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Coles Point Waste Treatment Plant
Westmoreland County Public Works

To: Drew Hammond, DEQ

July monthly report final total and average where calculated using a x2 factor.The in-line flow recorder experienced a half failure, this was verified by Johnson INC. This has been apparently going on since January. With out any way to verify true flow volume the displayed flow reading was recorded. Flow is always light during January, Febuary and March and no problem was realized. When field conditions improved and we were able to take advantage of the two flow meters used for irrigation and the sight gauges on the storage tanks did we realilized how far off the effluent meter really was.

Johnson Inc was contacted and two electronic flow recorders where ordered. A exterior mount flow recorder was placed on the influent line just below the head works to record incoming flow, this is still a work in progress, problem with internal perimeters, the primary flow recorder was placed in service 8-3-2011 and appears to be working fine. We are still working on the exterior mount flow recorder in hope to closer monitor incoming flow, plus verify the accuracy of the meters themselves.

If any guestion arise concerning this matter please call anytime. 804-472-9240

Plant Operations: Gary W. France

8-7-2011 Gary W France

ATTACHMENT D.1.
VPA MONITORING REPORT
VPA01423

Coles Point Wastewater TP

Month: July 2011
Report Date: 8-1-11

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

The following attachments are included with this submittal:

(X) Attachment D.1- D.3 - Wastewater Monitoring (A daily operational log and any contractual lab certification sheets are required as an addendum to this report).	(1/Month)
( ) Attachment D.4 - Wastewater Monitoring	(1/5 Years)
(X) Attachments D.5 Land Application Monitoring	(1/Month)
( ) Attachments D.6 Soil Monitoring	(1/Year and 1/5 Year)
( ) Attachment D.7 Groundwater Monitoring	(1/Quarter)
( ) Attachment D.8 Groundwater Monitoring	(1/Year)
(X) Attachment D.9 Surfacewater Monitoring	(1/Quarter)
(X) Attachment D.10. Daily Freeboard Monitoring Log	(1/Month)

(X) Other LAB REPORTS - BENCH SHEETS - IRRIGATION WORK SHEET
Cover letter

Coles Point Wastewater Treatment Plant
Westmoreland County
P.O. Box 1000
Montross, Va. 22520

Gary W. France
Printed Name

Gary W. France
Signature

Plant Operations
Title

8-1-11
Date

ATTACHMENT D.2
VPA MONITORING REPORT
Location: Flow Meter
Wastewater Monitoring
This monitoring is required by VPA01423, Part I.A. Wastewater Influent to Storage Pond

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Coles Point Wastewater TP

VPA01423

Year: July 2011

Parameter	Influent Flow (Avg.)	Influent Flow (Total)	Volume from Storage to each site	Volume in Storage	Remaining Storage Capacity	pH	TSS	BOD_5
Limits	NL	NL	NL	NL	NL	NL	60 mg/l	60 mg/l
Units	MGD	MG	MG	MG	MG	S.U.	mg/l	mg/l
Frequency	Continuous	Continuous	*********	1/Day	1/Day	1/Month	1/Month	1/Month
Sample Type	Measure	Recorded	From D.3	Calculated	Calculated	Grab	8 HC	8HC
Required Reporting	1/Month	1/Month	1/Month	1/Month	1/Month	1/Month	1/Month	1/Month
Month	**********	**********	Identify site(s):	**********	**********	**********	**********	**********
January								
February								
March								
April								
May								
June								
July	25,343.225	785640 1A	S1	2,522000	457,840	7.57	34.0	3.7
August		1B	S2	962,240	2,017600			
September		2A	S3	946,720	2033120			
October		2B	232,101					
November		3A	427,280					
December		3B	363,546					

ATTACHMENT D.3
VPA MONITORING REPORT

Coles Point Wastewater TP Location: Storage Pond

Monitoring Required by VPA01423 Part I.A. Wastewater from Storage Pond to Spray Fields
*Requirement of the NMP which expires July 9, 2006
Effluent Monitoring: Monthly Parameters

