VPDES PERMIT PROGRAM FACT SHEET

This document gives pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a MINOR, MUNICIPAL permit. The effluent limitations contained in this permit will maintain the water quality standards of 9 VAC 25-260-00 et seq. The discharge results from the operation of a municipal sewage treatment works receiving domestic sewage from an elementary school. This permit action consists of permit reissuance for a term of five years with updated boilerplate special conditions, adding bacteria monitoring.

1. **PERMIT NO.:** VA0022705

EXISTING PERMIT EXPIRATION DATE: July 31, 2011

2. **FACILITY NAME AND LOCAL MAILING ADDRESS**
Cluster Springs Early Learning Center STP
P.O. Box 1849
Halifax, VA 24558

FACILITY PHYSICAL LOCATION (IF DIFFERENT)
1011 Cluster Springs Elementary Road
Halifax County, VA

FACILITY CONTACT:
NAME: Larry Roller
TITLE: Director of Operations and Maintenance
COMPANY NAME: Halifax County Public Schools
PHONE: 434-572-4346
E-MAIL:

ALTERNATE CONTACT:
NAME:
TITLE:
PHONE:
E-MAIL:

3. **OWNER CONTACT:** (TO RECEIVE PERMIT)
NAME: Paul D. Stapleton
TITLE: Superintendent of Schools
COMPANY NAME: Halifax County Public Schools
ADDRESS: 1030 Mary Bethune Street
P.O. Box 1849
Halifax, VA 24558
PHONE: 434-476-2171
E-MAIL:

4. **PERMIT DRAFTED BY:** DEQ, Water Permits, Blue Ridge Regional Office

Permit Writer(s): Frank Bowman Date(s): 6/3/11
Reviewed By: Bob Tate Date(s): 6/6/11

5. **PERMIT CHARACTERIZATION:** (Check as many as appropriate)

( ) Issuance
(x) Reissuance
( ) Revoke & Reissue
( ) Owner Modification
( ) Board Modification
( ) Change of Ownership/Name
Effective Date:

(x) Municipal
SIC Code(s) 8211,4952
( ) Industrial
SIC Code(s) ____
____
____

(x) POTW
( ) PVOTW
( ) Private
( ) Federal
( ) State
( ) Publicly-Owned Industrial

( ) Site-Specific WQ Criteria
( ) Variance to WQ Standards
( ) Water Effects Ratio

( ) Interim Limits in Other Document (attach to fact sheet)
( ) Concept Engineering Report Being Approved with Permit
( ) Possible Interstate Effect

6. **APPLICATION COMPLETE DATE:** April 25, 2011

7. **RECEIVING WATERS CLASSIFICATION:** River basin information.

Outfall No: 001

Receiving Stream:	Stokes Creek, UT	7-Day/10-Year Low Flow:	0
River Mile:	0.6	7-Day/10-Year High Flow:	0
Basin:	Roanoke River	1-Day/10-Year Low Flow:	0
Subbasin:	Roanoke River	1-Day/10-Year High Flow:	0
Section:	2	30-Day/5-Year Low Flow:	0
Class:	III	30-Day/10-Year Low Flow:	0
Special Standard(s):	none	Harmonic Mean Flow:	0
Tidal?	No	On 303(d) list?	No

8. **FACILITY DESCRIPTION:** Describe the type facility from which the discharges originate.

Existing municipal discharge resulting from treated domestic sewage from an elementary school.

(There are no industrial users contributing to the treatment works.)

9. **LICENSED WASTEWATER OPERATOR REQUIREMENTS:** (x) No ( ) Yes Class:

10. **RELIABILITY CLASS:** II

11. **SITE INSPECTION DATE:** May 13, 2009 **REPORT DATE:** June 24, 2009

Performed By: Stephanie Bowman

The inspection report is included.

SEE ATTACHMENT 1

12. **DISCHARGE(S) LOCATION DESCRIPTION:** Provide **USGS Topo** which indicates the discharge location, significant (large) discharger(s) to the receiving stream, water intakes, and other items of interest.

Name of Topo: South Boston **Quadrant No.:** 013B

SEE ATTACHMENT 2

13. **ATTACH A SCHEMATIC OF THE WASTEWATER TREATMENT SYSTEM(S) [IND. & MUN.]. FOR INDUSTRIAL FACILITIES, ALSO PROVIDE A GENERAL DESCRIPTION OF THE PRODUCTION CYCLE(S) AND ACTIVITIES. FOR MUNICIPAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE TREATMENT PROVIDED.**

Narrative: Sewage is treated by a septic tank, followed by a recirculating, intermittent sand filter, chlorine disinfection, post-aeration and dechlorination.

SEE ATTACHMENT 3

14. **DISCHARGE DESCRIPTION:**

SEE ATTACHMENT 4

15. **COMBINED TOTAL FLOW:**

TOTAL: 0.0051 MGD (for public notice)

PROCESS FLOW: MGD (IND.)

NONPROCESS FLOW: MGD (IND.)

DESIGN FLOW: 0.0051 MGD (MUN.)

16. **STATUTORY OR REGULATORY BASIS FOR EFFLUENT LIMITATIONS AND SPECIAL CONDITIONS:** (Check all which are appropriate)

X State Water Control Law
X Clean Water Act
X VPDES Permit Regulation (9 VAC 25-31-10 et seq.)
X EPA NPDES Regulation (Federal Register)
___ EPA Effluent Guidelines [40 CFR 400 – 471 (industrial)]
X EPA Effluent Guidelines [40 CFR 133 (municipal 2^0 treatment)]
X Water Quality Standards (9 VAC 25-260-00 et seq.)
___ Waste load Allocation from a TMDL or River Basin Plan

17. **LIMITATIONS/MONITORING:** Include **all effluent limitations and monitoring requirements** being placed in the permit for each outfall, including any WET limits. If applicable, include any limitations and monitoring requirements being included for sludge and ground water.

There are no applicable limitations and monitoring requirements for sludge.

There are no applicable limitations and monitoring requirements for ground water.

SEE ATTACHMENT 5

18. **SPECIAL CONDITIONS:** Provide **all actual permit special conditions**, including compliance schedules, toxic monitoring, sludge, ground water, storm water and pretreatment.

SEE ATTACHMENT 6

19. **EFFLUENT/SLUDGE/GROUND WATER LIMITATIONS/MONITORING RATIONALE:** For outfalls, attach any analyses completed (**MIX.EXE and WLA.EXE) and STATS printouts** for individual toxic parameters. As a minimum, it will include: waste load allocation (acute, chronic and human health); statistics summary (number of data values, quantification level, expected value, variance, covariance, 97th percentile, and statistical method); input data listing; and, effluent limitations determination. Include **all calculations** used for each outfall's set of effluent limits and incorporate the results of **any water quality model(s)**. Include all calculations/documentation of any antidegradation or anti-backsliding issues in the development of any limitations; complete the review statements below. Provide a rationale for **limited internal waste streams** and indicator pollutants. Attach any additional information used to develop the limitations, including any applicable water quality standards calculations (acute, chronic and human health).

OTHER CONSIDERATIONS IN LIMITATIONS DEVELOPMENT:

WAIVERS/VARIANCES/ALTERNATE LIMITATIONS: Provide justification or refutation rationale for requested **waivers to the permit application (e.g., testing requirements)** or variances/alternatives to required permit conditions/ limitations. This includes, but is not limited to: variances from technology guidelines or water quality standards; WER/translator study consideration; variances from standard permit limits/conditions.

N/A

SUITABLE DATA: What, if any, effluent data were considered in the establishment of effluent limitations and provide all appropriate information/calculations.

All suitable effluent data were reviewed.

ANTIDEGRADATION REVIEW: Provide all appropriate information/calculations for the antidegradation review.

Tier I: X **Tier II:** ____ **Tier III:** ____

The State Water Control Board's Water Quality Standards regulations include an antidegradation policy (9 VAC 25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier I, existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier II water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier II waters is not allowed without an evaluation of the economic and social impacts. Tier III water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The antidegradation review begins with the Tier determination. The facility discharges to an unnamed tributary to Stokes Creek. This receiving stream is not listed on the 303(d) list and no in-stream data are available that indicate the water quality criteria either have been violated or are barely met. However, the receiving stream critical flows have been determined to be equivalent to 0.0 MGD and the permit contains water quality-based limits for ammonia (full allocation). Therefore, Stokes Creek, at the point of this facility's discharge, is designated as Tier I and no further review is needed. Permit limits have been established by determining waste load allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These waste load allocations will provide for the protection and maintenance of all existing uses.

ANTIBACKSLIDING REVIEW: Indicate if antibacksliding applies to this permit and, if so, provide all appropriate information.

There are no backsliding issues to address in this permit (i.e., limits as stringent or more stringent when compared to the previous permit).

SEE ATTACHMENT 7

20. **SPECIAL CONDITIONS RATIONALE:** Provide a rationale **for each of the permit's special conditions**, including compliance schedules, toxic monitoring, sludge, ground water, storm water and pretreatment.

SEE ATTACHMENT 8

21. **SLUDGE DISPOSAL PLAN:** Provide a brief description of the sludge disposal plan (e.g., type sludge, treatment provided and disposal method). Indicate if any of the plan elements are included within the permit.

Only septage is produced which is pumped and hauled. Septage is removed from the grease trap, septic tanks and distribution box on an annual basis (during the month of August) via a septage hauler who hauls to the South Boston Sewage Treatment Plant for disposal.

22. **MATERIAL STORED:** List the type and quantity of wastes, fluids, or pollutants being stored at this facility. Briefly describe the storage facilities and list, if any, measures taken to prevent the stored material from reaching State waters.

None stored on-site.

23. **RECEIVING WATERS INFORMATION:** Refer to the State Water Control Board's Water Quality Standards [e.g., River Basin Section Tables (9 VAC 25-260 - Part IX) [along with Parts VII and VIII]. Use 9 VAC 25-260-140 C (introduction and numbered paragraph) to address tidal waters where fresh water standards would be applied or transitional waters where the most stringent of fresh or salt water standards would be applied. Attach any memoranda or other information which helped to develop permit conditions (i.e. **flow determination memo, tier determinations**, PReP complaints, special water quality studies, **STORET data** and other biological and/or chemical data, etc.

SEE ATTACHMENT 9

24. **303(d) LISTED SEGMENTS:** Indicate if the facility **discharges directly** to a segment that is listed on the current 303(d) list, if the allocations are specified by an approved TMDL and, if so, provide all appropriate information/calculations. If the facility discharges directly to a stream segment that is on the current 303(d) list, the fact sheet must include a description of how the TMDL requirements are being met.

This facility discharges to an unnamed tributary to Stokes Creek. A downstream TMDL has been established for

the discharge of *E. coli*. EPA approved the Dan River Bacteria TMDL on December 8, 2008 for this segment. The TMDL contains WLAs of 2.43E+7 cfu/day and 8.89E+9 cfu/year for this discharge. This permit contains *E. coli* limits of 126 N/100 mL monthly average (geometric mean) and 126 N/100mL single sample maximum that are in compliance with the TMDL.

SEE ATTACHMENT 10

25. **CHANGES TO PERMIT:** Use **TABLE A** to record any **changes from the previous permit** and the rationale for those changes. Use **TABLE B** to record any **changes made to the permit during the permit processing period** and the rationale for those changes [i.e., use for comments from the applicant, VDH, EPA, other agencies and/or the public where comments resulted in changes to the permit limitations or any other changes associated with the special conditions or reporting requirements].

SEE ATTACHMENT 11

26. **NPDES INDUSTRIAL PERMIT RATING WORKSHEET:**

N/A - This is a municipal facility.

27. **EPA/VIRGINIA DRAFT PERMIT SUBMISSION CHECKLIST:**

SEE ATTACHMENT 12

28. **DEQ PLANNING COMMENTS RECEIVED ON DRAFT PERMIT:** Document any comments received from DEQ planning.

The discharge is not addressed in any planning document but will be included when the plan is updated.

