Altria
Altria Client Services

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PRO

Philip Morris USA – Park 500

4100 Bermuda Hundred Road
Chester, Virginia 23836

VPDES Permit Renewal Application VA0025667

December 18, 2008

Altria
Altria Client Services

December 18, 2008

Ms. Jamie Bauer
DEQ - Piedmont Regional Office
4949A Cox Road
Glen Allen, Virginia 23060

Dear Ms. Bauer:

On behalf of Philip Morris USA, enclosed is the renewal application for the VPDES permit number VA0026557 - Park 500 Plant. Should you have any questions, please contact Mark Davis at (804) 274-2253 or at mark.c.davis@altria.com.

Sincerely,

Charles T. Bridges
Staff Environmental Engineer

enclosure

PhilipMorrisUSA
an Altria Company

P.O. BOX 26603, RICHMOND, VIRGINIA 23261 TELEPHONE (804) 274-2000

October 28, 2008

Ms. Jamie Bauer
Department of Environmental Quality
4949-A Cox Road
Glen Allen, Virginia 23060-6295

Reference: VPDES Permit No. VA0026557
VPDES Permit No. VAN040084

Dear Ms. Bauer:

Due to recent organizational changes, responsibility for VPDES Permit Compliance at the Philip Morris USA – Park 500 Plant has been reassigned to Mr. Gary Ruth, Sr. Vice President, Manufacturing Operations. Mr. Ruth is the responsible individual for these permits, therefore; please add Mr. Ruth's name and remove mine from your records and direct future compliance communications to him. Day to day communications and compliance issues will be addressed by Mr. Mark Davis and should be directed to his attention.

As a result of a corporate restructuring, delegation of authority includes representatives of Altria Client Services who provide environmental support to Philip Morris. A list of delegated individuals for these permits and their corporate affiliation follows:

Philip Morris USA
Mr. Samuel Bowen, Director Park 500 Operations
Mr. Gary Hill, Manager, Operations Support
Mr. Tony Nobinger, Area Leader
Mr. Chandrakant Patel, Front Line Leader
Mr. David Zimmerman, Staff Engineer

Altria Client Services
Mr. T. Warren Murray, Director, Environmental Compliance
Mr. A. Patrick Puglisi, Manager, Environmental Compliance
Mr. Mark Davis, Associate Research Scientist

Should you have questions regarding these changes, please contact Mr. Davis.

Sincerely,

Gregory A. Cummings
Sr. Vice President
Manufacturing Integration

PUBLIC NOTICE BILLING INFORMATION FORM

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

Agent/Department to be billed: Tony Nobinger

Owner: Philip Morris USA

Applicant's Address: 4100 Bermuda Hundred Rd., Chester, VA., 23836

PO Box 26603, Richmond, VA., 23261

Agent's Telephone No: (804) 751-1855

Authorizing Agent Tony M Nobinger

Signature

Facility Name: Philip Morris USA-Park 500 Plant

Permit No.: VA 0026557

Please return to:

Ms. Jaime Bauer
DEQ-Piedmont Regional Office
4949 A Cox Road
Glen Allen, VA 23060
Fax Number: 804-527-5106

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S		T/A	C
F	VA0026557		D
1	2 — 13	14	15

LABEL ITEMS	
I. EPA I.D. NUMBER	PLEASE PLACE LABEL IN THIS SPACE
III. FACILITY NAME	
V. FACILITY MAILING ADDRESS	
VI. FACILITY LOCATION	

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
	16	17	18		19	20	21
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X		X	D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
	22	23	24		25	26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
	28	29	30		31	32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
	34	35	36		37	38	39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	
	40	41	42		43	44	45

III. NAME OF FACILITY

C 1 SKIP PHILIP MORRIS USA - PARK 500 PLANT

15 16 – 29 30 69

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
C 2 NOBINGER, TONY; AREA LEADER	(804) 751-1855
15 16 — 45	46 — 48 49 — 51 52 — 55

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX

C 3 P.O. BOX 26603

15 16 — 45

B. CITY OR TOWN	C. STATE	D. ZIP CODE
C 4 RICHMOND	VA	23261
15 16 — 40	41 42	47 — 51

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

C 5 4100 BERMUDA HUNDRED ROAD

15 16 — 45

B. COUNTY NAME

CHESTERFIELD

46 — 70

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
C 6 CHESTER	VA	23836	
15 16 — 40	41 42	47 — 51	52 — 54

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
7 2141 (specify) RECONSTITUTED TOBACCO	7 (specify)
C. THIRD	**D. FOURTH**
7 (specify)	7 (specify)

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also the owner?
8 Philip Morris USA	☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*		D. PHONE *(area code & no.)*
F = FEDERAL S = STATE P = PRIVATE M = PUBLIC *(other than federal or state)* O = OTHER *(specify)*	P (specify)	A (804) 274-4674

E. STREET OR P.O. BOX
P.O. BOX 26603

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
B RICHMOND	VA	23261	Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

	A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
	9 N VA0026557	9 P 51-041-0081, 8/23/2004
	B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
	9 U	9 VAN040084 (specify) VPDES GEN PERMIT-NUTRIENT
	C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
	9 R VAD010067171	9 VAR050586 (specify) STORM WATER GEN. PERMIT

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

SEE ATTACHMENT B - NATURE OF BUSINESS

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
GARY R. RUTH SENIOR VP - MANUFACTURING OPS.		12/18/08

COMMENTS FOR OFFICIAL USE ONLY

C

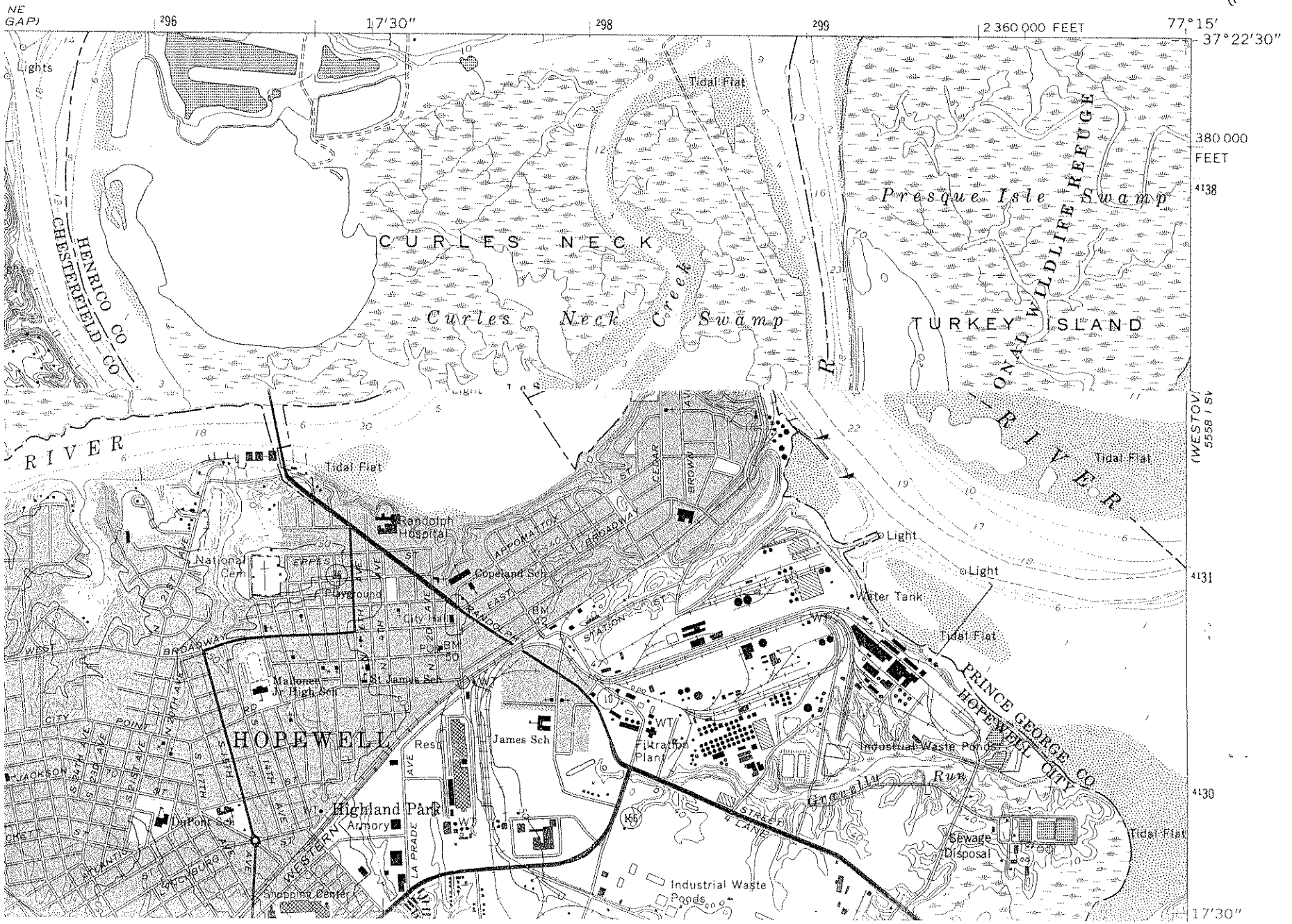
Attachment A

General Form 1 -- General Information

XI. Map

HOPEWELL QUADRANGLE
VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

5558 I NW (ROXBURY)



Attachment B

General Form 1 – General Information

XII. Nature of Business

The Park 500 site houses the following: the Park 500 Plant, the Bermuda Hundred Machinery Storage Facility, the Bermuda Hundred Pilot Plant, the Park Manufacturing Facility (PMF), and a process Wastewater Treatment Plant (WWTP).