VPA01423
Year: July 2011

Parameter	Total Kjeldahl Nitrogen (TKN)	Ammonia Nitrogen (NH_3-N)	Nitrate Nitrogen (NO_3-N)	Alkalinity	Storage Tank Freeboard	Total Potassium	pH	Total Sodium	Total Chloride	Total Boron	Total Phosphorus	Total Residual Chlorine (TRC)
Limits	NL	NL	NL	NL	2ft. min.	NL	NL	NL	NL	NL	NL	1.5 (min.)
Units	mg/l	mg/l	mg/l	mg/l	ft.	mg/l	S.U.	mg/l	mg/l	mg/l	mg/l	mg/l
Frequency	1/Month	1/Month	1/Month	1/Month	1/Day	1/Month	1/Day	1/Month	1/Month	2/Year	1/Month	1/Day
Sample Type	Grab	Grab	Grab	Grab	Measure	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Required Reporting	Monthly	Monthly	Monthly	Monthly	Monthly	Monthy	Monthly	Monthly	Monthly	2/Year	Monthly	Monthly
Month	*******	**********	*********	**********	********	********	********	********	*******	*******	********	********
January										xxxxx		
February										xxxxx		
March										xxxxx		
April												
May										xxxxx		
June										xxxxx		
July	5.96	4.91	2.92	294.4 ~~51~~	6.9'	25.2	7.29/8.02	132.0	81.6	xxxxx	4.95	1.62/2.34
August				~~52~~	23.6'					xxxxx		
September				~~53~~	23.8'					xxxxx		
October												
November										xxxxx		
December										xxxxx		

Parameter	Calcium*	Mag-nesium*	% Moisture*
Units	mg/l	mg/l	%
Spring Month:			
Late Summer Month:			

ATTACHMENT D.5
VPA MONITORING REPORT
Location: Land Application Site
Land Application
This monitoring is required by VPA01423 Part I.A. Land Application Monitoring
*Requirement of the NMP which expires July 9, 2006

Coles Point Wastewater TP

VPA01423

Month/Year: July 2011

	Total Gallons Applied	in/hr	in/period	in/wk	Cumulative in/year	Nov through Feb. Cumulative Inches
Limit:	**********	0.25	1.0	2.0	20	5.9
Units:	gal.	in/hr	in/day	in/wk	in/yr	in/winter
Zone: 1A					1.75	
1B					1.36	
2A					.74	
2B	232101	.25	.47 .54 1.01		3.86	
3A	427280	.25	.59 .66 .61		7.5	
3B	363746	.25	.53 .53 .54		5.12	

	Effluent Plant Available Nitrogen (PAN) Applied	Other N Applied (Fertilizer, etc.)	Total PAN applied year to date	Effluent Phos-phorus Applied	Other Phos-phorus Applied (Fertilizer, etc.)	Effluent Phosphorus Applied Year to Date	Effluent Potassium Applied	Other Potassium Applied (Fertilizer, etc.)	Effluent Potassium Applied Year to Date
Limit	*********	**********	60 lb/a first year; 160 lb/a year 2-5; 30 lb/a Nov-Feb*	*******	********	*********	*********	*******	*******
Units	lb/acre	lb/acre	lb/acre	lb/acre	lb/acre	lb/acre	lb/acre	lb/acre	lb/acre
Zone: 1A			4.86			4.02			13.87
1B			4.08			3.17			10.55
2A			2.23			1.73			5.77
2B	1.67		7.18	2.55		6.83	6.81		21.09
3A	3.07		19.29	4.70		15.41	12.54		48.26
3B	2.61		12.53	4.00		9.92	10.67		30.42

ATTACHMENT D.9
VPA MONITORING REPORT
Location: Surface Water Monitoring Sites
Surface Water Monitoring: Twice Yearly Parameters
These are required by VPA01423 Part I.A. Surfacewater Monitoring

