ATTACHMENT 9

MATERIAL STORED

6. Identify the characteristics of the receiving stream at the point just above the facility's discharge point:

   ✓ Permanent stream, never dry
   _____ Intermittent stream, usually flowing, sometimes dry
   _____ Ephemeral stream, wet-weather flow, often dry
   _____ Effluent-dependent stream, usually or always dry
   _____ Lake or pond at or below the discharge point
   _____ Other: _____

D. Anticipated Phasing Schedule for Plant Capacity – Proposed/Expanding Discharges

N/A

If this application is for a proposed or expanded discharge(s), complete the phasing schedule below beginning with the year in which construction completion is anticipated and progressing in increments of 5 years for 30 years thereafter.

Proposed Design Capacity: _____ MGD

Anticipated Date of Construction Completion: _____ Month/Year

Years after Completion	Projected Flow (MGD)
0	
5	
10	
15	
20	
25	
30	

E. Interim Facilities

N/A

Are the wastewater treatment facilities interim? (Designed for a useful life of less than 5 years) Y / N

If "Yes," provide the estimated date to be discontinued (month,year) _____, and the name and location of the intended replacement facility.

_____

F. List of Materials Stored at Facility (i.e, chemicals, petroleum products)

Material	Amount (monthly avg)	Stored Location
Chlorine	3 tons	Chlorine Room
Sulfur Dioxide	3 tons	SO_2 Room
Motor Oil	10 QTS.	Compressor bldg.
EP02 Grease	80 lbs.	" "

ATTACHMENT 10

RECEIVING WATERS INFO./
TIER DETERMINATION/STORET DATA

Appomattox River
Sta. Id 2-APP110.93
RT.45 BRIDGE AT FARMVILLE (CO. OF PRINCE

Collection Date Time	Temp Celcius °C	Field Ph
09/29/04	19.1	7.02
08/17/04	22.26	7.24
07/08/04	24.98	7.38
05/05/04	15.51	7.08
03/09/04	9.39	7.06
01/05/04	11.6	7.47
11/12/03	12.17	7.1
10/21/03	14.58	7.4
09/24/03	19.73	6.41
09/04/03	23.33	7.08
08/26/03	23.67	7.27
07/15/03	23.6	7.11
07/10/03	23.96	7.03
06/24/03	21.07	6.89
06/02/03	16.51	6.74
05/27/03	17.03	6.52
05/05/03	15.7	6.95
04/17/03	18.07	6.96
03/19/03	12.65	6.96
02/12/03	3.63	6.34
01/22/03	0.51	7.09
12/17/02	3.31	6.49
11/19/02	8.9	6.95
10/22/02	13.2	7.14
08/01/02	25.87	7.31
06/03/02	22.89	7.24
04/16/02	20.62	7.07
02/20/02	5.57	7.25
12/03/01	8.72	7.14
10/17/01	12.22	7.13
08/08/01	25.15	6.91
06/07/90	19.8	7.79
05/03/90	18.2	7.53
04/04/90	10	7.68
03/01/90	6.4	6.95
02/05/90	7.9	7.4
01/03/90	3.1	8.16

Statistics:

pH 90% =	7.494
pH 10%=	6.652
Annual Temp. 90%=	23.786
Annual Temp. 10%=	4.794
Wet Season Temp. 90% Dec.-April=	16.444

WET Season Temp.Dec.-April

03/09/04	9.39
01/05/04	11.6
04/17/03	18.07
03/19/03	12.65
02/12/03	3.63
01/22/03	0.51
12/17/02	3.31
04/16/02	20.62
02/20/02	5.57
12/03/01	8.72
04/04/90	10
03/01/90	6.4
02/05/90	7.9
01/03/90	3.1

Ambient Station 2-APP110.93 (Rt. 45 Bridge @ Farmville)

Hardness (mg/l $CaCO_3$)
30
30
26
32
34
22.4
19.1
24.2
36
32.7
31.9
48.7
32.2
24
30.5
34.1
26.5

Average Hardness	30.25294118

NOTE: Ambient Hardness Data 1990 - 12/09

Planning Statement for VPDES Permit Application Processing
DEQ-SCRO

VPDES	OwnerName	Facility	County
VA0083135	Farmville, Town of	Municipal STP	Prince Edward