At the Park 500 Plant, tobacco materials are reclaimed for use in cigarette manufacturing. Dry tobacco materials are cut and pulped into an aqueous slurry. The soluble components in the slurry are extracted and the resulting tobacco stock is refined and made into a sheet similar to paper. The extracted solubles are concentrated by evaporation, flavored and applied onto the tobacco sheet. Alternately, dry tobacco is ground and blended into a flavored slurry prior to forming the tobacco sheet. The tobacco sheet is then dried, cut, packed and transported to other locations for use in cigarette manufacturing. During full-scale production, process wastewater is generated from Production Lines 1, 2, and 3. All process wastewater from this plant is discharged to the existing process Wastewater Treatment Plant (WWTP).

The Bermuda Machinery Storage Facility houses idle manufacturing equipment waiting for reallocation or recycling.

The Bermuda Hundred Pilot Plant is not currently in operation.

The Park Manufacturing Facility (PMF) is currently being used for offices, employee orientation, machine operator training, and a fitness center.

The process Wastewater Treatment Plant (WWTP) treats process wastewater for the Park 500 site by pretreatment (bar racks, grit chambers, and coarse screens), primary clarifiers, activated sludge aeration, ferric chloride addition, and secondary clarifiers. Disinfection is carried out by chlorination, and dechlorination is carried out by sulfunation. Gravity filters are used for final treatment. Effluent from the Wastewater Treatment Plant (WWTP) discharges to the James River.

There are two (2) oil/water separators associated with aboveground storage tanks that can discharge to the Wastewater Treatment Plant (WWTP). In addition, Park 500 has three (3) boilers and a water treatment plant. Wastewater from these operations is treated in the existing Wastewater Treatment Plant (WWTP).

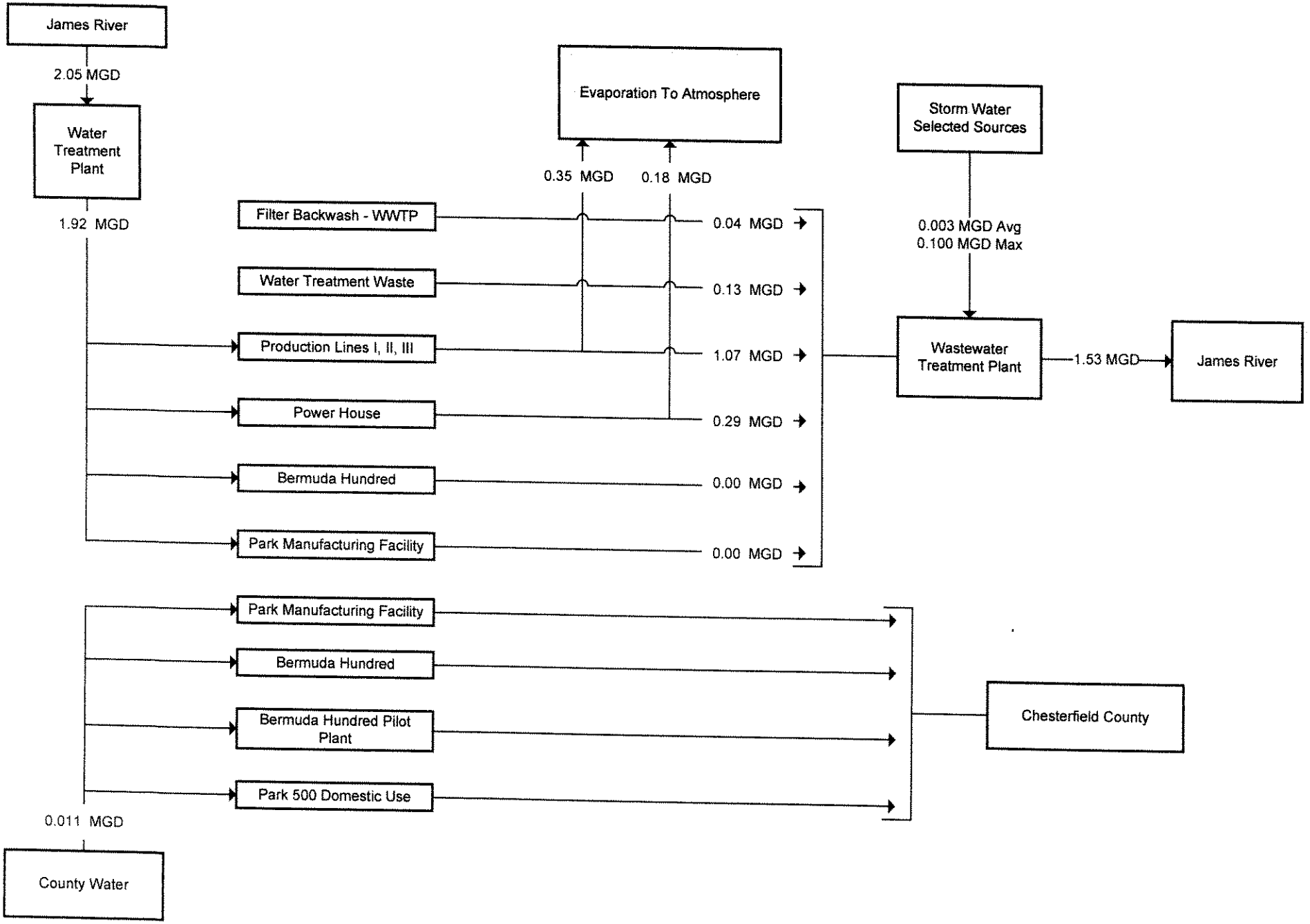
Attachment C

Form 2C – Existing Manufacturing, Commercial, Mining and Silvicultural Operations

II.A. Flows, Sources of Pollution, and Treatment Technologies

Park 500 – Water Flow Diagram

Park 500
Water Flow Diagram
(Estimated)



23 June 2008

Attachment D

Form 2C -- Existing Manufacturing, Commercial, Mining and Silvicultural Operations

II.A. Flows, Sources of Pollution, and Treatment Technologies

Park 500 -- Wastewater Treatment Plant Diagram

Attachment E

Form 2C – Existing Manufacturing, Commercial, Mining and Silvicultural Operations

II.B. Flows, Sources of Pollution, and Treatment Technologies

Description of Treatment	List Codes
1. Process wastewater passes through two (2) bar racks, two (2) grit chambers, and two (2) coarse screens.	1-M / Grit Removal 1-T / Screening
2. Up to two (2) surge basins may be used when flow equalization is required.	1-U / Sedimentation (Settling)
3. Up to five (5) primary clarifiers are used for settling followed by	1-U / Sedimentation (Settling)
4. Up to five (5) activated sludge aeration basins.	3-A / Activated Sludge
5. Ferric chloride is added to the effluent from the basins to remove phosphorus as required.	1-G / Flocculation 1-U / Sedimentation (Settling)
6. A mixing chamber provides polymer addition as required.	2-D / Coagulation
7. Up to six (6) secondary clarifiers are used.	1-G / Flocculation 1-U / Sedimentation (Settling)
8. Up to two (2) chlorine contact chambers provide a minimum of 30 minutes contact time.	2-F / Disinfection (Chlorine)
9. Sodium bisulfite is added to the final cell of the chlorine contacting chamber to remove residual chlorine.	2-E / Dechlorination
10. Up to a total of six (6) multimedia gravity filters may be used as required to provide final treatment prior to discharge.	1-Q / Multimedia Filtration 4-A / Discharge to Surface Water
11. Primary sludge may be pumped either to the belt filter presses or to the thickeners.	5-L / Gravity Thickening
12. Secondary sludge may be pumped to the belt filter presses, thickeners, influent to the primary clarifiers or directly to the activated sludge aeration basins.	5-L / Gravity Thickening
13. Chemical conditioners are added as required prior to dewatering on up to two (2) belt filter presses.	5-E / Chemical Conditioners 5-C / Belt Filtration
14. Contractors dispose of dewatered solids by composting and landfill. Disposal sites are fully permitted.	5-Q / Landfill 5-G / Composting
15. A three-zone concrete Anoxic Selector Tank on the number 1 aeration basin provides biological reduction of phosphorus as required.	3-D / Nitrification - Denitrification