Coles Point Wastewater TP

VPA01423

Year: July 2011

Mon. Station SW-1

Parameter	pH	Chloride	Fecal Coliform	Total Kjeldahl Nitrogen	Nitrate Nitrogen (NO_3-N)	Ammonia Nitrogen (NH_3-N)	Con-ductivity	Sulfate	BOD_5	Total Phos-phorus
Limits	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL
Units	S.U.	mg/l	N/100 ml	mg/l	mg/l	mg/l	mHos	mg/l	mg/l	mg/l
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Required Reporting	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter
Date	******	*******	*******	********	********	********	******	*******	*********	********
January-March										
April-June										
July-Sept	5.82	14.0	≥1600	4.9	0.02	1.61	186.6	24.1	29.4	2.67
Oct-Dec.										

ATTACHMENT D.9
VPA MONITORING REPORT
Location: Surface Water Monitoring Sites
Surface Water Monitoring: Twice Yearly Parameters
These are required by VPA01423 Part I.A. Surfacewater Monitoring

Coles Point Wastewater TP

VPA01423

Year: July 2011

Mon. Station SW-2

Parameter	pH	Chloride	Fecal Coliform	Total Kjeldahl Nitrogen	Nitrate Nitrogen (NO_3-N)	Ammonia Nitrogen (NH_3-N)	Con-ductivity	Sulfate	BOD_5	Total Phos-phorus
Limits	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL
Units	S.U.	mg/l	N/100 ml	mg/l	mg/l	mg/l	mHos	mg/l	mg/l	mg/l
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Required Reporting	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter
Date	******	*******	*******	********	********	********	******	*******	*********	********
January-March										
April-June										
July-Sept	4.35	81.6	170	0.9	0.27	0.40	510.0	61.8	3.6	0.48
Oct-Dec.										

ATTACHMENT D.9
VPA MONITORING REPORT
Location: Surface Water Monitoring Sites
Surface Water Monitoring: Twice Yearly Parameters
These are required by VPA01423 Part I.A. Surfacewater Monitoring

Coles Point Wastewater TP

VPA01423

Year: July 2011

Mon. Station SW-3

Parameter	pH	Chloride	Fecal Coliform	Total Kjeldahl Nitrogen	Nitrate Nitrogen (NO_3-N)	Ammonia Nitrogen (NH_3-N)	Con-ductivity	Sulfate	BOD_5	Total Phos-phorus
Limits	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL
Units	S.U.	mg/l	N/100 ml	mg/l	mg/l	mg/l	mHos	mg/l	mg/l	mg/l
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Required Reporting	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter	1/Quarter
Date	******	*******	*******	********	********	********	******	*******	*********	********
January-March										
April-June										
July-Sept	7.03	4,664.0	140	0.3	0.01	0.06	36,100.0	508.2	5.6	0.30
Oct-Dec.										

Attach. D.10. VPA Monitoring / Coles Point WWTP

Daily Freeboard Measurement Operational Log

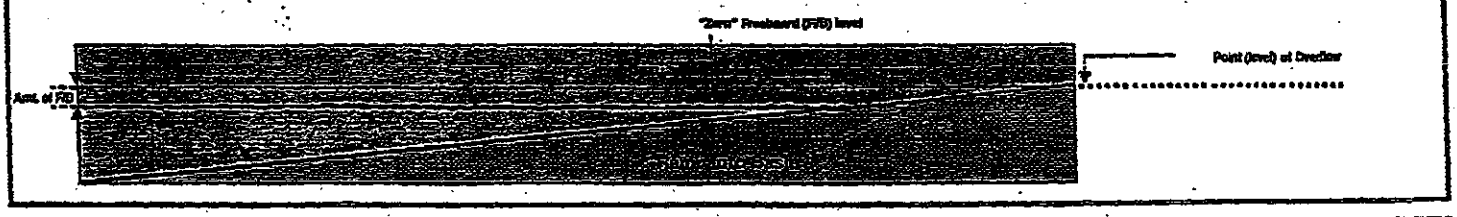
Facility Name: Coles Point Wastewater Treatment
Permit #: VPA01423
Month: July
Year: 2011

pH Method: Standard Methods 18th Edition 4500-H B and Manufacturer's Instructions
Freeboard Method: Ruler Measurement from calibrated 'Zero' freeboard point