29. **PUBLIC PARTICIPATION:** Document comments/responses received during the public participation process. If comments/responses provided, especially if they result in changes to the permit, place in the attachment.

PREVIOUS BOARD ACTION: none

VDH COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the Virginia Dept. of Health and noted how resolved.

Based on their review of the application, the VDH had no objections to the draft permit, as stated by memo dated February 2, 2011. The VDH provided the following comments: "The raw water intake for HCSA Leigh Street Waterworks is located approximately 5.8 miles from this discharge. We recommend a minimum Reliability Class I for this facility."

However, since this facility is a school, discharges infrequently and only for a short period of time, and would not operate in an emergency, the Reliability Class II is being retained.

EPA COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the U.S. Environmental Protection Agency and noted how resolved.

Based on their review of the draft permit, the EPA had no objections to the draft permit, as stated by e-mail dated July 22, 2011.

ADJACENT STATE COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from an adjacent state and noted how resolved.

Not Applicable.

OTHER AGENCY COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from any other agencies (e.g., VIMS, VMRC, DGIF, etc.) and noted how resolved.

Not Applicable.

STAFF COMMENTS:

None.

OTHER COMMENTS RECEIVED FROM RIPARIAN OWNERS/CITIZENS ON DRAFT PERMIT:
Document any comments received from other sources and note how resolved.

The application and draft permit have received public notice in accordance with the VPDES Permit Regulation, and no comments were received.

PUBLIC NOTICE INFORMATION: Comment Period: **Start Date:** June 28, 2011
End Date: July 28, 2011

All pertinent information is on file and may be inspected, and copied by contacting Frank Bowman at: Department of Environmental Quality (DEQ), Blue Ridge Regional Office-Lynchburg, 7705 Timberlake Road, Lynchburg, VA 24502. Telephone: 434-582-6207 E-mail: frank.bowman@deq.virginia.gov

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may review the draft permit and application at the DEQ Blue Ridge Regional Office by appointment.

30. **ADDITIONAL FACT SHEET COMMENTS/PERTINENT INFORMATION:**

None.

31. **SUMMARY OF SPECIFIC ATTACHMENTS LABELED AS:**

Attachment 1 Site Inspection Report/Memorandum
Attachment 2 Discharge Location/Topographic Map
Attachment 3 Schematic/Plans & Specs/Site Map/Water Balance
Attachment 4 Discharge/Outfall Description
Attachment 5 Limitations/Monitoring
Attachment 6 Special Conditions
Attachment 7 Effluent/Sludge/Ground Water Limitations/Monitoring Rationale/Suitable Data/ Stream Modeling/Antidegradation/Antibacksliding
Attachment 8 Special Conditions Rationale
Attachment ___ Material Stored
Attachment 9 Receiving Waters Info./Tier Determination/STORET Data
Attachment 10 303(d) Listed Segments
Attachment 11 TABLE A and TABLE B - Change Sheets
Attachment ___ NPDES Industrial Permit Rating Worksheet
Attachment 12 EPA/Virginia Draft Permit Submission Checklist
Attachment 13 Chronology Sheet
Attachment ___

ATTACHMENT 1

SITE INSPECTION REPORT

Virginia Department of Environmental Quality

COMPLIANCE INSPECTION REPORT

FACILITY NAME: Halifax County Schools – Cluster Springs Early Learning Center		**INSPECTION DATE:** 05-13-09	
		INSPECTOR: Stephanie Bowman	
PERMIT No.: VA0022705		**REPORT DATE: 06-24-09**	
TYPE OF FACILITY: ☑ Municipal ☐ Major ☐ Industrial ☑ Minor ☐ Federal ☐ Small Minor ☐ HP ☐ LP		**TIME OF INSPECTION:**	Arrival 13:30 / Departure 13:45
		TOTAL TIME SPENT (including prep & travel)	8 hours
PHOTOGRAPHS: ☑ Yes ☐ No		**UNANNOUNCED INSPECTION?** ☑ Yes ☐ No	
REVIEWED BY / Date: Fred T. DiLella			
PRESENT DURING INSPECTION: Operator not on site			

WL/NOV # : Paraphrase Noncompliance issues	Reported Cause of Noncompliance:	Corrective Action Taken:
N/A	N/A	N/A

INSPECTION OVERVIEW AND CONDITION OF TREATMENT UNITS

VPDES NO. **VA0022705**

UNIT PROCESS: Septic Tank/Dosing Siphon/Sand Filter

1. Grease trap preceding septic tank:	[ ] Yes	[ ] No	[X] NA	
2. When was septic tank last pumped? **July 2008**				
3. Dosing siphon operational (doesn't trickle):	[ ] Yes	[ ] No	[X] NA	
4. Condition of dosing siphon:	[ ] Good	[ ] Fair	[ ] Poor*	[X] NA
5. Number of sand filters: 3				
6. Condition of distribution system including seals:	[X] Good	[ ] Fair	[ ] Poor*	
7. Following problems evident:				
a. grass on filter	[X] Yes*	[ ] No		
b. ponding	[ ] Yes*	[X] No		
c. uneven sand	[X] Yes*	[ ] No		
d. places of black or septic sand	[ ] Yes*	[X] No		
e. uneven distribution of influent	[ ] Yes*	[X] No		
f. solids on surface	[ ] Yes*	[X] No		
8. Wasted sand disposed of properly?	[X] Yes	[ ] No*		

Comments:

1. *At the time of the inspection, the sand appeared in need of some leveling and there was also some vegetation growing in the filter beds.*

INSPECTION OVERVIEW AND CONDITION OF TREATMENT UNITS

VPDES NO. **VA0022705**

UNIT PROCESS: Chlorination

1. No. of chlorinators: 1 In operation: 1
2. No. of evaporators: 0 In operation: 0
3. No. of chlorine contact tanks: 1 In operation: 1
4. Proper flow distribution between units: [ ] Yes [ ] No* [X] NA
5. How is chlorine introduced into the wastewater?
   [ ] Perforated diffusers
   [ ] Injector with single entry point
   [X] Other Tablet Feeder
6. Chlorine residual in basin effluent: **N/A** mg/L – **Unit locked, no access at time of inspection**
7. Applied chlorine dosage: **Not recorded** lbs/day
8. Contact basins adequately baffled: [X] Yes [ ] No*
9. Adequate ventilation:
   a. cylinder storage area [ ] Yes [ ] No* [X] N/A
   b. equipment room [ ] Yes [ ] No* [X] N/A
10. Proper safety precautions used: [X] Yes [ ] No*
11. General condition: [X] Good [ ] Fair [ ] Poor

Comments:
1. There was no discharge occurring at the time of the inspection.

UNIT PROCESS: Dechlorination

1. Chemical used: [ ] Sulfur Dioxide [ ] Bisulfite [X] Sodium Sulfite

2. No. of sulfonators: 1 In operation: 1

3. No. of evaporators: 0 In operation: 0

4. No. of chemical feeders: 1 In operation: 1

5. No. of contact tanks: 1 In operation: 1

6. Proper flow distribution between units: [ ] Yes [ ] No* [X] NA

7. How is chemical introduced into the wastewater?

   [ ] Perforated diffusers
   [ ] Injector with single entry point?
   [X] Other Tablet Feeder

8. Control system operational: [X] Yes [ ] No*

   a. residual analyzers: [ ] Yes [X] No*
   b. system adjusted: [ ] Automatic [X] Manual [ ] Other:

9. Applied dechlorination dose: **Not recorded** lbs/day

10. Chlorine residual in basin effluent: **N/A** mg/L

11. Contact basins adequately baffled: [X] Yes [ ] No* [ ] NA

12. Adequate ventilation:

    a. cylinder storage area: [ ] Yes [ ] No* [X] NA
    b. equipment room: [ ] Yes [ ] No* [X] NA

13. Proper safety precautions used: [X] Yes [ ] No*

14. General condition: [X] Good [ ] Fair [ ] Poor

Comments:

1. The facility was locked and secured at the time of the inspection.
2. There was no discharge occurring at the time of the inspection.

Permit #	VA0022705

EFFLUENT FIELD DATA:

Flow	N/A MGD	**Dissolved Oxygen**	N/A mg/L	**TRC (Contact Tank)**	N/A mg/L
pH	N/A S.U.	**Temperature**	N/A °C	**TRC (Final Effluent)**	N/A mg/L

Was a Sampling Inspection conducted? ☐ Yes (see Sampling Inspection Report) ☑ No

CONDITION OF OUTFALL AND EFFLUENT CHARACTERISTICS:

1. Type of outfall: ☑ Shore based ☐ Submerged Diffuser? ☐ Yes ☑ No
2. Are the outfall and supporting structures in good condition? ☑ Yes ☐ No
3. Final Effluent (evidence of following problems): ☐ Sludge bar ☐ Grease
   ☐ Turbid effluent ☐ Visible foam ☐ Unusual color ☐ Oil sheen
4. Is there a visible effluent plume in the receiving stream? ☐ Yes ☑ No
5. Receiving stream: ☑ No observed problems ☐ Indication of problems (explain below)
   Comments: No problems observed, no discharge at the time of the inspection

REQUIRED CORRECTIVE ACTIONS:

1. The sand in the units appeared to need some maintenance in regards to leveling the sand and vegetative control.

NOTES and COMMENTS:

*See comment above.

DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVISION
LABORATORY INSPECTION REPORT

10/01

FACILITY NO:	INSPECTION DATE:	PREVIOUS INSP. DATE:	PREVIOUS EVALUATION:	TIME SPENT:
VA0022705	05/13/09	10-27-05	Deficiencies	.5 hour

NAME/ADDRESS OF FACILITY:	FACILITY CLASS:	FACILITY TYPE:	UNANNOUNCED INSPECTION?
Halifax Co. Schools-Cluster Springs ELC Elementary School	( ) MAJOR (X) MINOR ( ) SMALL ( ) VPA/NDC	(X) MUNICIPAL ( ) INDUSTRIAL ( ) FEDERAL ( ) COMMERCIAL LAB	(X) YES ( ) NO **FY-SCHEDULED INSPECTION?** (X) YES ( ) NO

INSPECTOR(S):	REVIEWERS:	PRESENT AT INSPECTION:
Stephanie Bowman	Fred T. DiLella	No operator on site

LABORATORY EVALUATION	DEFICIENCIES? Yes	DEFICIENCIES? No
LABORATORY RECORDS	X*	
GENERAL SAMPLING & ANALYSIS		X
LABORATORY EQUIPMENT		X
pH ANALYSIS PROCEDURES	X*	
TOTAL RESIDUAL CHLORINE ANALYSIS PROCEDURES (field)	X*	

QUALITY ASSURANCE/QUALITY CONTROL

Y/N	QUALITY ASSURANCE METHOD	PARAMETERS	FREQUENCY
Y	REPLICATE SAMPLES		
N	SPIKED SAMPLES		
Y	STANDARD SAMPLES	pH	Each run
N	SPLIT SAMPLES		
N	SAMPLE BLANKS	TRC	Each run
	OTHER		
	EPA-DMR QA DATA?	RATING: ( ) No Deficiency ( ) Deficiency (X) NA	
	QC SAMPLES PROVIDED?	RATING: ( ) No Deficiency ( ) Deficiency (X) NA	

COPIES TO: (X) DEQ - RO; ( ) OWPS; (X) VDH- FO and DWE; (X) OWNER; ( ) EPA-Region III; ( ) Other:

FACILITY #: VA0022705

LABORATORY RECORDS SECTION

LABORATORY RECORDS INCLUDE THE FOLLOWING:

X	SAMPLING DATE	X	ANALYSIS DATE	NA	CONT MONITORING CHART
X	SAMPLING TIME	X	ANALYSIS TIME	X	INSTRUMENT CALIBRATION
X	SAMPLE LOCATION	X	TEST METHOD	NA	INSTRUMENT MAINTENANCE
				X	CERTIFICATE OF ANALYSIS