16. A Hummix mixer, blower, and the associated plumbing installed on the final lift pumps achieve the required D.O. levels.	1-O / Mixing
17. Dispersion of the final effluent into the river is achieved at the outfall termination to provide enhanced mixing.	1-O / Mixing

VPDES Permit Application Addendum

1. **Entity to whom the permit is to be issued:** Gary R. Ruth
Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. **Is this facility located within city or town boundaries?** Y (N)

3. **Provide the tax map parcel number for the land where the discharge is located.** 836652920900000

4. **For the facility to be covered by this permit, how many acres will be disturbed during the next fine years due to new construction activities?** None

5. **What is the design average effluent flow of this facility?** 2.9 MGD
For industrial facilities, provide the max. 30-day average production level, include units:

In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Y (N)
If "Yes", please identify the other flow tiers (in MGD) or production levels:

_____

Please consider the following questions for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

6. **Nature of operations generating wastewater:**
Reconstituted Tobacco Leaf Manufacturing

0 % of flow from domestic connections/sources
Number of private residences to be served by the treatment works:

100% of flow from non-domestic connections/sources

7. **Mode of discharge:** X Continuous ____Intermittent ____Seasonal
Describe frequency and duration of intermittent or seasonal discharges:
_____

8. **Identify the characteristics of the receiving stream at the point just above the facility's discharge point:**
X Permanent stream, never dry
__ Intermittent stream, usually flowing, sometimes dry
__ Ephemeral stream, wet-weather flow, often dry
__ Effluent-dependent stream, usually or always dry without effluent flow
__ Lake or pond at or below the discharge point
__
Other: _____

9. **Approval Date(s):** Industrial
O & M Manual _____ **Sludge/Solids Management Plan** _____

Have there been any changes in your operations or procedures since the above approval dates?
Y (N)

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VA0026557

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM **2C** NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	37	20	25	77	16	56	JAMES RIVER

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUT-FALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	WATER TREATMENT	0.13 MGD	SEE ATTACHEMENT E - FLOWS		
	BACKWASH - WATER TREATMENT	0.04 MGD	SOURCES OF POLLUTION,		
	PRODUCTION LINES I, II, III	1.07 MGD	AND TREATMENT		
	POWER HOUSE	0.29 MGD	TECHNOLOGIES		

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ YES (*complete the following table*) ☑ NO (*go to Section III*)

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK (*specify average*)	b. MONTHS PER YEAR (*specify average*)	a. FLOW RATE (*in mgd*)		B. TOTAL VOLUME (*specify with units*)		C. DURATION (*in days*)
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES (*complete Item III-B*) ☑ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☐ YES (*complete Item III-C*) ☑ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (*list outfall numbers*)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

 CONTINUE ON PAGE 3

CONTINUED FROM PAGE 2

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VA0026557

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
NONE			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☑ YES (*identify the test(s) and describe their purposes below*) ☐ NO (*go to Section VIII*)

03/07/2005	LC50 =	> 98.6%
03/06/2006	LC50 =	> 100.0%
03/12/2007	LC50 =	59.0%
03/11/2008	LC50 =	> 100.0%

Species Test	Species
Acute	Ceriodaphnia dubia

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
Microbac Laboratories, Inc Richmond Divison	2028 Dabney Road Suite E-17 Richmond, Va 23230	804-353-1999 www.microbac.com	E. Coli, Coliform, dioxin, volatile and semi-volatile organics, chloride, nitrate, radiologicals, Herbicides, pesticides, alpha, beta, metals, cyanide
Severn Trent Laboratories, Inc STL-Savannah	5102 LaRoche Avenue Savannah, Ga 31404	912-354-7858 www.stl-inc.com	Methoxychlor, kepone, ammonia

IX. CERTIFICATION

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

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
Gary R. Ruth; Sr. Vice President - Manufacturing Ops.	(804) 274-5085
C. SIGNATURE	D. DATE SIGNED
Gary R. Ruth	12/15/08

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): VA0026557

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 001

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	2. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	2. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	2. EFFLUENT d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. UNITS (*specify if blank*) b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (*optional*) b. NO. OF ANALYSES
a. Biochemical Oxygen Demand *(CBOD5)*	11	202	9	143	7	87.6	52	mg/L	lb/day			
b. Chemical Oxygen Demand *(COD)*	150	2754						mg/L	lb/day			
c. Total Organic Carbon *(TOC)*	51	936						mg/L	lb/day			
d. Total Suspended Solids *(TSS)*	18.5	290	7.8	124	5.4	67.6	156	mg/L	lb/day			
e. Ammonia *(as N)*	0.51	8.1	0.40	6.3	0.302	3.78	52	mg/L	lb/day			
f. Flow	VALUE 2.2		VALUE 1.9		VALUE 1.5		365	MGD		VALUE		
g. Temperature *(winter)*	VALUE		VALUE		VALUE			°C		VALUE		
h. Temperature *(summer)*	VALUE 25.4		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 6.54	MAXIMUM 8.06	MINIMUM 7.61	MAXIMUM 7.95			365	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*) b. NO. OF ANALYSES
a. Bromide (24959-67-9)	X		0.9						1	mg/L				
b. Chlorine, Total Residual	X		< 0.10						26	mg/L				
c. Color	X		156						1	APHA unit				
d. Fecal Coliform	X		33						1	MPN/100mL				
e. Fluoride (16984-48-8)		X	< 0.20						1	mg/L				
f. Nitrate-Nitrite (as N)	X		1.36	24.9					1	mg/L	lb/day			

CONTINUE ON REVERSE

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		17.8	238	15.5	237	11.6	148	52	mg/L	lb/day			
h. Oil and Grease	X		19	349						mg/L	lb/day			
i. Phosphorus (as P), Total (7723-14-0)	X		2.01	28.2	1.61	23	0.84	11	24	mg/L	lb/day			
j. Radioactivity														
(1) Alpha, Total		X	< 13.4						1	pCi/L				
(2) Beta, Total	X		599						1	pCi/L				
(3) Radium, Total		X	< 1.0						1	pCi/L				
(4) Radium 226, Total		X	< 1.0						1	pCi/L				
k. Sulfate (*as SO_4*) (14808-79-8)	X		167	3,066					1	mg/L	lb/day			
l. Sulfide (*as S*)	X		2.8	51.4					1	mg/L	lb/day			
m. Sulfite (*as SO_3*) (14265-45-3)	X		2.0						1	mg/L				
n. Surfactants	X		0.019	0.349					1	mg/L	lb/day			
o. Aluminum, Total (7429-90-5)		X	< 0.05						1	mg/L				
p. Barium, Total (7440-39-3)		X	< 0.02						1	mg/L				
q. Boron, Total (7440-42-8)	X		0.120	2.2					1	mg/L	lb/day			
r. Cobalt, Total (7440-48-4)	X		0.0027	0.05					1	mg/L	lb/day			
s. Iron, Total (7439-89-6)	X		0.63	11.6					1	mg/L	lb/day			
t. Magnesium, Total (7439-95-4)	X		31	569					1	mg/L	lb/da			
u. Molybdenum, Total (7439-98-7)	X		0.034	0.624					1	mg/L	lb/da			
v. Manganese, Total (7439-96-5)	X		0.11	2.02					1	mg/L	lb/day			
w. Tin, Total (7440-31-5)		X	< 0.02						1	mg/L				
x. Titanium, Total (7440-32-6)		X	< 0.005						1	mg/L				

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EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA0026557	001

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X	< 0.02						1	mg/L				
2M. Arsenic, Total (7440-38-2)			X	< 0.02						1	mg/L				
3M. Beryllium, Total (7440-41-7)			X	< 1.0						1	mg/L				
4M. Cadmium, Total (7440-43-9)			X	< 0.02						1	mg/L				
5M. Chromium, Total (7440-47-3)			X	< 0.02						1	mg/L				
6M. Copper, Total (7440-50-8)		X		0.05	0.92					1	mg/L	lb/day			
7M. Lead, Total (7439-92-1)			X	< 0.02						1	mg/L				
8M. Mercury, Total (7439-97-6)			X	< 0.0002						1	mg/L				
9M. Nickel, Total (7440-02-0)			X	< 0.02						1	mg/L				
10M. Selenium, Total (7782-49-2)			X	< 0.02						1	mg/L				
11M. Silver, Total (7440-22-4)			X	< 0.02						1	mg/L				
12M. Thallium, Total (7440-28-0)			X	< 1.0						1	mg/L				
13M. Zinc, Total (7440-66-6)		X		0.02	0.37					1	mg/L	lb/day			
14M. Cyanide, Total (57-12-5)			X	< 0.01						1	mg/L				
15M. Phenols, Total			X	< 0.005						1	mg/L				
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS DIOXIN SCREEN RESULTS: NEGATIVE											