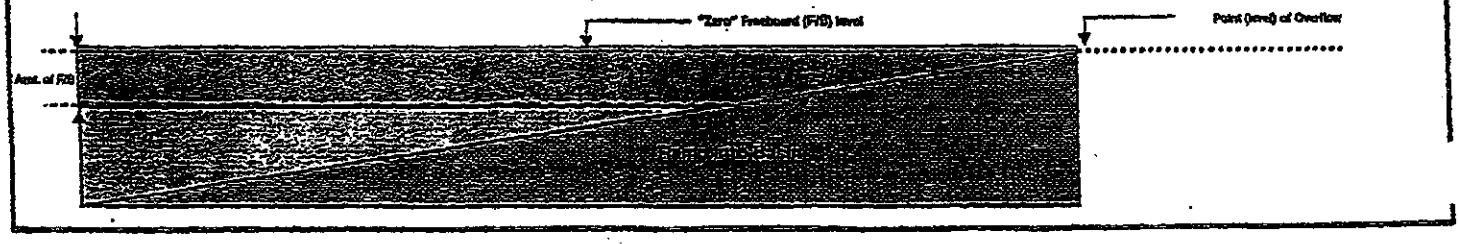
Date	Time	pH Meter Calibration (Record actual buffer values) Buffer 1	Buffer 2	Temp.	pH Sample Time	pH Analysis Time	Effluent pH S.U.	Initials	Freeboard (Inches) Basin 1	Basin 2	Basin 3	STORAGE 1	STORAGE 2	STORAGE 3	
1	0920	4.01	7.00	24.1	0930	0938	7.45	DRR	185	285	195	223	123	213	
2	0850	4.01	7.00	23.3	0935	0940	7.34	DRR	182	285	195	226	123	213	
3	0853	4.01	7.00	24.2	0945	0958	7.54	DWA	176	315	207	232	93	201	6
4	0845	4.01	7.00	23.7	0915	0918	7.52	DWA	169	332	207	239	96	201	7
5	0805	4.01	7.00	23.7	0855	0905	7.62	DWA	163	260	262	245	148	146	6
6	0800	4.01	7.00	23.8	0925	0930	7.56	DWA	159.5	260	262	248.5	148	146	3.5
7	0720	4.01	7.01	23.4	0935	0942	8.11	DWA	156.5	260	262	251.5	148	146	3
8	0850	4.01	7.00	23.9	0900	0908	7.89	DRR	154	260	262	254	148	146	
9	0855	4.01	7.00	24.1	0925	0945	7.84	DRR	145	260	262	263	148	146	
10	0846	4.01	7.00	24.4	0810	0915	7.70	DWA	141	260	262	267	148	146	4
11	0810	4.01	7.00	23.6	0850	0902	7.60	DWA	138	260	262	270	148	146	3
12	0735	4.01	7.00	24.0	0905	0910	7.53	DWA	136	260	262	272	148	146	2
13	0740	4.01	7.00	24.0	0850	0858	7.40	DWA	134	281	262	274	129	146	2
14	0800	4.01	7.01	23.2	0810	0818	7.63	DRR	131	281	262	277	129	146	
15	0830	4.01	7.00	23.4	0850	0858	7.64	DRR	129	281	262	279	129	146	
16	0905	4.01	7.00	24.5	0920	0928	7.44	DRR	126	281	262	282	129	146	
17	0735	4.01	7.00	24.8	0840	0850	7.35	DWA	122	281	262	286	129	146	4
18	0732	4.01	7.00	23.5	0835	0845	7.38	DWA	118	281	262	290	129	146	4 (2)
19	0725	4.01	7.00	23.7	0825	0832	7.48	DWA	116	297	262	292	111	146	2
20	0732	4.01	7.00	24.2	0915	0920	7.45	DWA	114	297	262	294	111	146	
21	0730	4.01	7.00	24.9	0820	0830	7.45	DWA	112	297	262	296	111	146	2
22	0810	4.01	7.00	25.3	0825	0831	7.43	DRR	110	297	262	298	111	146	
23	0905	4.01	7.00	25.2	1000	1007	7.39	DRR	108	297	262	300	111	146	1
24	0817	4.01	7.00	25.3	0900	0908	7.36	DWA	105.5	314	262	302.5	94	146	2.5
25	0732	4.01	7.00	25.3	0940	0950	7.53	DWA	103.5	284	286	304.5	124 TT	122 TT	2
26	0734	4.01	7.00	24.6	0845	0852	7.33	DWA	100.5	284	286	307.5	124	122	3
27	0828	4.01	7.00	24.8	0910	0920	7.49	DWA	98	284	286	310	124	122	2.5
28	0805	4.01	7.00	24.5	0910	0918	7.52	DRR	95	284	286	313	124	122	
29	0720	4.01	7.00	24.9	0900	0910	8.53	DRR	91.5	284	286	316.5	124	122	
30	0855	4.01	7.00	25.5	0910	0917	7.44	DRR	88	284	286	320	124	122	
31	0820	4.01	7.00	25.3	0920	0928	7.38	DWA	83	284	286	325	124	122	5
Minimum pH							7.33					2,522,000	962,240	946,120	
Maximum pH							8.11					4,517,840	2,017,600	2,033,120	
Minimum F/B									69'	23.6'	23.8				