WRITTEN INSTRUCTIONS INCLUDE THE FOLLOWING:

	SAMPLING SCHEDULES		CALCULATIONS		ANALYSIS PROCEDURES

	YES	NO	N/A
DO ALL ANALYSTS INITIAL THEIR WORK?	X		
DO BENCH SHEETS INCLUDE ALL INFORMATION NECESSARY TO DETERMINE RESULTS?	X		
IS THE DMR COMPLETE AND CORRECT? MONTH REVIEWED: **04-2009**	X		
ARE ALL MONITORING VALUES REQUIRED BY THE PERMIT REPORTED?	X		

GENERAL SAMPLING AND ANALYSIS SECTION

	YES	NO	N/A
ARE SAMPLE LOCATION(S) ACCORDING TO PERMIT REQUIREMENTS?	X		
ARE SAMPLE COLLECTION PROCEDURES APPROPRIATE?	X		
IS SAMPLE EQUIPMENT CONDITION ADEQUATE?	X		
IS FLOW MEASUREMENT ACCORDING TO PERMIT REQUIREMENTS?			X
ARE COMPOSITE SAMPLES REPRESENTATIVE OF FLOW?			X
ARE SAMPLE HOLDING TIMES AND PRESERVATION ADEQUATE?	X		
IF ANALYSIS IS PERFORMED AT ANOTHER LOCATION, ARE SHIPPING PROCEDURES ADEQUATE? LIST PARAMETERS AND NAME & ADDRESS OF LAB: ▪ **EnviroCompliance Laboratories, Inc. 10357 Old Keeton Road Ashland, VA 23005** ▪ **COD, TSS, TKN, NH_3, BOD, CBOD**	X		

LABORATORY EQUIPMENT SECTION

	YES	NO	N/A
IS LABORATORY EQUIPMENT IN PROPER OPERATING RANGE?	X		
ARE ANNUAL THERMOMETER CALIBRATION(S) ADEQUATE?	X		
IS THE LABORATORY GRADE WATER SUPPLY ADEQUATE?			X
ARE ANALYTICAL BALANCE(S) ADEQUATE?			X

LABORATORY INSPECTION REPORT SUMMARY

Halifax Co. Schools-Cluster Springs ELC Elementary	FACILITY NO: VA0022705	INSPECTION DATE: 05/13/09
LABORATORY EVALUATION:	(X) Deficiencies ( ) No Deficiencies	

LABORATORY RECORDS

The laboratory records section has deficiencies.

1. *The staff is occasionally using White-Out and overwriting data on the bench sheets.*

GENERAL SAMPLING AND ANALYSIS

The General Sampling and Analysis section has no deficiencies.

LABORATORY EQUIPMENT

The Laboratory Equipment section has no deficiencies.

INDIVIDUAL PARAMETERS

Total Residual Chlorine (TRC)

The analysis for the parameter of TRC has deficiencies.

1. *The staff has not demonstrated the TRC collection and analysis times to document that the samples were processed within the 15 minute holding time.*

pH

The analysis for the parameter of pH has deficiencies.

1. *The staff has not demonstrated the pH collection and analysis times to document that the samples were processed within the 15 minute holding time.*
2. *The staff has not documented the pH buffer temperatures or the times during calibration.*
3. *The facility log sheets must reference the standard method used.*

ANALYST:	Cathy Burns	VPDES NO	VA0022705

Meter: Sension 1

Parameter: Hydrogen Ion (pH)
1/08

Method: Electrometric

METHOD OF ANALYSIS:

X	18th Edition of Standard Methods – 4500-H^+ B
	21st or Online Editions of Standard Methods – 4500-H^+ B (00)

	pH is a method-defined analyte so modifications are not allowed. [40 CFR Part 136.6]	Y	N
1)	Is a certificate of operator competence or initial demonstration of capability available for each analyst/operator performing this analysis? **NOTE**: Analyze 4 samples of known pH. May use external source of buffer (different lot/manufacturer than buffers used to calibrate meter). Recovery for each of the 4 samples must be +/- 0.1 SU of the known concentration of the sample. [SM 1020 B.1]	X	
2)	Is the electrode in good condition (no chloride precipitate, scratches, deterioration, etc.)? [2.b/c and 5.b]		*
3)	Is electrode storage solution in accordance with manufacturer's instructions? [Mfr.]		*
4)	Is meter calibrated on at least a daily basis using three buffers all of which are at the same temperature? [4.a] **NOTE**: Follow manufacturer's instructions.	X	
5)	After calibration, is a buffer analyzed as a check sample to verify that calibration is correct? Agreement should be within +/- 0.1 SU. [4.a]	X	
6)	Do the buffer solutions appear to be free of contamination or growths? [3.1]		*
7)	Are buffer solutions within the listed shelf-life or have they been prepared within the last 4 weeks? [3.a]		*
8)	Is the cap or sleeve covering the access hole on the reference electrode removed when measuring pH? [Mfr.]		*
9)	For meters with ATC that also have temperature display, is the thermometer verified annually? [SM 2550 B.1]	X	
10)	Is temperature of buffer solutions and samples recorded when determining pH? [4.a]		X*
11)	Is sample analyzed within 15 minutes of collections? [40 CFR Part 136]		X*
12)	Is the electrode rinsed and then blotted dry between reading solutions (Disregard if a portion of the next sample analyzed is used as the rinsing solution.)? [4.a]		*
13)	Is the sample stirred gently at a constant speed during measurement? [4.b]		*
14)	Does the meter hold a steady reading after reaching equilibrium? [4.b]		*
15)	Is a duplicate sample analyzed after every 20 samples if citing 18th or 19th Edition or daily for 20th or 21st Edition? [Part 1020] **NOTE**: Not required for *in situ* samples.		NA
16)	Is the pH of duplicate samples within 0.1SU of the original sample? [Part 1020]		NA
17)	Is there a written procedure for which result will be reported on DMR (Sample or Duplicate) and is this procedure followed? [DEQ]		NA

Parameter: Hydrogen Ion (pH)
(continued)

Problems:

1. *The buffer temperatures must be recorded daily when performing the pH calibration.*
2. *The collection and analytical temperatures of the sample must be recorded to reflect that the proper 15 minute holding time is correct.*
3. *The operator is occasionally scratching out data to make corrections.*
4. *The facility log sheets must reference the standard method used.*

ANALYST:	**Cathy Burns**	VPDES NO.	**VA0022705**

Instrument: Pocket Colorimeter II Parameter: Total Residual Chlorine (TRC)
Method: DPD Colorimetric (HACH Pocket Colorimeter)
1/08

METHOD OF ANALYSIS:

HACH Manufacturer's Instructions (Method 8167) plus an edition of *Standard Methods*

X	18th Edition of *Standard Methods* 4500-Cl G
	21st Edition of *Standard Methods* 4500-Cl G (00)

		Y	N
1)	Is a certificate of operator competence or initial demonstration of capability available for each analyst/operator performing this analysis? **NOTE:** Analyze 4 samples of known TRC. Must use a lot number or source that is different from that used to prepare calibration standards. May not use Spec√ ™. [SM 1020 B.1]	X	
2)	Are the DPD PermaChem™ Powder Pillows stored in a cool, dry place? [Mfr.]		*
3)	Are the pillows within the manufacturer's expiration date? [Mfr.]		*
4)	Has buffering capability of DPD pillows been checked annually? (Pillows should adjust sample pH to between 6 and 7) [Mfr.]	X	
5)	When pH adjustment is required, is H_2SO_4 or NaOH used? [Hach 11.3.1]		*
6)	Are cells clean and in good condition? [Mfr]		*
7)	Is the low range (0.01 mg/L resolution) used for samples containing residuals from 0.2.00 mg/L? [Mfr.]		*
8)	Is calibration curve developed (may use manufacturer's calibration) with daily verification using a high and a low standard? **NOTE:** May use manufacturer's installed calibration and commercially available chlorine standards for daily calibration verifications. [18th ed 1020 B.5; 21st ed 4020 B.2.b]	X	
9)	Is the 10-mL cell (2.5-cm diameter) used for samples from 0-2.00 mg/L? [Mfr.]		*
10)	Is meter zeroed correctly by using sample as blank for the cell used? [Mfr.]		*
11)	Is the instrument cap placed correctly on the meter body when the meter is zeroed and when the sample is analyzed? [Mfr.]		*
12)	Is the DPD Total Chlorine PermaChem™ Powder Pillow mixed into the sample? [Hach 11.1]		*
13)	Is the analysis made at least three minutes but not more than six minutes after PermaChem™ Powder Pillow addition? [Hach 11.2]		*
14)	If read-out is flashing [2.20], is sample diluted correctly, and then reanalyzed? [Hach 1.2 & 2.0]	X	
15)	Are samples analyzed within 15 minutes of collection? [40 CFR Part 136]		*X**
16)	Is a duplicate sample analyzed after every 20 samples if citing 18th Edition [SM 1020 B.6] or daily for 21st Edition [SM 4020 B.3.c]?		N/A
17)	If duplicate sample is analyzed, is the relative percent difference (RPD) ≤ 20? [18th ed. Table 1020 I; 21st ed. DEQ]		N/A

ANALYST:	Cathy Burns	VPDES NO	VA0022705

Meter:_____

Parameter: Dissolved Oxygen
Method: Membrane Electrode
Facility Elevation 450 '
1/08

METHOD OF ANALYSIS:

X	18th Edition of Standard Methods – 4500-O G
	21st or Online Editions of Standard Methods – 4500-O G (01)

	DO is a method-defined analyte so modifications are not allowed. [40 CFR Part 136.6]	Y	N
1)	If samples are collected, is collection carried out with a minimum of turbulence and air bubble formation and is the sample bottle allowed to overflow several times its volume? [1.c]		*
2)	Are meter and electrode operable and providing consistent readings? [3]		*
3)	Is membrane in good condition without trapped air bubbles? [3.b]		*
4)	Is correct filling solution used in electrode? [Mfr.]		*
5)	Are water droplets shaken off the membrane prior to calibration? [Mfr.]		*
6)	Is meter calibrated before use or at least daily? [Mfr. & Part 1020]		*
7)	Is calibration procedure performed according to manufacturer's instructions? [Mfr.]		*
8)	Is sample stirred during analysis? [Mfr.]		*
9)	Is the sample analysis procedure performed according to manufacturer's instructions? [Mfr.]		*
10)	Is meter stabilized before reading D.O.? [Mfr.]		*
11)	Is electrode stored according to manufacturer's instructions? [Mfr.]		*
12)	Is a duplicate sample analyzed after every 20 samples if citing 18th or 19th Edition or daily if citing 20th or 21st Edition? [Part 1020] **NOTE:** Not required for *in situ* samples.		N/A
13)	If a duplicate sample is analyzed, is the reported value for that sampling event the average concentration of the sample and the duplicate? [DEQ]		N/A
14)	If a duplicate sample is analyzed, is the relative percent difference (RPD) ≤ 20? [18th ed. Table 1020 I; 21st ed. DEQ]		N/A

Problems: Operator and equipment not on site at time of inspection

DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVISION
SAMPLE ANALYSIS HOLDING TIME/CONTAINER/PRESERVATION CHECK SHEET
Revised 3/08 [40 CFR, Part 136.3, Table II]

FACILITY NAME:	**Halifax County Schools-Cluster Springs ELC Elementary**	VPDES NO	**VA0022705**	SAMPLE DATE:	**04-08-09**

HOLDING TIMES						SAMPLE CONTAINER				PRESERVATION				
PARAMETER	APPROVED	MET?		LOGGED?		ADEQ. VOLUME		APPROP. TYPE		APPROVED	MET?		CHECKED?	
		Y	N	Y	N	Y	N	Y	N		Y	N	Y	N
BOD5 & CBOD5	48 HOURS	X		X		X		X		ANALYZE 2 HRS or 6°C				
TSS	7 DAYS	X		X		X		X		6°C				
FECAL COLIFORM / *E. coli / Enterococci*	6 HRS & 2 HRS TO PROCESS									6°C (1 HOUR)+ 0.008% $Na_2S_2O_3$				
pH	15 MIN.		*X**		*X**					N/A				
CHLORINE	15 MIN.		*X**		*X**					N/A				
DISSOLVED O_2	15 MIN./IN SITU	X								N/A				
TEMPERATURE	IMMERSION STAB.									N/A				
OIL & GREASE	28 DAYS									6°C + H_2SO_4/HCL pH<2				
AMMONIA	28 DAYS	X		X		X		X		6°C + H_2SO_4 pH<2 DECHLOR		*X**		*X**
TKN	28 DAYS									6°C + H_2SO_4 pH<2 DECHLOR				
NITRATE	48 HOURS									6°C				
NITRATE+NITRITE	28 DAYS									6°C + H_2SO_4 pH<2				
NITRITE	48 HOURS									6°C				
PHOSPHATE, ORTHO	48 HOURS									FILTER, 6°C				
TOTAL PHOS.	28 DAYS									6°C+ H_2SO_4 pH<2				
METALS (except Hg)	6 MONTHS									HNO_3 pH<2				
MERCURY (CVAA)	28 DAYS									HNO_3 pH<2				
PROBLEMS: ***not recording collection & analytical times for pH and TRC***										PROBLEMS: ***Sample pH not recorded for NH_3***				

ATTACHMENT 2

DISCHARGE LOCATION/TOPOGRAPHIC MAP

FORM 1 SECTION XI.