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X	< 0.025						1	mg/L				
2V. Acrylonitrile (107-13-1)			X	< 0.025						1	mg/L				
3V. Benzene (71-43-2)			X	< 0.005						1	mg/L				
4V. Bis (*Chloro-methyl*) Ether (542-88-1)			X	< 1.0						1	mg/L				
5V. Bromoform (75-25-2)			X	< 0.005						1	mg/L				
6V. Carbon Tetrachloride (56-23-5)			X	< 0.005						1	mg/L				
7V. Chlorobenzene (108-90-7)			X	< 0.005						1	mg/L				
8V. Chlorodi-bromomethane (124-48-1)		X		0.037	0.68					1	mg/L	lb/day			
9V. Chloroethane (75-00-3)			X	< 0.005						1	mg/L				
10V. 2-Chloro-ethylvinyl Ether (110-75-8)			X	< 0.005						1	mg/L				
11V. Chloroform (67-66-3)		X		0.326	5.99					1	mg/L	lb/day			
12V. Dichloro-bromomethane (75-27-4)		X		0.182	3.34					1	mg/L	lb/day			
13V. Dichloro-difluoromethane (75-71-8)			X	< 1.0						1	mg/L				
14V. 1,1-Dichloro-ethane (75-34-3)			X	< 0.005						1	mg/L				
15V. 1,2-Dichloro-ethane (107-06-2)			X	< 0.005						1	mg/L				
16V. 1,1-Dichloro-ethylene (75-35-4)			X	< 0.005						1	mg/L				
17V. 1,2-Dichloro-propane (78-87-5)			X	< 0.005						1	mg/L				
18V. 1,3-Dichloro-propylene (542-75-6)			X	< 0.005						1	mg/L				
19V. Ethylbenzene (100-41-4)			X	< 0.005						1	mg/L				
20V. Methyl Bromide (74-83-9)			X	< 0.005						1	mg/L				
21V. Methyl Chloride (74-87-3)			X	< 0.005						1	mg/L				

CONTINUE ON PAGE V-5

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X	< 0.005						1	mg/L				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X	< 0.005						1	mg/L				
24V. Tetrachloro-ethylene (127-18-4)			X	< 0.005						1	mg/L				
25V. Toluene (108-88-3)			X	< 0.005						1	mg/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X	< 0.005						1	mg/L				
27V. 1,1,1-Trichloro-ethane (71-55-6)			X	< 0.005						1	mg/L				
28V. 1,1,2-Trichloro-ethane (79-00-5)			X	< 0.005						1	mg/L				
29V Trichloro-ethylene (79-01-6)			X	< 0.005						1	mg/L				
30V. Trichloro-fluoromethane (75-69-4)			X	< 0.005						1	mg/L				
31V. Vinyl Chloride (75-01-4)			X	< 0.005						1	mg/L				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X	< 0.005						1	mg/L				
2A. 2,4-Dichloro-phenol (120-83-2)			X	< 0.005						1	mg/L				
3A. 2,4-Dimethyl-phenol (105-67-9)			X	< 0.005						1	mg/L				
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X	< 0.005						1	mg/L				
5A. 2,4-Dinitro-phenol (51-28-5)			X	< 0.005						1	mg/L				
6A. 2-Nitrophenol (88-75-5)			X	< 0.005						1	mg/L				
7A. 4-Nitrophenol (100-02-7)			X	< 0.020						1	mg/L				
8A. P-Chloro-M-Cresol (59-50-7)			X	< 0.005						1	mg/L				
9A. Pentachloro-phenol (87-86-5)			X	< 0.020						1	mg/L				
10A. Phenol (108-95-2)			X	< 0.005						1	mg/L				
11A. 2,4,6-Trichloro-phenol (88-05-2)			X	< 0.005						1	mg/L				

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X	< 0.005						1	mg/L				
2B. Acenaphtylene (208-96-8)			X	< 0.005						1	mg/L				
3B. Anthracene (120-12-7)			X	< 0.005						1	mg/L				
4B. Benzidine (92-87-5)			X	< 0.005						1	mg/L				
5B. Benzo (*a*) Anthracene (56-55-3)			X	< 0.005						1	mg/L				
6B. Benzo (*a*) Pyrene (50-32-8)			X	< 0.005						1	mg/L				
7B. 3,4-Benzo-fluoranthene (205-99-2)			X	< 0.005						1	mg/L				
8B. Benzo (*ghi*) Perylene (191-24-2)			X	< 0.005						1	mg/L				
9B. Benzo (*k*) Fluoranthene (207-08-9)			X	< 0.005						1	mg/L				
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X	< 0.005						1	mg/L				
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X	< 0.005						1	mg/L				
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X	< 0.005						1	mg/L				
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X	< 0.005						1	mg/L				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X	< 0.005						1	mg/L				
15B. Butyl Benzyl Phthalate (85-68-7)			X	< 0.005						1	mg/L				
16B. 2-Chloro-naphthalene (91-58-7)			X	< 0.005						1	mg/L				
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X	< 0.005						1	mg/L				
18B. Chrysene (218-01-9)			X	< 0.005						1	mg/L				
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X	< 0.005						1	mg/L				
20B. 1,2-Dichloro-benzene (95-50-1)			X	< 0.005						1	mg/L				
21B. 1,3-Di-chloro-benzene (541-73-1)			X	< 0.005						1	mg/L				

CONTINUE ON PAGE V-7

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)			X	< 0.005						1	mg/L				
23B. 3,3-Dichloro-benzidine (91-94-1)			X	< 0.005						1	mg/L				
24B. Diethyl Phthalate (84-66-2)			X	< 0.005						1	mg/L				
25B. Dimethyl Phthalate (131 -11-3)			X	< 0.005						1	mg/L				
26B. Di-N-Butyl Phthalate (84-74-2)			X	< 0.005						1	mg/L				
27B. 2,4-Dinitro-toluene (121-14-2)			X	< 0.005						1	mg/L				
28B. 2,6-Dinitro-toluene (606-20-2)			X	< 0.005						1	mg/L				
29B. Di-N-Octyl Phthalate (117-84-0)			X	< 0.005						1	mg/L				
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)			X	< 0.005						1	mg/L				
31B. Fluoranthene (206-44-0)			X	< 0.005						1	mg/L				
32B. Fluorene (86-73-7)			X	< 0.005						1	mg/L				
33B. Hexachloro-benzene (118-74-1)			X	< 0.005						1	mg/L				
34B. Hexachloro-butadiene (87-68-3)			X	< 0.005						1	mg/L				
35B. Hexachloro-cyclopentadiene (77-47-4)			X	< 0.005						1	mg/L				
36B Hexachloro-ethane (67-72-1)			X	< 0.005						1	mg/L				
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X	< 0.005						1	mg/L				
38B. Isophorone (78-59-1)			X	< 0.005						1	mg/L				
39B. Naphthalene (91-20-3)			X	< 0.005						1	mg/L				
40B. Nitrobenzene (98-95-3)			X	< 0.005						1	mg/L				
41B. N-Nitro-sodimethylamine (62-75-9)			X	< 0.005						1	mg/L				
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X	< 0.005						1	mg/L				

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)			X	< 0.005						1	mg/L				
44B. Phenanthrene (85-01-8)			X	< 0.005						1	mg/L				
45B. Pyrene (129-00-0)			X	< 0.005						1	mg/L				
46B. 1,2,4-Tri-chlorobenzene (120-82-1)			X	< 0.005						1	mg/L				
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X	< 0.00005						1	mg/L				
2P. α-BHC (319-84-6)			X	< 0.00005						1	mg/L				
3P. β-BHC (319-85-7)			X	< 0.00005						1	mg/L				
4P. γ-BHC (58-89-9)			X	< 0.00005						1	mg/L				
5P. δ-BHC (319-86-8)			X	< 0.00005						1	mg/L				
6P. Chlordane (57-74-9)			X	< 0.001						1	mg/L				
7P. 4,4'-DDT (50-29-3)			X	< 0.00005						1	mg/L				
8P. 4,4'-DDE (72-55-9)			X	< 0.00005						1	mg/L				
9P. 4,4'-DDD (72-54-8)			X	< 0.00005						1	mg/L				
10P. Dieldrin (60-57-1)			X	< 0.00005						1	mg/L				
11P. α-Enosulfan (115-29-7)			X	< 0.00005						1	mg/L				
12P. β-Endosulfan (115-29-7)			X	< 0.00005						1	mg/L				
13P. Endosulfan Sulfate (1031-07-8)			X	< 0.00005						1	mg/L				
14P. Endrin (72-20-8)			X	< 0.00005						1	mg/L				
15P. Endrin Aldehyde (7421-93-4)			X	< 0.00005						1	mg/L				
16P. Heptachlor (76-44-8)			X	< 0.00005						1	mg/L				