Note: "Freeboard" measurement is the vertical distance (inches) from the water level to the level at which wastewater will leave the settling basin.
Note: If the "Freeboard" is less than 24 inches, DEQ must immediately be notified, and a written statement of explanation and corrective measures is due within 5 days.

Cross-sectional view of Settling Basin - Example 1 (Basin side wall is higher than level of overflow)



Cross-sectional view of Settling Basin - Example 2 (Basin side wall is the point/level of overflow)



COLES POINT WASTETREATMENT FACILTIY

DAILY BENCH SHEET

			PH SM18 4500-H B		DO SM18 4500-O 1		CL2 SM20 4500-CL G							MONTH July	YEAR 2011	
				SBR BASIN # 2			Chlorine Residual Sample				EFFLUENT SAMPLE			SETTLEABILITY %		
DAY	EFFLUENT TOTAL	DAILY +	TIME	Ph	DO	TEMP.	Cl2 RES.	Time Take	Time Analy	Effluent PH	Effluent Temp	Time Taken	Time Analy	30 MIN SSV	60 MIN SSV	OPR
Pevious Day	44213660															
1	44229510	15,850	0930	7.11	1.99	24.6	1.75	0930	0935	7.45	23.9	0930	0938	41%	33%	DRS
2	44245700	16,190	0935	7.08	0.40	24.5	1.56	0935	0934	7.34	23.9	0935	0940	46%	35%	DRS
3	44267800	22,100	0945	7.26	.35	24.3	2.18	0945	0948	7.56	25.1	0945	0988	48%	37%	DWA
4	44293670	25,870	0915	7.22	.49	24.0	1.96	0915	0918	7.52	25.0	0915	0925	58%	42%	DWA
5	44317970	24,300	0855	7.29	.49	24.1	2.18	0855	0858	7.62	24.8	0855	0905	75%	57%	DWA
6	44331630	13,660	0825	7.17	.45	24.5	2.20	0825	0828	7.56	25.7	0825	0830	76%	57%	DWA
7	44343450	11,820	0735	7.26	.75	23.9	1.51	0735	0738	8.11	22.1	0735	0742	78%	60%	DWA
8	44354400	10,950	0900	7.36	0.60	24.6	2.20	0900	0904	7.89	24.4	0900	0908	80%	63%	DRS
9	44368510	14,110	0935	7.41	0.72	25.1	1.77	0935	0940	7.34	25.3	0935	0945	73%	55%	DRS
10	44384690	16,180	0910	7.36	0.02	24.9	2.12	0910	0913	7.70	24.7	0910	0915	74%	55%	DWA
11	44397420	12,730	0850	7.22	0.49	25.1	1.62	0850	0853	7.60	25.0	0850	0902	77%	60%	DWA