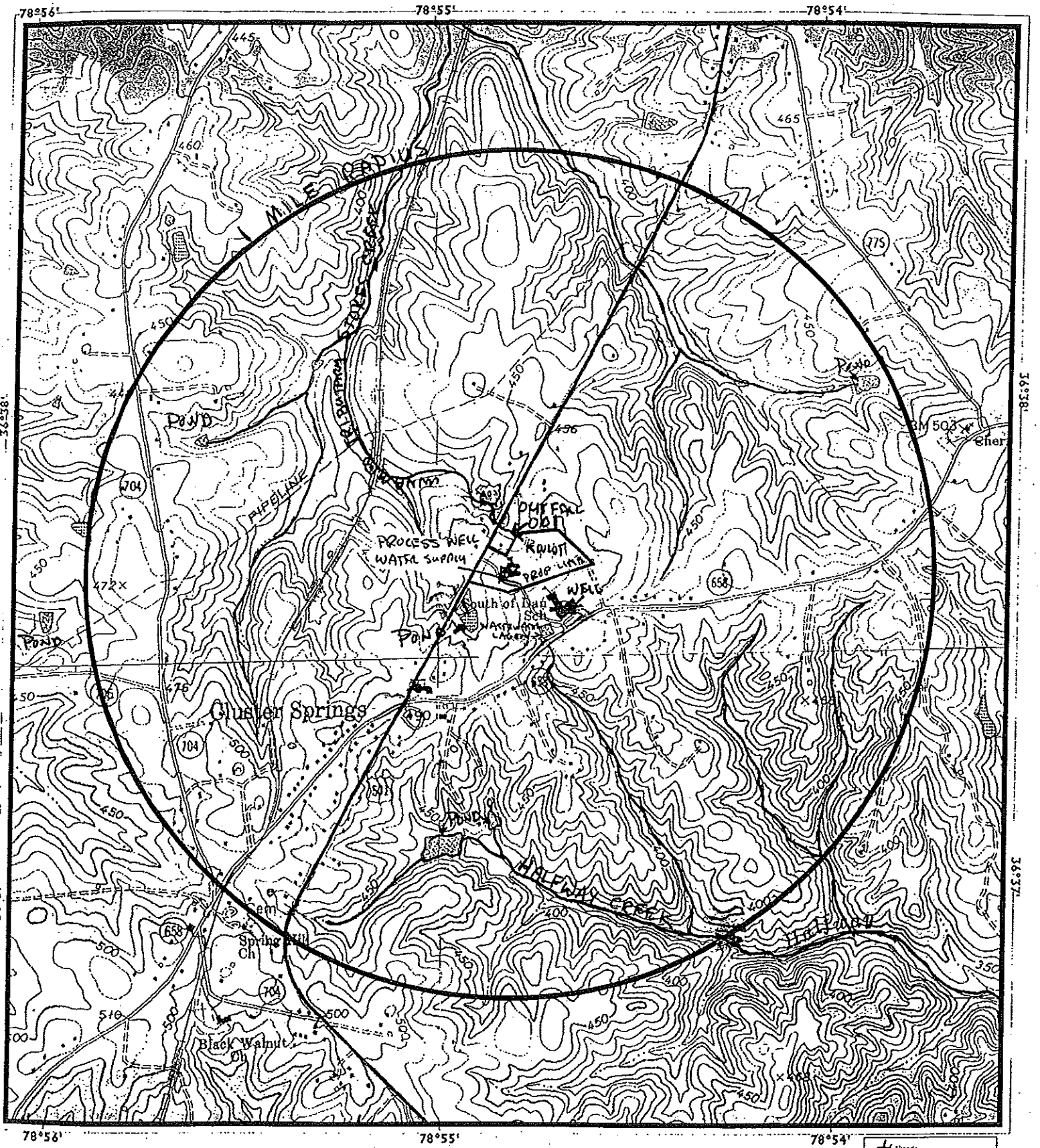
VA0022705

SWAP Zone 2 Map

DISTRICT 13

COUNTY/CITY: HALIFAX

CLUSTER SPRINGS ELEMENTARY SCHOOL



Ground Water Sources

Selected Water Source

Land Use Activities (L-#)

Potential Conduits (C-#)

Best Management Practices (B-#)

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Office of Water Programs
Division of Water Supply Engineering

N

800 0 800 1600 Feet

Potential Sources of Contamination (P-#)

Landfills

Discharge – No Discharge Facilities

Discharge

No Discharge

DEQSWRO – Storage Tank Releases

Active

Closed

Airports

Industrial Sites

Superfund Sites

Golf Courses

Boat Ramps

Underground Injection Wells

Hazardous and RCRA Sites

Hospitals

Tire Piles

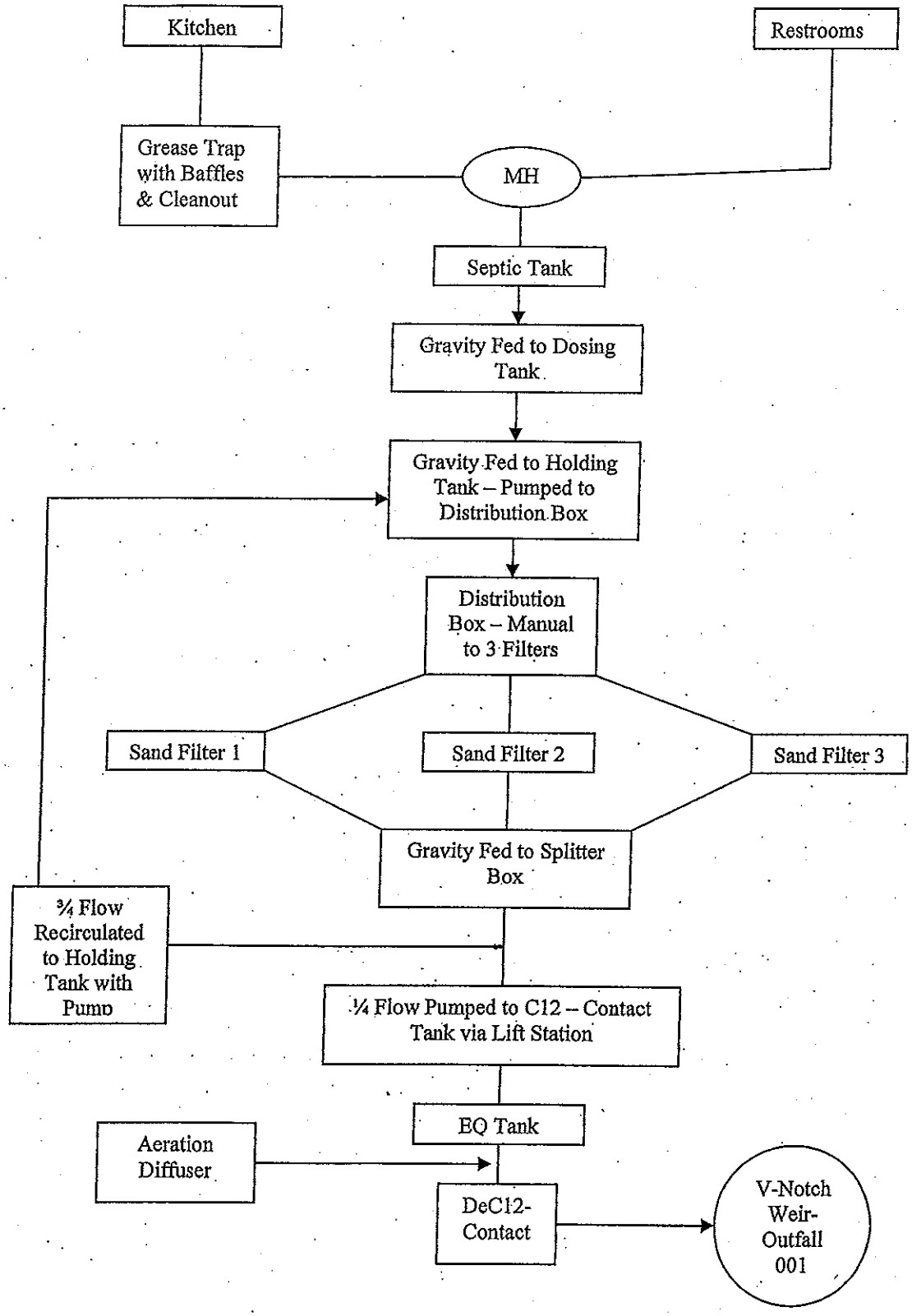
Marinas

ATTACHMENT 3

SCHEMATIC

SECTION A ITEM 6

Cluster Springs E.S. – VA0022705



ATTACHMENT 4

DISCHARGE/OUTFALL DESCRIPTION

TABLE I

NUMBER AND DESCRIPTION OF OUTFALLS

OUTFALL NO.	DISCHARGE LOCATION	DISCHARGE SOURCE (1)	TREATMENT (2)	FLOW (3)
001	36°37'40" 78°54'46"	Sewage from an elementary school.	Septic tank, followed by a recirculating, intermittent sand filter, chlorine disinfection, post-aeration and dechlorination.	0.0051 MGD

(1) List operations contributing to flow
(2) Give brief description, unit by unit
(3) Give maximum 30-day average flow for industry and design flow for municipal

ATTACHMENT 5

LIMITATIONS/MONITORING

MUNICIPAL EFFLUENT LIMITATIONS/MONITORING

OUTFALL # 001 DESIGN FLOW: 0.0051 MGD
Outfall Description: final discharge after dechlorination
SIC CODE: 4952 NAICS CODE: 611110

(X) Final Limits ( ) Interim Limits Effective Dates - From: Permit Effective date To: Permit expiration date

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
	MONTHLY AVERAGE		WEEKLY AVERAGE		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
	mg/l*	kg/day*	mg/l*	kg/d*	mg/l*	mg/l*		
Flow (MGD) [a]	NL		NA		NA	NL	5 Days/Week	Estimate
BOD5 [c] [d]	24	0.46	36	0.69	NA	NA	1/3 Months	Grab
Total Suspended Solids [c] [d]	30	0.58	45	0.87	NA	NA	1/3 Months	Grab
Ammonia-Nitrogen [c]	12	NA	12	NA	NA	NA	1/Month	Grab
Total Residual Chlorine (µg/l) [b] [c]	8.3	NA	11	NA	NA	NA	5 Days/Week	Grab
Dissolved Oxygen	NA		NA		5.0	NA	5 Days/Week	Grab
pH (standard units)	NA		NA		6.0	9.0	5 Days/Week	Grab
E. coli (N/100ml) [b]	126 [e]		NA		NA	126	1/Year [f]	Grab

* = UNLESS OTHERWISE NOTED NA = NOT APPLICABLE NL = NO LIMIT, MONITORING REQUIREMENT ONLY

[a] See Part I.C.1. for additional flow requirements.