CONTINUE ON PAGE V-9

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA0026557	001

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X	< 0.00005						1	mg/L				
18P. PCB-1242 (53469-21-9)			X	< 0.0005						1	mg/L				
19P. PCB-1254 (11097-69-1)			X	< 0.0005						1	mg/L				
20P. PCB-1221 (11104-28-2)			X	< 0.0005						1	mg/L				
21P. PCB-1232 (11141-16-5)			X	< 0.0005						1	mg/L				
22P. PCB-1248 (12672-29-6)			X	< 0.0005						1	mg/L				
23P. PCB-1260 (11096-82-5)			X	< 0.0005						1	mg/L				
24P. PCB-1016 (12674-11-2)			X	< 0.0005						1	mg/L				
25P. Toxaphene (8001-35-2)			X	< 0.001						1	mg/L				

Altria
Altria Client Services

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JAN 07 2009
PRO

January 5, 2009

Ms. Jamie L. Bauer, Environmental Specialist II
Virginia Department of Environmental Quality
Piedmont Regional Office
4949 A Cox Road
Glen Allen, Virginia 23060

Dear Ms. Bauer:

On behalf of Philip Morris USA, enclosed is an update to the VPDES Permit Application Addendum with information to correct the "entity to whom the permit is to be issued". Philip Morris USA Inc. is this entity. Also enclosed is an updated Form 2C with the corrections you requested. Changes have been made to the following sections:

Section V.A.1.b.c, and g (Page V-1): Number of analyses performed for COD, TOC and Summer Temperature, as requested in Section V.A.2.d.

Section V.A.1.g (Page V-1): Data for the Winter Temperature of the effluent.

Section V.B.1.h: Number of analyses performed for Oil & Grease, as requested in Section V.B.3.d.

Should you have any questions regarding this submission, please call me at (804) 274-2253 or by e-mail at mark.c.davis@altria.com. Thank you for your assistance.

Sincerely,

Mark Davis
Associate Research Scientist

enclosures

VPDES Permit Application Addendum

1. **Entity to whom the permit is to be issued**: Philip Morris USA Inc.
Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. **Is this facility located within city or town boundaries? No**

3. **Provide the tax map parcel number for the land where the discharge is located.** 836652920900000

4. **For the facility to be covered by this permit, how many acres will be disturbed during the next fine years due to new construction activities? None**

5. **What is the design average effluent flow of this facility?** 2.9 MGD
For industrial facilities, provide the max. 30-day average production level, include units:

In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? No
If "Yes", please identify the other flow tiers (in MGD) or production levels:

_____

Please consider the following questions for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

6. **Nature of operations generating wastewater**:
Reconstituted Tobacco Leaf Manufacturing

_0_% of flow from domestic connections/sources
Number of private residences to be served by the treatment works:

100 % of flow from non-domestic connections/sources

7. **Mode of discharge**: __**X**__Continuous ____Intermittent ____Seasonal
Describe frequency and duration of intermittent or seasonal discharges:

_____

8. **Identify the characteristics of the receiving stream at the point just above the facility's discharge point:**
X Permanent stream, never dry
__ Intermittent stream, usually flowing, sometimes dry
__ Ephemeral stream, wet-weather flow, often dry
__ Effluent-dependent stream, usually or always dry without effluent flow
__ Lake or pond at or below the discharge point
__ Other:_____

9. **Approval Date(s)**: Industrial
O & M Manual ____N/A_____ **Sludge/Solids Management Plan** __N/A_____

Have there been any changes in your operations or procedures since the above approval dates? **No**

Philip Morris USA Inc. Update 01-05-2009

REVISED

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*) VA0026557

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM 2C NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	37	20	25	77	16	56	JAMES RIVER

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUT-FALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	WATER TREATMENT	0.13 MGD	SEE ATTACHEMENT E - FLOWS		
	BACKWASH - WATER TREATMENT	0.04 MGD	SOURCES OF POLLUTION,		
	PRODUCTION LINES I, II, III	1.07 MGD	AND TREATMENT		
	POWER HOUSE	0.29 MGD	TECHNOLOGIES		

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

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CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ YES (*complete the following table*) ☑ NO (*go to Section III*)

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK (*specify average*)	b. MONTHS PER YEAR (*specify average*)	a. FLOW RATE (*in mgd*)		B. TOTAL VOLUME (*specify with units*)		C. DURATION (*in days*)
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES (*complete Item III-B*) ☑ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☐ YES (*complete Item III-C*) ☑ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (*list outfall numbers*)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

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CONTINUED FROM PAGE 2

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VA0026557

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
NONE			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

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VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☑ YES (*identify the test(s) and describe their purposes below*) ☐ NO (*go to Section VIII*)

03/07/2005 LC50 = > 98.6%
03/06/2006 LC50 = > 100.0%
03/12/2007 LC50 = 59.0%
03/11/2008 LC50 = > 100.0%

Species Test	Species
Acute	Ceriodaphnia dubia

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
Microbac Laboratories, Inc Richmond Divison	2028 Dabney Road Suite E-17 Richmond, Va 23230	804-353-1999 www.microbac.com	E. Coli, Coliform, dioxin, volatile and semi-volatile organics, chloride, nitrate, radiologicals, Herbicides, pesticides, alpha, beta, metals, cyanide
Severn Trent Laboratories, Inc STL-Savannah	5102 LaRoche Avenue Savannah, Ga 31404	912-354-7858 www.stl-inc.com	Methoxychlor, kepone, ammonia

IX. CERTIFICATION

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

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
Gary R. Ruth; Sr. Vice President - Manufacturing Ops.	(804) 274-5085
C. SIGNATURE	D. DATE SIGNED

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PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): VA0026557

Philip Morris USA Inc. Update 01-05-2009

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 001

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	2. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	2. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	2. EFFLUENT d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. UNITS (*specify if blank*) b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (*optional*) b. NO. OF ANALYSES
a. Biochemical Oxygen Demand *(CBOD5)*	11	202	9	143	7	87.6	52	mg/L	lb/day			
b. Chemical Oxygen Demand (*COD*)	150	2754					1	mg/L	lb/day			
c. Total Organic Carbon (*TOC*)	51	936					1	mg/L	lb/day			
d. Total Suspended Solids (*TSS*)	18.5	290	7.8	124	5.4	67.6	156	mg/L	lb/day			
e. Ammonia (*as N*)	0.51	8.1	0.40	6.3	0.302	3.78	52	mg/L	lb/day			
f. Flow	VALUE 2.2		VALUE 1.9		VALUE 1.5		365	MGD		VALUE		
g. Temperature (*winter*)	VALUE 11.2		VALUE		VALUE		1	°C		VALUE		
h. Temperature (*summer*)	VALUE 25.4		VALUE		VALUE		1	°C		VALUE		
i. pH	MINIMUM 6.54	MAXIMUM 8.06	MINIMUM 7.61	MAXIMUM 7.95			365	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*) b. NO. OF ANALYSES
a. Bromide (24959-67-9)	X		0.9						1	mg/L				
b. Chlorine, Total Residual		X	< 0.10						26	mg/L				
c. Color	X		156						1	APHA unit				
d. Fecal Coliform	X		33						1	MPN/100mL				
e. Fluoride (16984-48-8)		X	<0.20						1	mg/L				
f. Nitrate-Nitrite (*as N*)	X		1.36	24.9					1	mg/L	lb/day			

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CONTINUE ON REVERSE

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		17.8	238	15.5	237	11.6	148	52	mg/L	lb/day			
h. Oil and Grease	X		19	349					1	mg/l	lb/day			
i. Phosphorus (as P), Total (7723-14-0)	X		2.01	28.2	1.61	23	0.84	11	24	mg/L	lb/day			
j. Radioactivity														
(1) Alpha, Total		X	< 13.4						1	pCi/L				
(2) Beta, Total	X		599						1	pCi/L				
(3) Radium, Total	X		< 1.0						1	pCi/L				
(4) Radium 226, Total	X		< 1.0						1	pCi/L				
k. Sulfate (*as SO_4*) (14808-79-8)	X		167	3,066					1	mg/L	lb/day			
l. Sulfide (*as S*)	X		2.8	51.4					1	mg/L	lb/day			
m. Sulfite (*as SO_3*) (14265-45-3)	X		2.0						1	mg/L				
n. Surfactants	X		0.019	0.349					1	mg/L	lb/day			
o. Aluminum, Total (7429-90-5)		X	< 0.05						1	mg/L				
p. Barium, Total (7440-39-3)		X	< 0.02						1	mg/L				
q. Boron, Total (7440-42-8)	X		0.120	2.2					1	mg/L	lb/day			
r. Cobalt, Total (7440-48-4)	X		0.0027	0.05					1	mg/L	lb/day			
s. Iron, Total (7439-89-6)	X		0.63	11.6					1	mg/L	lb/day			
t. Magnesium, Total (7439-95-4)	X		31	569					1	mg/L	lb/da			
u. Molybdenum, Total (7439-98-7)	X		0.034	0.624					1	mg/L	lb/da			
v. Manganese, Total (7439-96-5)	X		0.11	2.02					1	mg/L	lb/day			
w. Tin, Total (7440-31-5)		X	< 0.02						1	mg/L				
x. Titanium, Total (7440-32-6)		X	< 0.005						1	mg/L				