Outfall #: 001

River Basin: James **Receiving Stream:** Appomattox River

Subbasin: Upper Appomattox

Watershed Code: J01R **River Mile:** 110.21

	MGD		MGD
1Q10	9.69	**HF 1Q10**	38.13
7Q10	12.28	**HF7Q10**	47.18
30Q5	25.85	**HF30Q10**	66.57
30Q10	18.1	**HM**	50.41

Modeling Notes

WQMP Name 9 VAC 25-720-60

Statement Wasteload Allocation - 220 BOD5 lbs/day

TMDL ID J01R-01-BAC

Impairment Cause Bacteria

TMDL Due Date 2004

Completed TMDL Information

Appomattox River Basin TMDL

TMDL Approval Dates EPA - 8/30/04 & SWCB - 12/20/05

Amanda B. Gray 2/24/09

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

MEMORANDUM

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

SUBJECT: Flow Frequency Determination
Farmville STP – VA#0083135

TO: Kirk Batsel

FROM: Amanda Gray *abg*

DATE: February 23, 2009

COPIES: File

This memo supersedes my August 25, 2004 memo concerning the subject VPDES permit.

The Farmville STP discharges to the Appomattox River in Farmville, VA. Stream flow frequencies are required at this site for use by the permit writer in developing effluent limitations for the VPDES permit.

The VDEQ has operated a continuous record gage on the Appomattox River at Farmville, VA (#02039500) since 1926. The gage is approximately 350 yards upstream of the discharge point. The flow frequencies for the gage represent the flows expected at the discharge point and do not address any withdrawals, discharges, or springs lying between the gage and the discharge point.

Appomattox River at Farmville, VA (#02039500):
Drainage Area: 303 mi^2

1Q10 = 15 cfs (9.69 MGD)	High Flow 1Q10 = 59 cfs (38.13 MGD)
7Q10 = 19 cfs (12.28 MGD)	High Flow 7Q10 = 73 cfs (47.18 MGD)
30Q5 = 40 cfs (25.85 MGD)	High Flow 30Q10 = 103 cfs (66.57 MGD)
30Q10 = 28 cfs (18.1 MGD)	Harmonic Mean = 78 cfs (50.41 MGD)

The high flow months are December through April. If there are any questions concerning this analysis, please let me know.

BOD5 lbs/day

					Total Assimilative	WLA	Reserve
Rivanna River	2-10	E.L.	15.0-0.0	Palmyra	250.0	4.0	158.0 (63%)
				Schwarzenbach Huber		88.0[3]	
Unnamed Tributary of Whispering Creek	2-6	E.L.	1.2-00	Dillwyn STP	38.0	30.0	8.0 (21%)
South Fork Appomattox River	2-17	E.L.	5.5-0.0	Appomattox Lagoon	18.8	15.0	3.8 (20%)
Unnamed Tributary of Buffalo Creek	2-19	W.Q.	1.3-0.0	Hampden-Sydney Coll. STP	10.0	8.0	2.0 (20%)
Appomattox River	2-17	E.L.	106.1-88.0	Farmville STP	280.0	220.0	60.0 (21%)
Unnamed Tributary of Little Guinea Creek	2-17	E.L.	2.5-1.3	Cumberland H.S. Lagoon	0.6	0.5	0.1 (20%)
Unnamed Tributary of Tear Wallet Creek	2-17	E.L.	0.68-0.0	Cumberland Courthouse	8.8	7.0	1.8 (20%)
Courthouse Branch	2-22	W.Q.	2.2-0.0	Amelia STP	21.0	17.0	4.0 (20%)
Unnamed Tributary of Deep Creek	2-22	W.Q.	2.2-0.0	Crewe STP	50.3[11,12]	50.1[11,12]	0.2 (0.4%)[11,12,13]

[1] Recommended classification.

[2] Based on 2020 loads or stream assimilative capacity less 20%.

[3] Load allocation based on published NPDES permits.

[4] This assimilative capacity is based upon an ammonia loading no greater than 125.1 lbs/day.

[5] Percentages refer to reserve as percent of total assimilative capacity. Minimum reserve for future growth and modeling accuracy is 20% unless otherwise noted.

[6] No NPDES Permits published (BPT not established) allocation base on maximum value monitored.

[7] This table is for the existing discharge point. The recommended plan may involve relocation or elimination of stream discharge.

[8] Assimilative capacity will be determined upon completion of the ongoing study by Hydroscience, Inc.

[9] Discharges into Karnes Creek, a tributary to the Jackson River.

[10] Discharges into Wilson Creek, near its confluence with Jackson River.

[11] Five-day Carbonaceous Biological Oxygen Demand ($cBOD_5$).

[12] Revision supersedes all subsequent Crewe STP stream capacity, allocation, and reserve references.

[13] 0.4 percent reserve: determined by SWCB Piedmont Regional Office.

Source: Wiley & Wilson, Inc.