[b] See Part I.B for additional monitoring and reporting requirements.

[c] See Parts I.C.7.a. and I.C.7.b. for quantification levels and reporting requirements, respectively.

[d] See Part I.C.8. for additional instructions regarding effluent monitoring frequencies.

[e] geometric mean

[f] 4 weekly samples collected in one month, between 10 a.m. and 4 p.m.

The design flow of this treatment facility is 0.0051 MGD.

The 30-day average percent removal for BOD5 and TSS shall not be less than 85 percent for this effluent.

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

BASES FOR LIMITATIONS/MONITORING:

PARAMETER	MULTIPLIER OR PRODUCTION	TECHNOLOGY	WATER QUALITY	BEST PROFESSIONAL JUDGMENT
Flow	Design flow (0.0051 MGD)			
pH	NA	X	X	
BOD5 (mg/l)	24/36 1.5 x monthly avg. (weekly max.)		X	X
BOD5 (kg/day)	Design flow (0.0051 MGD)		X	X
TSS (mg/l)	30/45	X	X	
TSS (kg/day)	Design flow (0.0051 MGD)	X	X	
Ammonia, chlorine, dissolved oxygen	NA		X	
E. coli	NA		X	X

ATTACHMENT 6

SPECIAL CONDITIONS

B. ADDITIONAL TOTAL RESIDUAL CHLORINE (TRC) AND E. COLI LIMITATIONS AND MONITORING REQUIREMENTS

1. If chlorine is used as the disinfection method, TRC shall be limited and monitored by the permittee as specified below:

   a. The permittee shall monitor the TRC at the outlet of the chlorine contact tank, prior to dechlorination, once per day by grab sample.

   b. No more than 3 of all samples taken at the outlet of the chlorine contact tank, prior to dechlorination, shall be less than 1.0 mg/l (DMR # 157) for any one calendar month.

   c. No TRC sample collected at the outlet of the chlorine contact tank, prior to dechlorination, shall be less than 0.60 mg/l (DMR # 213).

2. The permittee shall report *E. coli* monitoring results on the DMR as specified below:

   a. If four or more weekly samples are collected during a discharge month, report the geometric mean of the results as the average concentration. Report maximum concentration as "NR" (not required).

   b. If there are insufficient data to report a geometric mean (fewer than four weekly samples), report the largest single sample value as the maximum concentration. Report the number of samples exceeding the maximum concentration limit in the "No. Ex." Column. Report average concentration as "NR" (not required) and provide an explanation why four weekly samples were not collected.

3. If an alternative to chlorine disinfection is used, *E. coli* shall be limited and monitored by the permittee as specified in Part I.A.1 and B.2 with the exception that the monitoring frequently shall be once per week in every month there is a discharge.

C. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1. 95% Capacity Reopener

   A written notice and a **plan of action** for ensuring continued compliance with the terms of this permit shall be submitted to the DEQ Regional Office when the monthly average flow influent to the sewage treatment plant reaches 95 percent of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at the DEQ Regional Office **no later than 90 days from the third consecutive month for which the flow reached 95 percent 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. CTC, CTO Requirement

   The permittee shall, in accordance with the DEQ Sewage Collection and Treatment Regulation (9VAC25-790), obtain a Certificate to Construct (CTC), and a Certificate to Operate (CTO) from the DEQ Office of Wastewater Engineering (for Water Quality Improvement Funded (WQIF) projects) or submitted by the design engineer and owner to the DEQ regional water permit manager (for non WQIF projects) prior to constructing wastewater treatment works and operating the treatment works, respectively. Non-compliance with the CTC or CTO shall be deemed a violation of the permit.

3. Operation and Maintenance Manual Requirement

The permittee shall review the existing Operations and Maintenance (O & M) Manual and notify the DEQ Regional Office in writing within 90 days of the effective date of this permit whether 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 the DEQ Regional Office within 90 days of the effective date of this permit. The permittee will maintain an accurate, approved operation and maintenance manual for the treatment works. This manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of the permit. The permittee shall operate the treatment works in accordance with the approved O&M Manual. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

a. Techniques to be employed in the collection, preservation, and analysis of effluent and sludge samples;
b. Procedures for measuring and recording the duration and volume of treated wastewater discharged;
c. Discussion of Best Management Practices, if applicable;
d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants that will prevent these materials from reaching state waters.
e. Treatment works design, treatment works operation, routine preventative maintenance of units within the treatment system, critical spare parts inventory and record keeping; and,
f. A plan for the management and/or disposal of waste solids and residues.

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for DEQ Regional 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.

Letter/Revised Manual Due: October 30, 2011

4. Permit Reopeners

a. 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.

b. 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.

5. Licensed Wastewater Operator Requirement

No licensed wastewater works operator is required at this permitted facility.

6. Reliability Class Requirement

The permitted treatment works shall meet Reliability Class II.

7. Compliance Reporting

a. The quantification levels (QL) shall be less than or equal to the following concentrations:

Effluent Parameter	Quantification Level
Chlorine	0.10 mg/l
Ammonia	0.20 mg/l
BOD5	5.0 mg/l
TSS	1.0 mg/l

The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method. 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. The permittee shall use any method in accordance with Part II A of this permit.

b. **Monthly Average** -- Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as it is reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the Discharge Monitoring Report (DMR) as calculated. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported monthly average concentration is <QL, then report "<QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the monthly average of the calculated daily quantities.

Weekly Average -- Compliance with the weekly average limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each complete calendar week and entirely contained within the reporting month. The maximum value of the weekly averages thus determined shall be reported on the DMR. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the weekly average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported weekly average concentration is <QL, then report "<QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the maximum weekly average of the calculated daily quantities.

Daily Maximum -- Compliance with the daily maximum limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each day during the reporting month. The maximum value of these daily averages thus determined shall be reported on the DMR as the Daily Maximum. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the maximum value of the daily averages shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported daily maximum concentration is <QL, then report "<QL" for the quantity. Otherwise use the reported daily average concentrations (including the defined zeros) and corresponding daily flows to

determine daily average quantities and report the maximum of the daily average quantities during the reporting month.

Single Datum - Any single datum required shall be reported as "<QL" if it is less than the QL used for the analysis (QL must be less than or equal to the QL listed in a. above). Otherwise the numerical value shall be reported.

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

8. Effluent Monitoring Frequencies

If the facility permitted herein is issued a Notice of Violation for any of the parameters listed below, then the following effluent monitoring frequencies shall become effective upon written notice from DEQ and remain in effect until permit expiration date.

Effluent Parameter	Frequency
TSS	1/Month
BOD5	1/Month

No other effluent limitations or monitoring requirements are affected by this special condition.

9. Sludge Management Plan

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 Department of Environmental Quality 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.

10. Closure Plan

If the permittee does not intend to apply for reissuance of this permit or if any part of the facility presently permitted will not be included in a future permit application, an **approvable closure plan** shall be submitted to the DEQ regional office **90 days before the facility is taken out of service**. The closure plan shall include a plan of action and a schedule.

11. Permit Application Requirement

In accordance with Part II. M. of this permit, a new and complete permit application shall be submitted for the reissuance of this permit.

Application Due: No later than February 2, 2016

ATTACHMENT 7

EFFLUENT LIMITATIONS/MONITORING RATIONALE/SUITABLE DATA

THE EFFLUENT LIMITATIONS AND MONITORING RATIONALE ARE BASED ON THE FOLLOWING:

FLOW – The design of the facility is 0.0051 million gallons per day (MGD). The flow is estimated in MGD. The monitoring frequency is 5 days per week (to coincide with school operations). This monitoring frequency and sample type are in accordance with guidance for this size facility and should be appropriate for assessment of treatment plant capacity.

pH – The limits of 6.0 S.U. (minimum) to 9.0 S.U. (maximum) are based on technology [secondary treatment limits as per Federal effluent guidelines (40 CFR 133)], water quality standards, are carried over from the previous permit, and are protective of water quality. The monitoring frequency is 5 days per week (to coincide with school operations). The sample type is grab (required for pH). This monitoring frequency and sample type are in accordance with guidance for this size facility and should provide enough data for proper assessment of compliance with the effluent limits and water quality standards.

BOD_5 – The limits of 24 mg/l (monthly average) and 36 mg/l (weekly average) were originally based on the old septic tank/sand filter limits (best professional judgment); however, these limits in conjunction with the dissolved oxygen limit will comply with water quality standards. The mass limits of 0.46 kg/day and 0.69 kg/day, respectively, were calculated based on design flow. The monitoring frequency is once per three months, which is based on a reduced monitoring frequency granted for good plant performance during the last reissuance and carried forward. The sample type is grab (based on the design flow). This is in accordance with guidance for this size facility and should provide enough data for proper assessment of compliance with the effluent limit and water quality standards.

TSS – The limits of 30 mg/l (monthly average) and 45 mg/l (weekly average) are based on technology [secondary treatment limits as per Federal effluent guidelines (40 CFR 133)] and are protective of water quality. The mass limits of 0.58 kg/day and 0.87 kg/day, respectively, were calculated based on design flow. The monitoring frequency is once per three months which is based on a reduced monitoring frequency for good plant performance granted during the last reissuance and carried forward. The sample type is grab (based on the design flow). This monitoring frequency and sample type are in accordance with guidance for this size facility and should provide enough data for proper assessment of compliance with the effluent limit and water quality standards. Mass limits were calculated based on design flow.

DO – The dissolved oxygen limit of 5.0 mg/l (minimum) is BPJ-based and set to protect water quality standards. This level of dissolved oxygen is necessary in order to allow the BOD5 limit of 24 mg/l. The monitoring frequency is 5 days per week (to coincide with school operations). The sample type is grab (required for dissolved oxygen). This monitoring frequency and sample type are in accordance with guidance for this size facility and should provide enough data for proper assessment of compliance with the effluent limit and water quality standards.

TRC – The total residual chlorine limits of 8.3 and 11 µg/l, monthly average and weekly average, respectively are set to insure compliance with the acute water quality criterion. The sample type is grab and the monitoring frequency is 5 days per week (to coincide with school operations). This monitoring frequency and sample type are in accordance with guidance for this size facility and should provide enough data for proper assessment of compliance with the effluent limits. All internal monitoring for chlorine, after the chlorine contact tank and prior to dechlorination, is to insure adequate disinfection.

NH3-N – The ammonia-nitrogen limits were reassessed using the latest ammonia criteria, which resulted in limits of 12 mg/l (monthly average and weekly average) based on the acute water quality criterion as this is an intermittent discharge. These limits are slightly more restrictive than in the previous permit and are protective of water quality. The monitoring frequency is once per month and the sample type is grab (based on flow). This monitoring frequency and sample type are in accordance with guidance for this size facility and should provide enough data for proper assessment of compliance with the effluent limits.

***E. coli* –** A new *E. coli* monthly average limit, calculated as a geometric mean, of **126 N/100ml** or a maximum of **126 N/100 mL** has been added to the permit. Monitoring will be performed once per year. The monitoring will consist of once per week grab samples during the month monitoring occurs in order to calculate the geometric

mean. Previously DEQ has allowed chlorine disinfection monitoring requirements as a surrogate for *E. coli* monitoring. However, EPA has questioned the adequacy of surrogate parameters for demonstrating compliance with TMDL wasteload allocations. Consequently, VPDES Permit Manual (Rev. 1/27/2010) Section MN-3 B.2 requires *E. coli* limits in permits with TMDL *E. coli* allocations. The Dan River Bacteria TMDL contains the following wasteload allocations for this facility: 2.43E+7 cfu/day and 8.89E+9 cfu/year. The new *E. coli* limit is needed to demonstrate compliance with the assigned wasteload allocations. Compliance with the new *E. coli* limit of 126 cfu/100mL and with Part I.C.1 (95% Capacity Reopener) ensures compliance with the TMDL wasteload allocations because the allocations are based on the bacteria water quality criterion of 126 cfu/100mL. The bacteria water quality criteria specify a geometric mean calculated from 4 weekly samples collected during a calendar month. If four or more weekly samples cannot be collected, each sample must comply with a maximum limit of 126 cfu/100mL to demonstrate compliance with the daily WLA.