CONTINUE ON PAGE V-3

REVISED

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA0026557	001

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X	< 0.02						1	mg/L				
2M. Arsenic, Total (7440-38-2)			X	< 0.02						1	mg/L				
3M. Beryllium, Total (7440-41-7)			X	< 1.0						1	mg/L				
4M. Cadmium, Total (7440-43-9)			X	< 0.02						1	mg/L				
5M. Chromium, Total (7440-47-3)			X	< 0.02						1	mg/L				
6M. Copper, Total (7440-50-8)		X		0.05	0.92					1	mg/L	lb/day			
7M. Lead, Total (7439-92-1)			X	< 0.02						1	mg/L				
8M. Mercury, Total (7439-97-6)			X	< 0.0002						1	mg/L				
9M. Nickel, Total (7440-02-0)			X	< 0.02						1	mg/L				
10M. Selenium, Total (7782-49-2)			X	< 0.02						1	mg/L				
11M. Silver, Total (7440-22-4)			X	< 0.02						1	mg/L				
12M. Thallium, Total (7440-28-0)			X	< 1.0						1	mg/L				
13M. Zinc, Total (7440-66-6)		X		0.02	0.37					1	mg/L	lb/day			
14M. Cyanide, Total (57-12-5)			X	< 0.01						1	mg/L				
15M. Phenols, Total			X	< 0.005						1	mg/L				
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS DIOXIN SCREEN RESULTS: NEGATIVE											

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CONTINUE ON REVERSE

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X	< 0.025						1	mg/L				
2V. Acrylonitrile (107-13-1)			X	< 0.025						1	mg/L				
3V. Benzene (71-43-2)			X	< 0.005						1	mg/L				
4V. Bis (*Chloro-methyl*) Ether (542-88-1)			X	< 1.0						1	mg/L				
5V. Bromoform (75-25-2)			X	< 0.005						1	mg/L				
6V. Carbon Tetrachloride (56-23-5)			X	< 0.005						1	mg/L				
7V. Chlorobenzene (108-90-7)			X	< 0.005						1	mg/L				
8V. Chlorodi-bromomethane (124-48-1)		X		0.037	0.68					1	mg/L	lb/day			
9V. Chloroethane (75-00-3)			X	< 0.005						1	mg/L				
10V. 2-Chloro-ethylvinyl Ether (110-75-8)			X	< 0.005						1	mg/L				
11V. Chloroform (67-66-3)		X		0.326	5.99					1	mg/L	lb/day			
12V. Dichloro-bromomethane (75-27-4)		X		0.182	3.34					1	mg/L	lb/day			
13V. Dichloro-difluoromethane (75-71-8)			X	< 1.0						1	mg/L				
14V. 1,1-Dichloro-ethane (75-34-3)			X	< 0.005						1	mg/L				
15V. 1,2-Dichloro-ethane (107-06-2)			X	< 0.005						1	mg/L				
16V. 1,1-Dichloro-ethylene (75-35-4)			X	< 0.005						1	mg/L				
17V. 1,2-Dichloro-propane (78-87-5)			X	< 0.005						1	mg/L				
18V. 1,3-Dichloro-propylene (542-75-6)			X	< 0.005						1	mg/L				
19V. Ethylbenzene (100-41-4)			X	< 0.005						1	mg/L				
20V. Methyl Bromide (74-83-9)			X	< 0.005						1	mg/L				
21V. Methyl Chloride (74-87-3)			X	< 0.005						1	mg/L				

REVISED

CONTINUE ON PAGE V-5

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X	< 0.005						1	mg/L				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X	< 0.005						1	mg/L				
24V. Tetrachloro-ethylene (127-18-4)			X	< 0.005						1	mg/L				
25V. Toluene (108-88-3)			X	< 0.005						1	mg/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X	< 0.005						1	mg/L				
27V. 1,1,1-Trichloro-ethane (71-55-6)			X	< 0.005						1	mg/L				
28V. 1,1,2-Trichloro-ethane (79-00-5)			X	< 0.005						1	mg/L				
29V Trichloro-ethylene (79-01-6)			X	< 0.005						1	mg/L				
30V. Trichloro-fluoromethane (75-69-4)			X	< 0.005						1	mg/L				
31V. Vinyl Chloride (75-01-4)			X	< 0.005						1	mg/L				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X	< 0.005						1	mg/L				
2A. 2,4-Dichloro-phenol (120-83-2)			X	< 0.005						1	mg/L				
3A. 2,4-Dimethyl-phenol (105-67-9)			X	< 0.005						1	mg/L				
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X	< 0.005						1	mg/L				
5A. 2,4-Dinitro-phenol (51-28-5)			X	< 0.005						1	mg/L				
6A. 2-Nitrophenol (88-75-5)			X	< 0.005						1	mg/L				
7A. 4-Nitrophenol (100-02-7)			X	< 0.020						1	mg/L				
8A. P-Chloro-M-Cresol (59-50-7)			X	< 0.005						1	mg/L				
9A. Pentachloro-phenol (87-86-5)			X	< 0.020						1	mg/L				
10A. Phenol (108-95-2)			X	< 0.005						1	mg/L				
11A. 2,4,6-Trichloro-phenol (88-05-2)			X	< 0.005						1	mg/L				

CONTINUE ON REVERSE

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1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X	< 0.005						1	mg/L				
2B. Acenaphtylene (208-96-8)			X	< 0.005						1	mg/L				
3B. Anthracene (120-12-7)			X	< 0.005						1	mg/L				
4B. Benzidine (92-87-5)			X	< 0.005						1	mg/L				
5B. Benzo (*a*) Anthracene (56-55-3)			X	< 0.005						1	mg/L				
6B. Benzo (*a*) Pyrene (50-32-8)			X	< 0.005						1	mg/L				
7B. 3,4-Benzo-fluoranthene (205-99-2)			X	< 0.005						1	mg/L				
8B. Benzo (*ghi*) Perylene (191-24-2)			X	< 0.005						1	mg/L				
9B. Benzo (*k*) Fluoranthene (207-08-9)			X	< 0.005						1	mg/L				
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X	< 0.005						1	mg/L				
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X	< 0.005						1	mg/L				
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X	< 0.005						1	mg/L				
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X	< 0.005						1	mg/L				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X	< 0.005						1	mg/L				
15B. Butyl Benzyl Phthalate (85-68-7)			X	< 0.005						1	mg/L				
16B. 2-Chloro-naphthalene (91-58-7)			X	< 0.005						1	mg/L				
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X	< 0.005						1	mg/L				
18B. Chrysene (218-01-9)			X	< 0.005						1	mg/L				
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X	< 0.005						1	mg/L				
20B. 1,2-Dichloro-benzene (95-50-1)			X	< 0.005						1	mg/L				
21B. 1,3-Di-chloro-benzene (541-73-1)			X	< 0.005						1	mg/L				

CONTINUE ON PAGE V-7

REV/SD

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)			X	< 0.005						1	mg/L				
23B. 3,3-Dichloro-benzidine (91-94-1)			X	< 0.005						1	mg/L				
24B. Diethyl Phthalate (84-66-2)			X	< 0.005						1	mg/L				
25B. Dimethyl Phthalate (131 -11-3)			X	< 0.005						1	mg/L				
26B. Di-N-Butyl Phthalate (84-74-2)			X	< 0.005						1	mg/L				
27B. 2,4-Dinitro-toluene (121-14-2)			X	< 0.005						1	mg/L				
28B. 2,6-Dinitro-toluene (606-20-2)			X	< 0.005						1	mg/L				
29B. Di-N-Octyl Phthalate (117-84-0)			X	< 0.005						1	mg/L				
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)			X	< 0.005						1	mg/L				
31B. Fluoranthene (206-44-0)			X	< 0.005						1	mg/L				
32B. Fluorene (86-73-7)			X	< 0.005						1	mg/L				
33B. Hexachloro-benzene (118-74-1)			X	< 0.005						1	mg/L				
34B. Hexachloro-butadiene (87-68-3)			X	< 0.005						1	mg/L				
35B. Hexachloro-cyclopentadiene (77-47-4)			X	< 0.005						1	mg/L				
36B Hexachloro-ethane (67-72-1)			X	< 0.005						1	mg/L				
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X	< 0.005						1	mg/L				
38B. Isophorone (78-59-1)			X	< 0.005						1	mg/L				
39B. Naphthalene (91-20-3)			X	< 0.005						1	mg/L				
40B. Nitrobenzene (98-95-3)			X	< 0.005						1	mg/L				
41B. N-Nitro-sodimethylamine (62-75-9)			X	< 0.005						1	mg/L				
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X	< 0.005						1	mg/L				