12	44406210	8,790	0905	7.36	0.55	25.6	1.68	0905	0908	7.53	25.6	0905	0910	78%	61%	DWA
13	44413430	7,220	0750	7.15	0.44	26.0	1.62	0750	0753	7.40	25.6	0750	0758	78%	61%	DWA
14	44423200	9,770	0810	7.34	0.41	25.2	1.73	0810	0815	7.63	24.7	0810	0818	72%	54%	DRS
15	44430870	7,670	0850	7.25	0.34	25.2	1.55	1500	1505	7.64	23.9	0850	0858	83%	68%	DRS
16	44440690	9,820	0720	7.20	1.28	24.9	1.95	0720	0724	7.44	24.6	0720	0728	77%	60%	DRS
17	44456240	15,550	0840	7.06	1.26	24.5	1.58	0840	0843	7.35	24.2	0840	0850	78%	60%	DWA
18	44470420	14,180	0835	7.23	1.29	25.1	1.62	0835	0838	7.38	25.0	0835	0845	80%	63%	DWA
19	44478050	7,630	0825	7.32	1.86	25.2	1.52	0825	0828	7.48	25.1	0825	0832	80%	63%	DWA
20	44484850	6,800	0915	7.10	1.42	25.8	1.64	0915	0918	7.45	25.2	0915	0920	80%	61%	DWA
21	44493100	8,250	0820	7.08	0.72	26.0	1.56	0820	0823	7.45	25.8	0820	0830	77%	58%	DWA
22	44499700	6,600	0825	7.12	1.81	26.7	1.60	0825	0828	7.43	26.7	0825	0831	77%	56%	DRS
23	44507800	8,100	1000	7.18	0.37	27.4	1.52	1000	1004	7.39	27.8	1000	1007	75%	55%	DRS
24	44518220	10,420	0900	7.22	0.36	26.8	1.50	0900	0903	7.76	28.1	0900	0908	72%	52%	DWA
25	44527470	9,250	0940	7.10	1.59	26.7	1.62	0940	0943	7.57	27.3	0940	0950	77%	58%	DWA
26	44538810	11,340	0845	7.03	1.78	26.4	1.52	0845	0845	7.33	26.4	0845	0852	72%	51%	DWA
27	44548910	10,100	0910	7.22	1.48	26.8	1.50	0910	0913	7.49	27.0	0910	0920	63%	46%	DWA
28	44559620	10,710	0910	7.34	2.27	26.7	1.83	0910	0914	7.52	25.0	0910	0918	65%	47%	DRS
29	44572800	13,180	0900	7.24	2.36	26.7	2.20	0900	0903	8.53	26.3	0900	0910	51%	40%	DRS
30	44587600	14,800	0910	7.10	1.75	26.9	1.67	0910	0914	7.44	27.2	0910	0917	60%	44%	DRS
31	44606480	18,880	0920	7.03	1.15	26.8	1.56	0920	0923	7.39	27.1	0920	0928	60%	44%	DWA
* PH TAKEN OF EFFLUENT SAMPLE DURING MONTHLY TESTING										7.57	25.5	1155	1200			

