
c. Limestone rock outcrops and sinkholes	50 feet

8. Minimization of Aerosol Formation -- Aerosol formation shall be minimized within 100 feet of occupied dwellings and outdoor eating, drinking, and bathing facilities through the use of low trajectory nozzles for spray irrigation, above-ground drip irrigation, or other means.

9. Reclaimed Water Storage Requirements -- Off-line reject water storage equal to the average daily permitted flow shall be provided at this facility when the CTO is issued for the reclamation system. Reject water storage may be in an impoundment with a minimum of two feet of freeboard or in water-tight tanks placed above-ground or in-ground. All reject water storage shall have a synthetic liner of at least 20 mils thickness, a compacted soil liner of at least one foot thickness, or an approved groundwater monitoring plan; and shall be designed and operated to prevent a discharge to surface waters of the state except in the event of a storm greater than the 25-year, 24-hour storm.

   If it can be shown that the all reject water can be returned to the head of the plant for retreatment, discharged to another permitted reuse system requiring a lower level of treatment not less than Level 2, or sent to a VPDES permitted effluent disposal system successfully, reject water storage shall not be required at this facility.

10. Notification to End Users of Reclaimed Water Treatment Failures -- If the treatment of the reclaimed water fails more than once during a seven-day period to comply with Level 1 standards specified in Part I.A.2 of this permit, the permittee shall notify the golf course of the treatment failures and advise the golf course of precautions to be taken to protect public health when using the reclaimed water in areas accessible to the public or where human contact with the reclaimed water is likely. These precautions shall be implemented for a period of seven days or greater depending on the frequency and magnitude of the treatment failure.

11. Recordkeeping and Reporting Requirements -- A monthly summary of operating records regarding reclamation and reuse shall be maintained at the Zion Crossroads WWTP. A certified monthly monitoring report for reclamation and reuse that encompasses the parameters in Part I.A.2 of this permit shall be submitted to DEQ-NRO by the 10th of each month following the month of monitoring. This report shall include information about the irrigation reuse of any reclaimed water that fails to meet the standards in this permit and a description of any notification provided in accordance with 9 VAC 25-740-170 A.2. An annual report shall be submitted to DEQ-NRO by February 10 of each year and include the requirements of 9 VAC 25-740-200.C.

12. Reclamation and Reuse Regulations Reopener -- The permit may be reopened to incorporate any changes to these regulations.

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Monitoring

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.
2. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.
3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.

B. Records

1. Records of monitoring information shall include:
   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) and time(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

C. Reporting Monitoring Results

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

   Department of Environmental Quality - Northern Regional Office (DEQ-NRO)
   13901 Crown Court
   Woodbridge, VA 22193

   Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the Department.

2. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under Title 40 of the Code of Federal Regulations Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Department.

3. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to Provide Information.

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

E. Compliance Schedule Reports

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

F. Unauthorized Discharges

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

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

G. Reports of Unauthorized Discharges.

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

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and
8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

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

H. Reports of Unusual or Extraordinary Discharges.

If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II.I.2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

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

I. Reports of Noncompliance

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

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:
   a. Any unanticipated bypass; and
   b. Any upset which causes a discharge to surface waters.

2. A written report shall be submitted within 5 days and shall contain:
   a. A description of the noncompliance and its cause;
   b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
   c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

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

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

NOTE: The immediate (within 24 hours) reports required in Parts II, G., H. and I. may be made to the Department's Northern Virginia Regional Office at (703) 583-3800 (voice) or (703) 583-3841 (fax). For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.

J. Notice of Planned Changes.

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

   a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

      1) After promulgation of standards of performance under Section 306 of Clean Water Act which are applicable to such source; or
      2) After proposal of standards of performance in accordance with Section 306 of Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;

   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or

   c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

K. Signatory Requirements.

1. All permit applications shall be signed as follows:

   a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
      1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or

      2) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

   c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes:

      1) The chief executive officer of the agency, or
      2) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II.K.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Part II.K.1.;

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

   c. The written authorization is submitted to the Department.

3. Changes to authorization. If an authorization under Part II.K.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II.K.2. shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Parts II, K.1. or K.2. shall make the following certification:

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

L. Duty to Comply.

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

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

M. Duty to Reapply.

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

N. Effect of a Permit.

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

O. State Law.

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

P. Oil and Hazardous Substance Liability.

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

Q. Proper Operation and Maintenance.

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

R. Disposal of solids or sludges.

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

S. Duty to Mitigate.

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

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

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

U. Bypass.

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II, U.2. and U.3.

2. Notice
   a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.
   b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II.I.

3. Prohibition of bypass.
   a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:
      1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      3) The permittee submitted notices as required under Part II.U.2.

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

V. Upset.

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part II.V.2. are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An upset occurred and that the permittee can identify the cause(s) of the upset;
   b. The permitted facility was at the time being properly operated;
   c. The permittee submitted notice of the upset as required in Part II.I.; and
   d. The permittee complied with any remedial measures required under Part II.S.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and Entry

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

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

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

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

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

X. Permit Actions.

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

Y. Transfer of permits

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II.Y.2., a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.

2. As an alternative to transfers under Part II.Y.1., this permit may be automatically transferred to a new permittee if:
   a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;
   b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
   c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II.Y.2.b.

Z. Severability

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