CONTINUE ON REVERSE

REVISED

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)			X	< 0.005						1	mg/L				
44B. Phenanthrene (85-01-8)			X	< 0.005						1	mg/L				
45B. Pyrene (129-00-0)			X	< 0.005						1	mg/L				
46B. 1,2,4-Tri-chlorobenzene (120-82-1)			X	< 0.005						1	mg/L				
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X	< 0.00005						1	mg/L				
2P. α-BHC (319-84-6)			X	< 0.00005						1	mg/L				
3P. β-BHC (319-85-7)			X	< 0.00005						1	mg/L				
4P. γ-BHC (58-89-9)			X	< 0.00005						1	mg/L				
5P. δ-BHC (319-86-8)			X	< 0.00005						1	mg/L				
6P. Chlordane (57-74-9)			X	< 0.001						1	mg/L				
7P. 4,4'-DDT (50-29-3)			X	< 0.00005						1	mg/L				
8P. 4,4'-DDE (72-55-9)			X	< 0.00005						1	mg/L				
9P. 4,4'-DDD (72-54-8)			X	< 0.00005						1	mg/L				
10P. Dieldrin (60-57-1)			X	< 0.00005						1	mg/L				
11P. α-Endosulfan (115-29-7)			X	< 0.00005						1	mg/L				
12P. β-Endosulfan (115-29-7)			X	< 0.00005						1	mg/L				
13P. Endosulfan Sulfate (1031-07-8)			X	< 0.00005						1	mg/L				
14P. Endrin (72-20-8)			X	< 0.00005						1	mg/L				
15P. Endrin Aldehyde (7421-93-4)			X	< 0.00005						1	mg/L				
16P. Heptachlor (76-44-8)			X	< 0.00005						1	mg/L				

CONTINUE ON PAGE V-9

REVISED

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA0026557	001

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X	< 0.00005						1	mg/L				
18P. PCB-1242 (53469-21-9)			X	< 0.0005						1	mg/L				
19P. PCB-1254 (11097-69-1)			X	< 0.0005						1	mg/L				
20P. PCB-1221 (11104-28-2)			X	< 0.0005						1	mg/L				
21P. PCB-1232 (11141-16-5)			X	< 0.0005						1	mg/L				
22P. PCB-1248 (12672-29-6)			X	< 0.0005						1	mg/L				
23P. PCB-1260 (11096-82-5)			X	< 0.0005						1	mg/L				
24P. PCB-1016 (12674-11-2)			X	< 0.0005						1	mg/L				
25P. Toxaphene (8001-35-2)			X	< 0.001						1	mg/L				

Virginia Department of Environmental Quality Alternative Compliance Methods Request Form for VEEP E3 & E4 Facilities

Facility Name: Philip Morris USA – Park 500 Plant

Facility Contact: Blasé Keegel

Contact Phone and Email Address: 804-751-1974 blasé.a.keegel@pmusa.com

Type of VEEP Facility: E3 ___ E4 _X__

What is the current regulatory requirement that you are seeking to change and what process are you currently going through to meet that requirement?

Reduce Testing Frequencies

We currently staff our laboratory 7 days per week. We have had no permit violations over the past 25 years.

What is the alternative approach you are proposing? (Include timeframe implications for other environmental media or the community, etc.)

Reduce our sampling requirements to 5 days per week to allow flexibility in manpower schedules. Please see attached proposed sampling schedule.

Which permits (if any) at the facility will be affected by the proposed approach?

VA0026557

What are the expected benefits of the proposed approach to the facility?

Allows us to dedicate less staff to laboratory testing and maintain staffing in operations.

What are the expected benefits of the proposed approach to the environment? Explain how the proposed change would reduce one or more of the major environmental impacts described in your facility's EMS.

No expected negative impact on Water use or Nutrients, both of which are Significant Aspects of our EMS.

Today, there is an expectation that responsible companies will work to reduce the environmental impact of their business and promote the sustainability of the natural resources on which we all depend.

At Philip Morris USA, water is an important part of our environmental footprint. Our Park 500 tobacco processing facility in Chesterfield County, Va., withdraws about 1.8 million gallons of water directly from the James River each day. Water is used in our manufacturing processes and then treated in an on-site treatment plant before it is returned to the river. That treated wastewater contains substances like nitrogen and phosphorus that are present in agricultural products like tobacco.

The James River is a vital asset for our community and a major tributary to the Chesapeake Bay. Because high levels of nutrients can have an adverse impact on aquatic life, Park 500 has worked to voluntarily reduce its nitrogen loadings to the James River by 46 percent between 2001 and 2006 – though our nutrient discharges were well within state-permitted levels. Then we learned about engineered wetlands and saw an opportunity to do more.

When our Natural Treatment System is fully established – as early as the summer of 2009 – we expect to further reduce Park 500's nitrogen output by about 13 percent and phosphorus output by 34 percent. Thus far, we are really pleased with the water quality results we have seen and the new wildlife habitats that have been created right here in our backyard.

Our Natural Treatment System is believed to be the largest of its kind in Virginia, and it was made possible through the leadership and support of the Commonwealth of Virginia and the Virginia Department of Environmental Quality.

On behalf of all the employees of Philip Morris USA, I am proud to share with you this information about our project – an investment in the environment we all share.

Craig Johnson
President, Philip Morris USA

Natural Treatment System

By the Numbers

The six wetland cells comprise **48 acres.**

The entire natural treatment system site (including dry areas) is nearly **70 acres.**

Designed to process up to **2.0 million gallons per day.**

More than **150,000 native plants** were planted in the six cells of the Natural Treatment System, including bulrush, pickelweed, wool-grass, spikerush, arrow arum, duck potato, sweetflag and blueflag Iris.

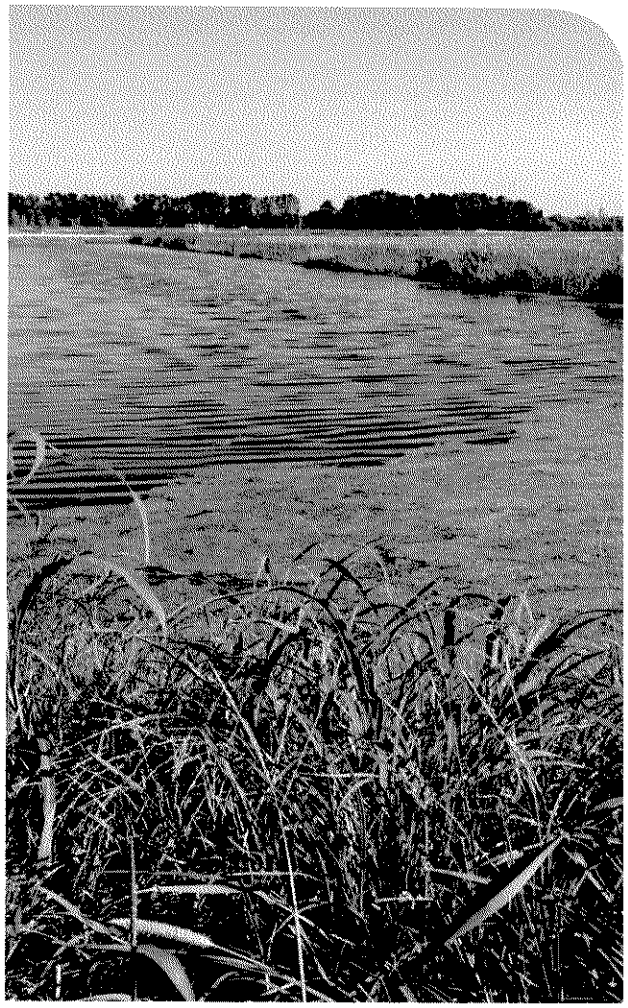
In the uplands, there are approximately **945 plants**, including more than **350 trees** such as Maple, Redbud, Dogwood, Cypress, Crabapple and others.

Since May 2008, more than **70 species** have been sighted, including deer, squirrels, groundhogs, raccoons, and many varieties of birds, toads and frogs.

The project took about **one year** to complete – from July 2007 – July 2008.