FRESHWATER
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Cluster Springs Elementary School Permit No.: VA0022705

Receiving Stream: Stokes Creek, UT Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO3) =	34.87	mg/L
90% Temperature (Annual) =	23.57	deg C
90% Temperature (Wet season) =	11.8	deg C
90% Maximum pH =	7.3	SU
10% Maximum pH =	6.3	SU
Tier Designation (1 or 2) =	1	
Public Water Supply (PWS) Y/N? =	N	
Trout Present Y/N? =	N	
Early Life Stages Present Y/N? =	Y	

Stream Flows

1Q10 (Annual) =	0	MGD
7Q10 (Annual) =	0	MGD
30Q10 (Annual) =	0	MGD
1Q10 (Wet season) =	0	MGD
30Q10 (Wet season)	0	MGD
30Q5 =	0	MGD
Harmonic Mean =	0	MGD

Mixing Information

Annual - 1Q10 Mix =	100	%
- 7Q10 Mix =	100	%
- 30Q10 Mix =	100	%
Wet Season - 1Q10 Mix =	100	%
- 30Q10 Mix =	100	%

Effluent Information

Mean Hardness (as CaCO3) =	34.87	mg/L
90% Temp (Annual) =	23.57	deg C
90% Temp (Wet season) =	11.8	deg C
90% Maximum pH =	7.3	SU
10% Maximum pH =	6.3	SU
Discharge Flow =	0.0051	MGD

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenapthene	0	--	--	na	9.9E+02	--	--	na	9.9E+02	--	--	--	--	--	--	--	--	--	--	na	9.9E+02
Acrolein	0	--	--	na	9.3E+00	--	--	na	9.3E+00	--	--	--	--	--	--	--	--	--	--	na	9.3E+00
Acrylonitrile[c]	0	--	--	na	2.5E+00	--	--	na	2.5E+00	--	--	--	--	--	--	--	--	--	--	na	2.5E+00
Aldrin [c]	0	3.0E+00	--	na	5.0E-04	3.0E+00	--	na	5.0E-04	--	--	--	--	--	--	--	--	3.0E+00	--	na	5.0E-04
Ammonia-N (mg/l) (Yearly)	0	2.62E+01	2.83E+00	na	--	2.6E+01	2.8E+00	na	--	--	--	--	--	--	--	--	--	2.6E+01	2.8E+00	na	--
Ammonia-N (mg/l) (High Flow)	0	2.62E+01	5.08E+00	na	--	2.6E+01	5.1E+00	na	--	--	--	--	--	--	--	--	--	2.6E+01	5.1E+00	na	--
Anthracene	0	--	--	na	4.0E+04	--	--	na	4.0E+04	--	--	--	--	--	--	--	--	--	--	na	4.0E+04
Antimony	0	--	--	na	6.4E+02	--	--	na	6.4E+02	--	--	--	--	--	--	--	--	--	--	na	6.4E+02
Arsenic	0	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Benzene [c]	0	--	--	na	5.1E+02	--	--	na	5.1E+02	--	--	--	--	--	--	--	--	--	--	na	5.1E+02
Benzidine[c]	0	--	--	na	2.0E-03	--	--	na	2.0E-03	--	--	--	--	--	--	--	--	--	--	na	2.0E-03
Benzo (a) anthracene [c]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (b) fluoranthene [c]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (k) fluoranthene [c]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (a) pyrene [c]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Bis2-Chloroethyl Ether[c]	0	--	--	na	5.3E+00	--	--	na	5.3E+00	--	--	--	--	--	--	--	--	--	--	na	5.3E+00
Bis2-Chloroisopropyl Ether	0	--	--	na	6.5E+04	--	--	na	6.5E+04	--	--	--	--	--	--	--	--	--	--	na	6.5E+04
Bis 2-Ethylhexyl Phthalate [c]	0	--	--	na	2.2E+01	--	--	na	2.2E+01	--	--	--	--	--	--	--	--	--	--	na	2.2E+01
Bromoform [c]	0	--	--	na	1.4E+03	--	--	na	1.4E+03	--	--	--	--	--	--	--	--	--	--	na	1.4E+03
Butylbenzylphthalate	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	--	--	--	--	--	--	--	--	na	1.9E+03
Cadmium	0	1.2E+00	5.0E-01	na	--	1.2E+00	5.0E-01	na	--	--	--	--	--	--	--	--	--	1.2E+00	5.0E-01	na	--
Carbon Tetrachloride [c]	0	--	--	na	1.6E+01	--	--	na	1.6E+01	--	--	--	--	--	--	--	--	--	--	na	1.6E+01
Chlordane [c]	0	2.4E+00	4.3E-03	na	8.1E-03	2.4E+00	4.3E-03	na	8.1E-03	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	na	8.1E-03
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	na	--
Chlorobenzene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	1.6E+03

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane[C]	0	--	--	na	1.3E+02	--	--	na	1.3E+02	--	--	--	--	--	--	--	--	--	--	na	1.3E+02
Chloroform	0	--	--	na	1.1E+04	--	--	na	1.1E+04	--	--	--	--	--	--	--	--	--	--	na	1.1E+04
2-Chloronaphthalene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	1.6E+03
2-Chlorophenol	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	--	--	na	1.5E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	--	--	--	--	--	--	--	--	8.3E-02	4.1E-02	na	--
Chromium III	0	2.4E+02	3.1E+01	na	--	2.4E+02	3.1E+01	na	--	--	--	--	--	--	--	--	--	2.4E+02	3.1E+01	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.6E+01	1.1E+01	na	--
Chromium, Total	0	--	--	1.0E+02	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Chrysene [C]	0	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	--	--	--	--	--	--	--	--	na	1.8E-02
Copper	0	5.0E+00	3.6E+00	na	--	5.0E+00	3.6E+00	na	--	--	--	--	--	--	--	--	--	5.0E+00	3.6E+00	na	--
Cyanide, Free	0	2.2E+01	5.2E+00	na	1.6E+04	2.2E+01	5.2E+00	na	1.6E+04	--	--	--	--	--	--	--	--	2.2E+01	5.2E+00	na	1.6E+04
DDD [C]	0	--	--	na	3.1E-03	--	--	na	3.1E-03	--	--	--	--	--	--	--	--	--	--	na	3.1E-03
DDE [C]	0	--	--	na	2.2E-03	--	--	na	2.2E-03	--	--	--	--	--	--	--	--	--	--	na	2.2E-03
DDT [C]	0	1.1E+00	1.0E-03	na	2.2E-03	1.1E+00	1.0E-03	na	2.2E-03	--	--	--	--	--	--	--	--	1.1E+00	1.0E-03	na	2.2E-03
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Diazinon	0	1.7E-01	1.7E-01	na	--	1.7E-01	1.7E-01	na	--	--	--	--	--	--	--	--	--	1.7E-01	1.7E-01	na	--
Dibenz(a,h)anthracene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
1,2-Dichlorobenzene	0	--	--	na	1.3E+03	--	--	na	1.3E+03	--	--	--	--	--	--	--	--	--	--	na	1.3E+03
1,3-Dichlorobenzene	0	--	--	na	9.6E+02	--	--	na	9.6E+02	--	--	--	--	--	--	--	--	--	--	na	9.6E+02
1,4-Dichlorobenzene	0	--	--	na	1.9E+02	--	--	na	1.9E+02	--	--	--	--	--	--	--	--	--	--	na	1.9E+02
3,3-Dichlorobenzidine[C]	0	--	--	na	2.8E-01	--	--	na	2.8E-01	--	--	--	--	--	--	--	--	--	--	na	2.8E-01
Dichlorobromomethane [C]	0	--	--	na	1.7E+02	--	--	na	1.7E+02	--	--	--	--	--	--	--	--	--	--	na	1.7E+02
1,2-Dichloroethane [C]	0	--	--	na	3.7E+02	--	--	na	3.7E+02	--	--	--	--	--	--	--	--	--	--	na	3.7E+02
1,1-Dichloroethylene	0	--	--	na	7.1E+03	--	--	na	7.1E+03	--	--	--	--	--	--	--	--	--	--	na	7.1E+03
1,2-trans-dichloroethylene	0	--	--	na	1.0E+04	--	--	na	1.0E+04	--	--	--	--	--	--	--	--	--	--	na	1.0E+04
2,4-Dichlorophenol	0	--	--	na	2.9E+02	--	--	na	2.9E+02	--	--	--	--	--	--	--	--	--	--	na	2.9E+02
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,2-Dichloropropane[C]	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	--	--	na	1.5E+02
1,3-Dichloropropene [C]	0	--	--	na	2.1E+02	--	--	na	2.1E+02	--	--	--	--	--	--	--	--	--	--	na	2.1E+02
Dieldrin [C]	0	2.4E-01	5.6E-02	na	5.4E-04	2.4E-01	5.6E-02	na	5.4E-04	--	--	--	--	--	--	--	--	2.4E-01	5.6E-02	na	5.4E-04
Diethyl Phthalate	0	--	--	na	4.4E+04	--	--	na	4.4E+04	--	--	--	--	--	--	--	--	--	--	na	4.4E+04
2,4-Dimethylphenol	0	--	--	na	8.5E+02	--	--	na	8.5E+02	--	--	--	--	--	--	--	--	--	--	na	8.5E+02
Dimethyl Phthalate	0	--	--	na	1.1E+06	--	--	na	1.1E+06	--	--	--	--	--	--	--	--	--	--	na	1.1E+06
Di-n-Butyl Phthalate	0	--	--	na	4.5E+03	--	--	na	4.5E+03	--	--	--	--	--	--	--	--	--	--	na	4.5E+03
2,4 Dinitrophenol	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	5.3E+03
2-Methyl-4,6-Dinitrophenol	0	--	--	na	2.8E+02	--	--	na	2.8E+02	--	--	--	--	--	--	--	--	--	--	na	2.8E+02
2,4-Dinitrotoluene [C]	0	--	--	na	3.4E+01	--	--	na	3.4E+01	--	--	--	--	--	--	--	--	--	--	na	3.4E+01
Dioxin 2,3,7,8-tetrachlorodibenzo-p-dioxin	0	--	--	na	5.1E-08	--	--	na	5.1E-08	--	--	--	--	--	--	--	--	--	--	na	5.1E-08
1,2-Diphenylhydrazine[C]	0	--	--	na	2.0E+00	--	--	na	2.0E+00	--	--	--	--	--	--	--	--	--	--	na	2.0E+00
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	8.9E+01
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	8.9E+01
Alpha + Beta Endosulfan	0	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	--	--
Endosulfan Sulfate	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	--	--	na	8.9E+01
Endrin	0	8.6E-02	3.6E-02	na	6.0E-02	8.6E-02	3.6E-02	na	6.0E-02	--	--	--	--	--	--	--	--	8.6E-02	3.6E-02	na	6.0E-02
Endrin Aldehyde	0	--	--	na	3.0E-01	--	--	na	3.0E-01	--	--	--	--	--	--	--	--	--	--	na	3.0E-01