TABLE B3 - UPPER JAMES RIVER BASIN ADDITIONAL LOAD ALLOCATIONS BASED ON RECOMMENDED DISCHARGE POINT

Stream Name	Segment Number	Classification[1]	Mile to Mile	Significant Discharges	Total Assimilative Capacity of Stream BOD_5 lbs/day	Wasteload[2] Allocation BOD_5 lbs/day	Reserve[4] BOD_5 lbs/day[5]
Mill Creek	2-4	E.L.	5.5-0.0	Millboro	30.0	7.3	22.7 (76%)
Calfpasture River	2-4	E.L.	4.9-0.0	Goshen	65.0	12.0	53.0 (82%)
Maury River	2-4	E.L.	1.2-0.0	Lees Carpet	790.0	425.0[3]	235.0 (30%)
				Glasgow Regional S.T.P.		130.0	
Buffalo River	2-7	E.L.	9.6-0.0	Amherst S.T.P.	150.0	120.0	30.0 (20%)
Rockfish River	2-6	E.L.	9.5-0.0	Schuyler S.T.P.	110.0	25.0	85.0 (77%)
Standardsville Run		E.L.		Standardsville	Land Application Recommended		

ATTACHMENT 11

303(d) LISTED SEGMENTS

Appomattox River Cause Group Code: **J01R-01-BAC**

Location: Appomattox River from its confluence with Suanee Creek to its confluence with Stock Creek.

City / County: Amelia Co. Appomattox Co. Buckingham Co. Cumberland Co. Prince Edward Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli/ 4A Escherichia coli/ 5A Fecal Coliform/ 5A

Station ID: DEQ Stations
2-APP143.57 2/3 violation rate for fecal coliform
2-APP137.55 2/10 violation rate for e coli
2-APP127.08 4/12 violation rate for e coli
2-APP122.15 2/10 violation rate for e coli
Clean Virginia Waterways (Level III Citizen Monitoring)
2APP-APP2-CVW 5/14 violation rate for e coli

Appomattox Basinwide TMDL Approved 8/30/04

Appomattox River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**52.65**

Appomattox River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**5.93**

TMDL Due Date: 2018

Sources:

Livestock (Grazing or Feeding Operations)	Non-Point Source	Source Unknown	Unspecified Domestic Waste
Wastes from Pets	Wildlife Other than Waterfowl		

Table ES.1.1 Average annual E. coli loads (cfu/year) modeled after TMDL allocation in the Appomattox River watershed impairments.

Impairment	WLA (cfu/year)	LA (cfu/year)	MOS	TMDL (cfu/year)
Angola Creek (1)	0.00E+00	6.76E+12		6.76E+12
	0.00E+00			
Angola Creek (2)	0.00E+00	1.80E+13		1.80E+13
	0.00E+00			
Appomattox River (1)	4.74E+12	6.86E+14		6.90E+14
Chesterfield --VA0088609	6.64E+09			
VAG402047	1.75E+09	4.79 x 10^6		
VAG404002	1.75E+09			
VAG404107	1.75E+09			
VAG404129	1.75E+09			
VAG404140	1.75E+09			
VAG404161	1.75E+09			
VA0083135	4.18E+12			
VAG407199	1.75E+09			
VAG407198	1.75E+09			
VAG404092	1.75E+09			
VA0057088	0.00E+00			
VA0089206	0.00E+00			
VA0086681	5.24E+11			
VA0020222	1.15E+10			
VA0089931	0.00E+00			
Appomattox River (2)	1.07E+13	5.90E+14	Implicit	6.01E+14
Chesterfield --VA0088609	2.07E+11			
Colonial Heights --VAR040009	1.74E+10			
Petersburg --VAR040013	1.31E+11			
VAG402047	1.75E+09			
VAG404002	1.75E+09			
VAG404107	1.75E+09			
VAG404129	1.75E+09			
VAG404140	1.75E+09			
VAG404161	1.75E+09			
VA0083135	4.18E+12			
VAG407199	1.75E+09			
VAG407198	1.75E+09			
VAG404092	1.75E+09			
VA0057088	0.00E+00			
VA0089206	0.00E+00			
VA0086681	5.24E+11			
VA0020222	1.15E+10			
VA0089931	0.00E+00			
VA0020303	8.71E+11			
VA0090131	0.00E+00			
VA0023540	2.62E+10			
VA0005819	4.70E+12			
VA0059099	0.00E+00			
VA0089516	0.00E+00			

Table ES.1.1 Average annual E. coli loads (cfu/year) modeled after TMDL allocation in the Appomattox River watershed impairments. (Continued)