TOTAL: 392820 x (correction factor of 2) 785640 gallons

AVG: 25,343.225

Coles Point Wa[illegible] eatment Facility

Irrigation Data [redacted] July 2011

					Effluent Sample			Totalizer Reading			Sight Gage Reading			Rain Gage Data	
'SI	Date	Pump #	Zone	Time Taken	Time Analy	CL2 Res.	PH	Start	End	Total	Start	End	Total	Apply Inches	Total Flow
64	7-2-11	1	2B	0855	0900	2.34	7.36	32256540	33339724	108,320	123	93/14	108,640	0.53	190,000
61		2	3A	0855	0900	2.34	7.36	105210430	105346770	136,540	123	93/16	124,160	0.4	91,200
	7-3-11	2	3B	0915	0918	2.26	7.29	105346970	105467020	120,050	93	78/15	116,400	0.58	132,240
	7-12-11	2	3A	0840	0843	1.62	7.53	105467020	105618000	150,980	148	127/21	162,960	.40	91,200
	7-18-11	1	2B	0820	0823	2.32	7.45	33339724	34577155	123,781	127	111/16	124,160	.82	186,960
60	7-23-11	2	3A	0920	0925	1.64	7.44	105618000	105748760	139,760	111	94/17	131,920	.35	79,800
	7-24-11	1	3B	0825	0828	2.01	7.48	34577155	35778763	121,008	94	78/16	124,160	.5	114,000
	7-31-11	1	3B	0822	0825	1.63	8.02	35778763	37201451	122,688	124	109/15	116,400	.4	91,200
Monthly Totals															

Primary Laboratories, Inc.

7423 Lee Davis Road • Mechanicsville, VA 23111 • Telephone (804) 559-9004 • Fax (804) 559-9306

ANALYTICAL LABORATORY REPORT

Westmoreland County
Attn: Gary France
P.O. Box 1000
Montross, Va. 22520

26-Jul-11

Project: Coles Point
Date Received: 13-Jul-11
Date Sampled: 13-Jul-11
Work Order No: 1107094-01
Client ID: **Plant**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
TSS	34.0	1.0	mg/L	2540 D	13-Jul-11 at 15:20	HV
BOD	3.7	3.0	mg/L	5210 B	13-Jul-11 at 15:30	NA

Date Sampled: 13-Jul-11
Work Order No: 1107094-02
Client ID: **Storage Tanks**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Alkalinity	294.4	1.0	mg/L as $CaCO_3$	2320 B	19-Jul-11 at 16:00	NA
Nitrate	2.92	0.20	mg/L	4500 NO_3^- E	22-Jul-11 at 15:00	NA
Total Phosphorus	4.95	0.10	mg/L	4500P E	15-Jul-11 at 14:00	NA
Ammonia	4.91	0.01	mg/L	4500NH_3 F	20-Jul-11 at 9:30	NA
Chloride	81.6	0.1	mg/L	4500CL G	15-Jul-11 at 9:00	NA
TKN	5.96	0.20	mg/L	4500 N/NH_3	21-Jul-11 at 10:00	NA

Primary Laboratories, Inc.
Results

26-Jul-11

Project: Coles Point
Date Received: 13-Jul-11
Date Sampled: 13-Jul-11
Work Order No: 1107094-02
Client ID: **Storage Tanks**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
METALS						
Potassium	25.2	1.0	mg/L	3120 B	26-Jul-11 at 14:30	HV
Sodium	132.0	1.0	mg/L	3120 B	26-Jul-11 at 14:30	HV
Boron	<0.10	0.10	mg/L	3120 B	26-Jul-11 at 14:30	HV

* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: Parry L. Bragg Date: 7/26/11
Laboratory Manager

These analytical results are based upon materials provided by the client and are intended for the exclusive use of the client. These analytical results represent the best judgement of Primary Laboratories, Inc. Primary Laboratories, Inc. assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report. This report is not to be reproduced except with the written approval of Primary Laboratories, Inc.