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.1E+03	--	--	na	2.1E+03	--	--	--	--	--	--	--	--	--	--	na	2.1E+03
Fluoranthene	0	--	--	na	1.4E+02	--	--	na	1.4E+02	--	--	--	--	--	--	--	--	--	--	na	1.4E+02
Fluorene	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	5.3E+03
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	1.0E-02	na	--
Heptachlor [c]	0	5.2E-01	3.8E-03	na	7.9E-04	5.2E-01	3.8E-03	na	7.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	7.9E-04
Heptachlor Epoxide[c]	0	5.2E-01	3.8E-03	na	3.9E-04	5.2E-01	3.8E-03	na	3.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	3.9E-04
Hexachlorobenzene[c]	0	--	--	na	2.9E-03	--	--	na	2.9E-03	--	--	--	--	--	--	--	--	--	--	na	2.9E-03
Hexachlorobutadiene[c]	0	--	--	na	1.8E+02	--	--	na	1.8E+02	--	--	--	--	--	--	--	--	--	--	na	1.8E+02
Hexachlorocyclohexane Alpha-BHC[c]	0	--	--	na	4.9E-02	--	--	na	4.9E-02	--	--	--	--	--	--	--	--	--	--	na	4.9E-02
Hexachlorocyclohexane Beta-BHC[c]	0	--	--	na	1.7E-01	--	--	na	1.7E-01	--	--	--	--	--	--	--	--	--	--	na	1.7E-01
Hexachlorocyclohexane Gamma-BHC[c] (Lindane)	0	9.5E-01	na	na	1.8E+00	9.5E-01	--	na	1.8E+00	--	--	--	--	--	--	--	--	9.5E-01	--	na	1.8E+00
Hexachlorocyclopentadiene	0	--	--	na	1.1E+03	--	--	na	1.1E+03	--	--	--	--	--	--	--	--	--	--	na	1.1E+03
Hexachloroethane[c]	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	--	--	na	3.3E+01
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	2.0E+00	na	--
Indeno (1,2,3-cd) pyrene [c]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Iron	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Isophorone[c]	0	--	--	na	9.6E+03	--	--	na	9.6E+03	--	--	--	--	--	--	--	--	--	--	na	9.6E+03
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Lead	0	3.1E+01	3.5E+00	na	--	3.1E+01	3.5E+00	na	--	--	--	--	--	--	--	--	--	3.1E+01	3.5E+00	na	--
Malathion	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	--	--	1.4E+00	7.7E-01	--	--	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	--	--
Methyl Bromide	0	--	--	na	1.5E+03	--	--	na	1.5E+03	--	--	--	--	--	--	--	--	--	--	na	1.5E+03
Methylene Chloride [c]	0	--	--	na	5.9E+03	--	--	na	5.9E+03	--	--	--	--	--	--	--	--	--	--	na	5.9E+03
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	3.0E-02	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Nickel	0	7.5E+01	8.3E+00	na	4.6E+03	7.5E+01	8.3E+00	na	4.6E+03	--	--	--	--	--	--	--	--	7.5E+01	8.3E+00	na	4.6E+03
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Nitrobenzene	0	--	--	na	6.9E+02	--	--	na	6.9E+02	--	--	--	--	--	--	--	--	--	--	na	6.9E+02
N-Nitrosodimethylamine[c]	0	--	--	na	3.0E+01	--	--	na	3.0E+01	--	--	--	--	--	--	--	--	--	--	na	3.0E+01
N-Nitrosodiphenylamine[c]	0	--	--	na	6.0E+01	--	--	na	6.0E+01	--	--	--	--	--	--	--	--	--	--	na	6.0E+01
N-Nitrosodi-n-propylamine[c]	0	--	--	na	5.1E+00	--	--	na	5.1E+00	--	--	--	--	--	--	--	--	--	--	na	5.1E+00
Nonylphenol	0	2.8E+01	6.6E+00	--	--	2.8E+01	6.6E+00	na	--	--	--	--	--	--	--	--	--	2.8E+01	6.6E+00	na	--
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	na	--
PCB Total[c]	0	--	1.4E-02	na	6.4E-04	--	1.4E-02	na	6.4E-04	--	--	--	--	--	--	--	--	--	1.4E-02	na	6.4E-04
Pentachlorophenol [c]	0	4.3E+00	3.3E+00	na	3.0E+01	4.3E+00	3.3E+00	na	3.0E+01	--	--	--	--	--	--	--	--	4.3E+00	3.3E+00	na	3.0E+01
Phenol	0	--	--	na	8.6E+05	--	--	na	8.6E+05	--	--	--	--	--	--	--	--	--	--	na	8.6E+05
Pyrene	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	--	--	--	--	--	--	--	--	na	4.0E+03
Radionuclides	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Gross Alpha Activity (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Beta and Photon Activity (mrem/yr)	0	--	--	na	4.0E+00	--	--	na	4.0E+00	--	--	--	--	--	--	--	--	--	--	na	4.0E+00
Radium 226 + 228 (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Uranium (ug/l)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				**Most Limiting Allocations**			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	**Acute**	**Chronic**	**HH (PWS)**	**HH**
Selenium, Total Recoverable	0	2.0E+01	5.0E+00	na	4.2E+03	2.0E+01	5.0E+00	na	4.2E+03	--	--	--	--	--	--	--	--	**2.0E+01**	**5.0E+00**	**na**	**4.2E+03**
Silver	0	5.6E-01	--	na	--	5.6E-01	--	na	--	--	--	--	--	--	--	--	--	**5.6E-01**	**--**	**na**	**--**
Sulfate	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
1,1,2,2-Tetrachloroethane[C]	0	--	--	na	4.0E+01	--	--	na	4.0E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**4.0E+01**
Tetrachloroethylene[C]	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**3.3E+01**
Thallium	0	--	--	na	4.7E-01	--	--	na	4.7E-01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**4.7E-01**
Toluene	0	--	--	na	6.0E+03	--	--	na	6.0E+03	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**6.0E+03**
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
Toxaphene [C]	0	7.3E-01	2.0E-04	na	2.8E-03	7.3E-01	2.0E-04	na	2.8E-03	--	--	--	--	--	--	--	--	**7.3E-01**	**2.0E-04**	**na**	**2.8E-03**
Tributyltin	0	4.6E-01	7.2E-02	na	--	4.6E-01	7.2E-02	na	--	--	--	--	--	--	--	--	--	**4.6E-01**	**7.2E-02**	**na**	**--**
1,2,4-Trichlorobenzene	0	--	--	na	7.0E+01	--	--	na	7.0E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**7.0E+01**
1,1,2-Trichloroethane[C]	0	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.6E+02**
Trichloroethylene [C]	0	--	--	na	3.0E+02	--	--	na	3.0E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**3.0E+02**
2,4,6-Trichlorophenol [C]	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.4E+01**
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
Vinyl Chloride[C]	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.4E+01**
Zinc	0	4.8E+01	4.8E+01	na	2.6E+04	4.8E+01	4.8E+01	na	2.6E+04	--	--	--	--	--	--	--	--	**4.8E+01**	**4.8E+01**	**na**	**2.6E+04**

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
   Antidegradation WLAs are based upon a complete mix.
6. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
7. WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens and Harmonic Mean for Carcinogens. To apply mixing ratios from a model set the stream flow equal to (mixing ratio - 1), effluent flow equal to 1 and 100% mix.

Metal	Target Value (SSTV)
Antimony	6.4E+02
Arsenic	9.0E+01
Barium	na
Cadmium	3.0E-01
Chromium III	1.9E+01
Chromium VI	6.4E+00
Copper	2.0E+00
Iron	na
Lead	2.1E+00
Manganese	na
Mercury	4.6E-01
Nickel	5.0E+00
Selenium	3.0E+00
Silver	2.3E-01
Zinc	1.9E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

4/26/2011 4:00:38 PM

Facility = Cluster Springs Elementary School
Chemical = Ammonia
Chronic averaging period = 30
WLAa = 26
WLAc =
Q.L. = .2
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 9
Variance = 29.16
C.V. = 0.6
97th percentile daily values = 21.9007
97th percentile 4 day average = 14.9741
97th percentile 30 day average= 10.8544
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

9

4/26/2011 4:13:22 PM

Facility = Cluster Springs Elementary School
Chemical = Chlorine
Chronic averaging period = 4
WLAa = 19
WLAc =
Q.L. = 100
# samples/mo. = 20
# samples/wk. = 5

Summary of Statistics:

observations = 1
Expected Value = 1000
Variance = 360000
C.V. = 0.6
97th percentile daily values = 2433.41
97th percentile 4 day average = 1663.79
97th percentile 30 day average= 1206.05
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 19
Average Weekly limit = 12.3834080752271
Average Monthly LImit = 9.77838359349854

The data are:

1000

ATTACHMENT 8

SPECIAL CONDITIONS RATIONALE

B. ADDITIONAL TOTAL RESIDUAL CHLORINE AND E. COLI (TRC) LIMITATIONS AND MONITORING REQUIREMENTS

Rationale: Required by Sewage Collection and Treatment Regulations, 9VAC25-790. Also, 40 CFR 122.41(e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment in order to comply with the permit. This ensures proper operation of chlorination equipment to maintain adequate disinfection. 9 VAC 25-260-170 establishes bacteria water quality standards. The standards set bacteria monitoring requirements. This is needed to describe requirements for when there is insufficient data (four weekly samples) to calculate a monthly geometric mean.

C. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1. 95% Capacity Reopener

Rationale: Required by VPDES Permit Regulation, 9VAC25-31-200 B 4 for all POTW and PVOTW permits.

2. CTC, CTO Requirement

Rationale: Required by Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790.

3. Operations & Maintenance (O&M) Manual Requirement

Rationale: Required by Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790; VPDES Permit Regulation, 9VAC25-31-190 E.

4. Permit Reopeners

a. Sludge Reopener

Rationale: Required by VPDES Permit Regulation, 9VAC25-31-220 C for all permits issued to treatment works treating domestic sewage.

b. Total Maximum Daily Load (TMDL) Reopener

Rationale: Section 303(d) of the Clean Water Act requires that total maximum daily loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The re-opener recognizes that, according to section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act.

5. Licensed Wastewater Operator Requirement

Rationale: The VPDES Permit Regulation, 9VAC25-31-200 C and the Code of Virginia § 54.1-2300 et seq, Rules and Regulations for Waterworks and Wastewater Works Operators (18VAC160-20-10 et seq.), require licensure of operators.

6. Reliability Class

Rationale: Required by Sewage Collection and Treatment Regulations, 9VAC25-790 for all municipal facilities.

7. Compliance Reporting

Rationale: Authorized by the VPDES Permit Regulation, 9 VAC 25-31-190 J.4. and 220 I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.

8. Effluent Monitoring Frequencies

Rationale: Permittees are granted a reduction in monitoring frequency based on a history of permit compliance. To remain eligible for the reduction, the permittee should not have violations related to the effluent limits for which reduced frequencies were granted. If permittees fail to maintain the previous level of performance, the baseline monitoring frequencies should be reinstated for those parameters that were previously granted a monitoring frequency reduction.

9. Sludge Management Plan

Rationale: VPDES Permit Regulation, 9VAC25-31-100 P; 220 B 2; and 420 through 720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on sludge use and disposal practices and to meet specified standards for sludge use and disposal.

10. Closure Plan

Rationale: Required by Code of Virginia § 62.1.-44.18:3 and the Board's Financial Assurance Regulation, 9VAC25-650-10 et seq.

11. Permit Application Requirement

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-100 D. and 40 CFR 122.21 (d)(1) require a new application at least 180 days prior to expiration of the existing permit. In addition, the VPDES Permit Regulation, 9 VAC 25-31-100 E.1. and 40 CFR 122.21 (e)(1) note that a permit shall not be issued before receiving a complete application.

Part II CONDITIONS APPLICABLE TO ALL VPDES PERMITS

Rationale: VPDES Permit Regulation, 9VAC25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.