Impairment		WLA (cfu/year)	LA (cfu/year)	MOS	TMDL (cfu/year)
Appomattox River (3)-tidal		6.87E+13	7.22E+14		7.91E+14
Chesterfield --VA0088609		1.14E+13			
Colonial Heights --VAR040009		2.49E+12			
Hopewell – VAR040015		1.44E+12			
Petersburg –VAR040013		1.76E+12			
	VAG402047	1.75E+09			
	VAG404002	1.75E+09			
	VAG404107	1.75E+09			
	VAG404129	1.75E+09			
	VAG404140	1.75E+09			
	VAG404161	1.75E+09			
	VA0083135	4.18E+12			
	VAG407199	1.75E+09			
	VAG407198	1.75E+09			
	VAG404092	1.75E+09			
	VA0057088	0.00E+00			
	VA0089206	0.00E+00			
	VA0086681	5.24E+11			
	VA0020222	1.15E+10			
	VA0089931	0.00E+00			
	VA0020303	8.71E+11			
	VA0090131	0.00E+00			
	VA0023540	2.62E+10			
	VA0005819	4.70E+12			
	VA0059099	0.00E+00			
	VA0089516	0.00E+00			
	VA0025437	4.01E+13			
	VA0028258	6.81E+10			
	VA0059161	8.73E+11			
	VA0006254	1.05E+10			
	VA0023426	9.59E+10			
	VA0020206	1.67E+10			
	VA0027561	1.75E+10			
	VA0090344	6.99E+10			
Briery Creek		3.50E+09	3.84E+13		3.84E+13
	VAG407198	1.75E+09			
	VAG404092	1.75E+09			
Bush River (1)		3.50E+09	9.03E+13		9.03E+13
	VAG407198	1.75E+09			
	VAG404092	1.75E+09			
Bush River (2)		3.50E+09	1.10E+14		1.10E+14
	VAG407198	1.75E+09			
	VAG404092	1.75E+09			

Implicit

Table 3.1 Summary of VPDES permitted point discharges in the Appomattox River watershed.

Facility	VPDES #	Design Discharge (MGD)	Permitted For Fecal Control	Data Availability
Farmville WWTP	VA0083135	2.4	Yes	May 1999 – March 2003
Crewe WWTP	VA0020303	0.5	Yes	Feb 1999-Feb 2003
App. River Water Authority	VA0005819	2.7	Yes	N/A
Swift Creek WTP	VA0006254	0.006	Yes	N/A
Thomas Dale West STP	VA0020206	0.0096	Yes	May 1999-July 2002
Chesterfield Co. Grange Elementary WWTP	VA0020222	0.0066	Yes	May 1999-June 2003
DOC Pocahontas Correctional Unit 13	VA0023426	0.055	Yes	May 1999-June 2003
DOC Dinwiddie Field Unit 27 WWTP	VA0023540	0.015	Yes	May 1999-June 2003
So. Central Wastewater Authority WWTF	VA0025437	23	Yes	May 1999-June 2003
Children's Home of VA Baptists Lagoon	VA0027561	0.01	Yes	N/A
Red Hill Mobile Home Park WWTP	VA0028258	0.039	Yes	May 1999-March 2003
US Army Fort Lee - Aerial Delivery Site	VA0059161	0.5	Yes	Nov 2000-Oct 2001
Amelia Co Sanitary District	VA0086681	0.3	Yes	May 1999-June 2003
New Matoaca High School	VA0090344	0.04	Yes	Oct 2002-May 2003
Colonial Pipeline Powhatan	VA0057088	3	No	N/A
Southside VA Training Center	VA0059099	0.159	No	N/A
Fighting Creek WWTF	VA0089206	0.1	No	N/A
Tidewater Materials Inc – Dinwiddie	VA0089516	0.012	No	N/A
Taylor Road Landfill	VA0089931	0.018	No	N/A
Tyson Foods Inc - Feed Mill	VA0090131	0.0012	No	N/A
Residence	VAG402047	0.001	Yes	ND
Residence	VAG404002*	0.001	Yes	ND
PRJ Land Trust	VAG404092*	0.001	Yes	ND
Residence	VAG404107*	0.001	Yes	ND
Landing View Golf Club	VAG404129*	0.001	Yes	ND
Residence	VAG404140*	0.001	Yes	ND
Residence	VAG404161*	0.001	Yes	ND
Residence	VAG407198	0.001	Yes	ND
Residence	VAG407199	0.001	Yes	ND

* Location of permits unknown.
ND – no data, facility not required to submit monitoring data