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ANALYTICAL LABORATORY REPORT

28-Jul-11

Westmoreland County
Attn: Gary France
P.O. Box 1000
Montross, Va. 22520

Project: Coles Point
Date Received: 13-Jul-11
Date Sampled: 13-Jul-11
Work Order No: 1107093-01
Client ID: **Surface Water 1**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Fecal Coliform	≥1,600	2	MPN/100ml	9221E	13-Jul-11 at 15:00	MS
Specific Conductance	186.6	0.2	umhos/cm	2510 B	19-Jul-11 at 10:10	HV
pH	5.82	-	pH Units	4500H^+B	19-Jul-11 at 10:00	HV
Nitrate	0.02	0.01	mg/L	4500 NO_3^-E	25-Jul-11 at 15:00	NA
Total Phosphorus	2.57	0.05	mg/L	4500P E	15-Jul-11 at 14:00	NA
Ammonia	1.61	0.01	mg/L	4500NH_3 F	20-Jul-11 at 9:30	NA
TKN	4.9	0.2	mg/L	4500 $N/_{NH3}$	21-Jul-11 at 10:00	NA
Chloride	14.0	0.1	mg/L	4500CL B	15-Jul-11 at 9:00	NA
BOD	29.4	3.0	mg/L	5210 B	13-Jul-11 at 15:30	NA
Sulfate	24.1	10.0	mg/L	4500SO_4^{2}E	27-Jul-11 at 15:00	NA

Primary Laboratories, Inc.
Results

28-Jul-11

Project: Coles Point
Date Received: 13-Jul-11
Date Sampled: 13-Jul-11
Work Order No: 1107093-02
Client ID: **Surface Water 2**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Fecal Coliform	170	2	MPN/100ml	9221E	13-Jul-11 at 15:00	MS
Specific Conductance	510.0	0.2	umhos/cm	2510 B	19-Jul-11 at 10:10	HV
pH	4.35	-	pH Units	4500H$^+$B	19-Jul-11 at 10:00	HV
Nitrate	0.29	0.01	mg/L	4500 NO_3^-E	25-Jul-11 at 15:00	NA
Total Phosphorus	0.48	0.05	mg/L	4500P E	15-Jul-11 at 14:00	NA
Ammonia	0.40	0.01	mg/L	4500NH_3 F	20-Jul-11 at 9:30	NA
TKN	0.9	0.2	mg/L	4500 $N/_{NH3}$	21-Jul-11 at 10:00	NA
Chloride	81.6	0.1	mg/L	4500CL B	15-Jul-11 at 9:00	NA
BOD	3.6	3.0	mg/L	5210 B	13-Jul-11 at 15:30	NA
Sulfate	61.8	10.0	mg/L	4500SO_4^{2}E	27-Jul-11 at 15:00	NA

Primary Laboratories, Inc.
Results

28-Jul-11

Project: Coles Point
Date Received: 13-Jul-11
Date Sampled: 13-Jul-11
Work Order No: 1107093-03
Client ID: **Surface Water 3**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Fecal Coliform	140	2	MPN/100ml	9221E	13-Jul-11 at 15:00	MS
Specific Conductance	26,100.0	0.2	umhos/cm	2510 B	19-Jul-11 at 10:10	HV
pH	7.03	-	pH Units	4500H$^+$B	19-Jul-11 at 10:00	HV
Nitrate	0.01	0.01	mg/L	4500 NO_3^-E	25-Jul-11 at 15:00	NA
Total Phosphorus	0.20	0.02	mg/L	4500P E	15-Jul-11 at 14:00	NA
Ammonia	0.06	0.01	mg/L	4500NH_3 F	20-Jul-11 at 9:30	NA
TKN	0.3	0.2	mg/L	4500 $N/_{NH3}$	21-Jul-11 at 10:00	NA
Chloride	4,664.0	20.0	mg/L	4500CL B	15-Jul-11 at 9:00	NA
BOD	5.6	3.0	mg/L	5210 B	13-Jul-11 at 15:30	NA
Sulfate	508.2	40.0	mg/L	4500SO_4^{2}E	27-Jul-11 at 15:00	NA

*All methods are from Standard Methods 18th Edition, unless otherwise noted.

Signature: _____ Date: 7/28/11
Parry L. Bragg
Laboratory Manager

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