ATTACHMENT 9

RECEIVING WATERS INFO./STORET DATA

Planning Statement for VPDES Permit Application Processing DEQ-SCRO

VPDES	OwnerName	Facility	County
VA0022705	Halifax County Public Schools	Cluster Springs Elementary School	Halifax

Outfall #: 001

River Basin: Roanoke **Receiving Stream:** Stokes Creek, UT

Subbasin: Lower Dan/Banister

Watershed Code: L64 **River Mile:** 0.6

	MGD		MGD
1Q10	0	**HF 1Q10**	0
7Q10	0	**HF7Q10**	0
30Q5	0	**HF30Q10**	0
30Q10	0	**HM**	0

Modeling Notes

WQMP Name No Plan

Statement

TMDL ID None

Impairment Cause

TMDL Due Date

Completed TMDL Information

Dan River Bacteria TMDL

TMDL Approval Dates 12/08/2008, 04/28/2009

8/4/16

Amanda B. Gray, Water Planning Engineer or Paula Nash, TMDL Coordinator **Date**

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
South Central Regional Office - Water Planning
7705 Timberlake Road Lynchburg, VA 24502 434/582-5120

SUBJECT: Flow Frequency Determination
Cluster Springs Elementary School - #VA0022705

TO: Frank Bowman

FROM: Amanda Gray abg

DATE: August 4, 2010

COPIES: File

The Cluster Springs Elementary School discharges to an unnamed tributary of Stokes Creek in Halifax County, Virginia. Flow frequencies are required at this site for use by the permit writer in developing the VPDES permit.

The flow frequencies for the receiving stream were determined by inspection of the USGS Quadrangle topographic map. The map depicts the stream as intermittent. The flow frequencies for intermittent streams are 0.0 cfs for the 1Q10, 7Q10, 30Q5, 30Q10, HF1Q10, HF7Q10, HF30Q10 and harmonic mean.

If you have any questions regarding this analysis please feel free to contact me.

MEMORANDUM
Department of Environmental Quality
Blue Ridge Regional Office-Lynchburg

7705 Timberlake Road **Lynchburg, Virginia 24502**

Subject: Planning and TMDL Service Requests for VPDES Permits

To: Amanda Gray, Water Planning Engineer to
Paula Nash, TMDL Coordinator

From: Frank Bowman

Date: August 3, 2010

Copies: Planning File

The request for information is to be made at the following times:

Planning: Upon sending the reissuance reminder letter to the facility or, for an issuance or modification, at the time of application/modification request receipt.

TMDL: Same as above. For VPDES general permits, at the time of registration statement receipt.

FACILITY NAME: South of Dan Cluster Springs Elementary School

VPDES PERMIT NO. VA0022705 EXPIRATION DATE: July 31, 2011

FACILITY PHYSICAL LOCATION: 1011 Cluster Springs Elementary Road, Halifax, VA

INDIVIDUAL PERMIT ACTION: Issuance **Reissuance** Modification

GENERAL PERMIT ACTION: New Coverage Previously Covered

PERMIT TYPE: Major **Minor** General **Municipal** Industrial Storm Water TMP TRE

If a VPDES General Permit, which type: _____

PERMIT WRITERS: ATTACH THE FOLLOWING

- **Topo map with facility location and outfall locations clearly marked (include any proposed outfalls)**
- **Site diagram for facilities with multiple outfalls**
- **Description or map showing effluent flow path if not apparent on topo map**
- **The outfall numbers, latitude, longitude, receiving stream and topo name in the table below (use an additional sheet if there are more outfalls)**

Outfall No.	Latitude	Longitude	Receiving Stream	Topo Name
001	36° 37' 40"	18 79° 54' 46"	Stokes Creek, UT	South Boston

DATE INFORMATION NEEDED: February 1, 2011

ATTACHMENT 10

303(d) LISTED SEGMENTS

Bacteria TMDL Development for the Dan River, Blackberry Creek, Byrds Branch, Double Creek, Fall Creek, Leatherwood Creek, Marrowbone Creek, North Fork Mayo River, South Fork Mayo River, Smith River, Sandy Creek, and Sandy River Watersheds

Submitted by

Virginia Department of Environmental Quality

Prepared by

GEORGE MASON UNIVERSITY

and

THE Louis Berger Group, INC.
2445 M Street, NW Washington, DC 20037

April 2008

percent of days the 126 cfu/100ml *E. coli* geometric mean water quality standard and the 235 cfu/100ml *E. coli* instantaneous water quality standard were violated under each scenario are presented.

5.6 Dan River (VAC-L60R-01) TMDL

5.6.1 Dan River Waste load Allocation

There are 33 facilities discharging bacteria to Dan River. These facilities do not have a permit limit for bacteria. For this TMDL, the waste load allocation for such facilities is to maintain discharge at the design flow limits and bacteria concentrations at the existing *E. coli* standard of 126 cfu/100mL. **Table 5-2** shows the loading from the permitted point source dischargers in Dan River. To account for future growth, the WLA was developed using 5 times the original allocation.

Table 5-2: Dan River Waste load Allocation for *E. coli*

Point Source	Existing Load (cfu/day)	Allocated Load (cfu/day)	Allocated Load (cfu/year)	Percent Reduction
VA0020362	9.55E+09	9.55E+09	3.48E+12	0%
VA0022705	2.43E+07	2.43E+07	8.89E+09	0%
VAG402052	2.15E+06	2.15E+06	7.84E+08	0%
VAG404018	2.15E+06	2.15E+06	7.84E+08	0%
VAG404039	2.15E+06	2.15E+06	7.84E+08	0%
VAG404043	2.15E+06	2.15E+06	7.84E+08	0%
VAG404067	1.43E+06	1.43E+06	5.23E+08	0%
VAG404095	4.77E+06	4.77E+06	1.74E+09	0%
VAG404104	4.77E+06	4.77E+06	1.74E+09	0%
VAG404108	4.77E+06	4.77E+06	1.74E+09	0%
VAG404112	4.77E+06	4.77E+06	1.74E+09	0%
VAG404119	4.77E+06	4.77E+06	1.74E+09	0%
VAG404121	2.15E+06	2.15E+06	7.84E+08	0%
VAG404123	1.43E+06	1.43E+06	5.23E+08	0%
VAG404127	4.77E+06	4.77E+06	1.74E+09	0%
VAG404138	2.15E+06	2.15E+06	7.84E+08	0%
VAG404160	2.15E+06	2.15E+06	7.84E+08	0%
VAG404163	4.77E+06	4.77E+06	1.74E+09	0%
VAG404173	2.15E+06	2.15E+06	7.84E+08	0%
VAG404195	4.30E+06	4.30E+06	1.57E+09	0%
VAG407197	4.77E+06	4.77E+06	1.74E+09	0%
VAG407218	2.15E+06	2.15E+06	7.84E+08	0%
VAG407220	4.77E+06	4.77E+06	1.74E+09	0%
VAG407223	2.15E+06	2.15E+06	7.84E+08	0%

ATTACHMENT 11

TABLE A AND TABLE B - CHANGE SHEETS

TABLE A

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes FROM PREVIOUS PERMIT and give a brief rationale for the changes).

OUTFALL NUMBER	PARAMETER	MONITORING CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
001	E. coli – monthly avg (geometric mean)	None to 1/Yr	None to 126 N/100 mL	Monitoring is required to demonstrate compliance with (*anticipated*) TMDL wasteload allocations.	6/21/11, GFB
001	E. coli – max weekly	None to 1/Yr	None to 126 N/100 mL	Monitoring is required to demonstrate compliance with (*anticipated*) TMDL wasteload allocations.	6/21/11, GFB

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
Indirect Dischargers and Materials Handling and Storage Conditions	Deleted	6/21/11, GFB

TABLE B

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes MADE DURING PERMIT PROCESS and give a brief rationale for the changes).

NOTE: INCLUDE ONLY CHANGES MADE DUE TO OUTSIDE COMMENTS (OWNER, EPA, PUBLIC, ETC.). LEAVE THIS TABLE OUT IF THERE ARE NO SUCH CHANGES.

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
001					

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL

ATTACHMENT 12

EPA/VIRGINIA DRAFT PERMIT SUBMISSION CHECKLIST

Part I. Virginia Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name:	Cluster Springs Early Learning Center
NPDES Permit Number:	VA0022705
Permit Writer Name:	Frank Bowman
Date:	June 3, 2011

Major [ ] **Minor** [x] **Industrial** [ ] **Municipal** [x]

I.A. Draft Permit Package Submittal Includes:	**Yes**	**No**	**N/A**
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?	X		
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?			X
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?		X	
8. Whole Effluent Toxicity Test summary and analysis?			X
9. Permit Rating Sheet for new or modified industrial facilities?			X

I.B. Permit/Facility Characteristics	**Yes**	**No**	**N/A**
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet **or** permit contain a description of the wastewater treatment process?	X		
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	

I.B. Permit/Facility Characteristics – cont.	Yes	No	N/A
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet **or** permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?		X	
8.a. Has a TMDL been developed and approved by EPA for the impaired water?			X
8.b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?			X
8.c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?			X
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?		X	
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?		X	
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Does the permit include appropriate Pretreatment Program requirements?			X
18. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
19. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
20. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
21. Has previous permit, application, and fact sheet been examined?	X		

Part II NPDES Draft Permit Checklist
Region III NPDES Permit Quality Checklist – for POTWs
(To be completed and included in the record only for POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet **or** permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a Comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the record discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			X

II.C. Technology-Based Effluent Limits (POTWs)	Yes	No	N/A
1. Does the permit contain numeric limits for ALL of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS and pH?	X		
2. Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133?	X		
2.a. If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved?			X
3. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	X		
4. Are permit limits for BOD and TSS expressed in terms of both long-term (e.g., average monthly) and short term (e.g., average weekly) limits?	X		
5. Are any concentration limitations in the permit less stringent than the Secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average?		X	
5.a. If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?			X

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering state narrative and numeric criteria for water quality?	X		
2. Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL?			X

II.D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?	X		
4.a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	X		
4.b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			X
4.c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?	X		
4.d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?			X
4.e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?	X		
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established?		X	
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the record indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	X		

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?	X		
1.a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate his waiver?			X
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?		X	
4. Does the permit require testing for Whole Effluent Toxicity?		X	

II.F. Special Conditions	Yes	No	N/A
1. Does the permit include appropriate biosolids use/disposal requirements?	X		

II.F. Special Conditions – cont.	Yes	No	N/A
2. Does the permit include appropriate storm water program requirements?			X
3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			X
5. Does the permit authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]?		X	
5.a. Does the permit require implementation of the "Nine Minimum Controls"?			X
5.b. Does the permit require development and implementation of a "Long Term Control Plan"?			X
5.c. Does the permit require monitoring and reporting for CSO events?			X
6. Does the permit include appropriate Pretreatment Program requirements?			X

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		
List of Standard Conditions – 40 CFR 122.41 • Duty to comply • Duty to reapply • Need to halt or reduce activity not a defense • Duty to mitigate • Proper O & M • Permit Actions • Property rights • Duty to provide information • Inspections and entry • Monitoring and reporting • Signatory requirement • Reporting requirements Planned change Anticipated non-compliance Transfers Monitoring Reports Compliance schedules 24-hour reporting Other non-compliance • Bypass • Upset			
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]?	X		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	Frank Bowman
Title	Environmental Engineer
Signature	Frank Bowman
Date	June 3, 2011

ATTACHMENT 13

CHRONOLOGY SHEET

CHRONOLOGY OF EVENTS

APPLICATION RECEIVED	APPLICATION RETURNED	ADDITIONAL INFO REQUESTED	APPLICATION/ADD INFO DUE BACK IN RO	APPLICATION/ADD. INFO RECEIVED
January 31, 2011				

APPLICATION TO VDH: February 1, 2011	VDH COMMENTS RECEIVED: February 4, 2011
APPLICATION ADMIN. COMPLETE: January 31, 2011	APPLICATION TECH. COMPLETE: April 25, 2011

Date	DESCRIPTIVE STATEMENT [CHRONOLOGY OF EVENTS] (Meetings, telephone calls, letters, memos, hearings, etc. affecting permit from application to issuance)
8/2/10	Reissuance letter sent to owner
1/31/11	4 copies of permit application received
2/9/11	Application administratively complete letter sent
6/3/11	Draft permit/FS sent for review