The total project cost was approximately **$7 million.**

PhilipMorrisUSA
an Altria Company



Natural Treatment System

48-acre engineered wetlands harnessing nature to reduce nutrient discharge

Park 500 Natural Dechlorination Test Plan

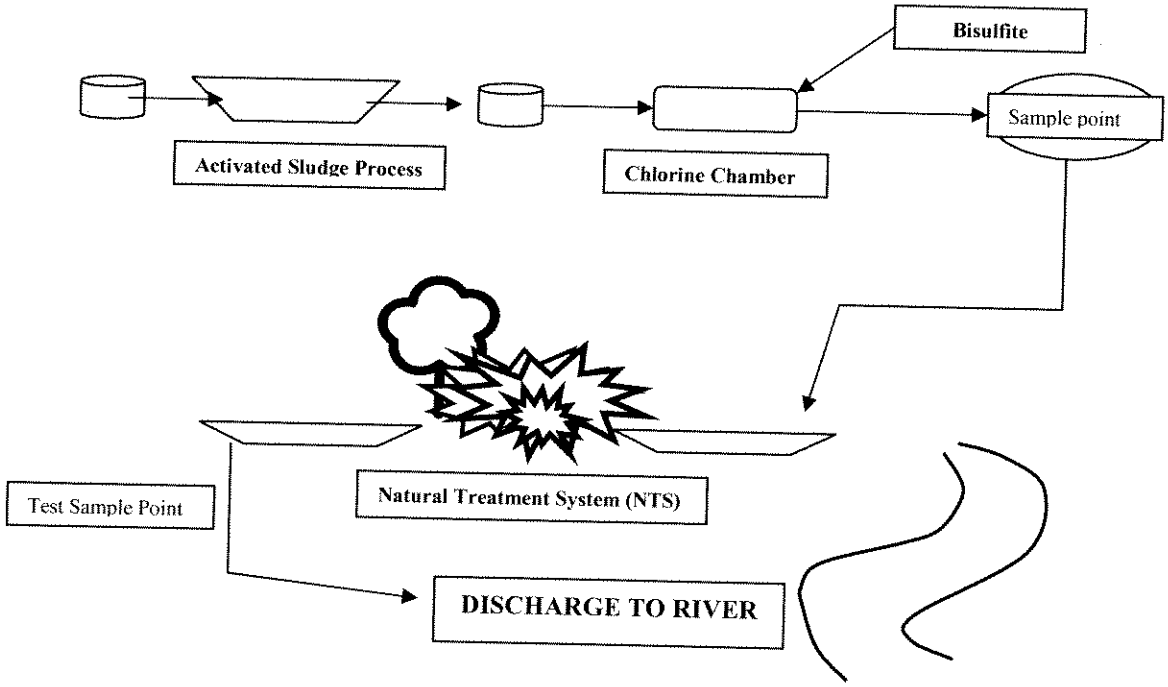
Executive Summary

Park 500 is currently meeting the residual chlorine limits of their permit with a chemical dechlorination system. This test plan proposes evaluating the Natural Treatment System (NTS) for the removal of chlorine via natural processes. The ultimate goal will be to eliminate the chemical dechlorination and continue to verify residual chlorine levels at the current discharge monitoring point.

System Description

Park 500 operates an activated sludge waste water treatment system and utilizes sodium hypochlorite for effluent disinfection. Residual chlorine is removed by sodium bisulfite addition. This process discharges to a 48 wetted acre Natural Treatment System (NTS) which polishes the effluent before it enters the James River. The treatment plant effluent is monitored to ensure that the discharge meets all permit limits. The NTS acts as a polishing system to further reduce nutrient and residual chlorine levels. The calculated volumetric retention time for the NTS is approximately 25 days. The system is represented in the diagram below:

SYSTEM DIAGRAM



Test Method

Park 500 would gradually reduce the addition of bisulfite to increase the residual chlorine levels at the discharge of the treatment plant (influent to the NTS) as described in the chart below. Park 500 would monitor the effluent from the NTS to ensure that the residual chlorine levels did not exceed 0.14 ppm, which is the current maximum average monthly discharge limit for residual chlorine. If the NTS effluent levels did exceed the 0.14 limit, the influent levels would be reduced by chemical means to the last level of testing that did not exceed the effluent limit, and the test would continue without increasing the influent levels any more. Should the maximum influent concentration of 3.5 ppm be achieved, and natural dechlorination is established, Park 500 would continue to monitor the NTS effluent for six (6) additional months to ensure that the NTS effluent would remain in compliance with the permit limits.

The test periods and influent residual chlorine levels are detailed in the below chart:

		RESIDUAL CHLORINE			
TIMELINE	Chemical Chlorine Control	NTS Influent (Test Limits in ppm)	Testing Frequency	NTS effluent (Test Limits in ppm)	Testing Frequency
7/01/09 - 8/31/09	Yes	1.0 - 1.5	Daily, M-F	0.14	Daily, M-F
9/01/09 - 10/31/09	Yes	1.5 - 2.5	Daily, M-F	0.14	Daily, M-F
11/01/09 - 12/31/09	Yes	2.5 - 3.5	Daily, M-F	0.14	Daily, M-F
1/01/10 - 6/30/10	No	1.0 - 3.5	Daily, M-F	0.14	Daily, M-F
7/01/10 and later	No	1.0 - 3.5	Daily, M-F	0.14	None

Park 500 would submit two (2) reports detailing the results of the testing. The first would be submitted in January of 2010 describing the results of the dechlorination testing, and the second would be submitted in August of 2010 describing the outcome of the test.

Desired Results

If the test proves that the Natural Treatment System is capable of naturally removing chlorine from influent with up to 3.5 ppm residual chlorine, then Park 500 would request that permit compliance be monitored by applying the 1.0-3.5 ppm limit to a measurement taken at the influent to the NTS (effluent of the treatment plant) with the knowledge that this action ensures that the effluent from the NTS to the river is well within the current limits.

Virginia Department of Environmental Quality Alternative Compliance Methods Request Form for VEEP E3 & E4 Facilities

Facility Name: Philip Morris USA – Park 500 Plant

Facility Contact: Blasé Keegel

Contact Phone and Email Address: 804-751-1974 blasé.a.keegel@pmusa.com

Type of VEEP Facility: E3 ___ E4 _X__

What is the current regulatory requirement that you are seeking to change and what process are you currently going through to meet that requirement?

Nutrient Reporting

The current requirement is to report nutrient discharges in both our individual and general nutrient permits. We currently report the same data for both permits.

What is the alternative approach you are proposing? (Include timeframe implications for other environmental media or the community, etc.)

Eliminate nutrient reporting in our individual permit.

Which permits (if any) at the facility will be affected by the proposed approach?

VA0026557

What are the expected benefits of the proposed approach to the facility?

Reporting data on one report.

What are the expected benefits of the proposed approach to the environment? Explain how the proposed change would reduce one or more of the major environmental impacts described in your facility's EMS.

Eliminates duplicative reporting.

Virginia Department of Environmental Quality Alternative Compliance Methods Request Form for VEEP E3 & E4 Facilities

Facility Name: Philip Morris USA – Park 500 Plant

Facility Contact: Blasé Keegel

Contact Phone and Email Address: 804-751-1974 blasé.a.keegel@pmusa.com

Type of VEEP Facility: E3 ___ E4 _X__

What is the current regulatory requirement that you are seeking to change and what process are you currently going through to meet that requirement?

Residual Chlorine in Effluent

Currently the requirement is met by a Sodium Bisulfite addition after the chlorine contact requirement has been met.

What is the alternative approach you are proposing? (Include timeframe implications for other environmental media or the community, etc.)

We propose utilizing the natural chlorine removal available through our recently constructed Natural Treatment System. Chlorine residual will be monitored at the inlet and outlet of the Natural Treatment System for a test period to ensure chlorine removal.
See attached test plan.

Which permits (if any) at the facility will be affected by the proposed approach?

VA0026557

What are the expected benefits of the proposed approach to the facility?

Reduced chemical addition costs.

What are the expected benefits of the proposed approach to the environment? Explain how the proposed change would reduce one or more of the major environmental impacts described in your facility's EMS.

Reduce the dissolved solids in the effluent by removing the addition of bisulfite to the effluent. Nutrient content of the effluent is a Significant Aspect of our EMS, and dissolved solids contain many micro-nutrients.

Philip Morris USA - Park 500
VEEP E4 Requested Monitoring Sample Requirements
November 19, 2008

Parameter #	Test Parameter	Current Frequency	Requested Frequency
002	pH	1/day	5/week (1/day, Monday to Friday)
005	Dechlorinated Effluent Total Residual Chlorine (CL2, TOTAL)	1/day	5/week (1/day, Monday to Friday)
213	Chlorinated Effluent Total Residual Chlorine (CL2, INST TECH)	1/day	5/week (1/day, Monday to Friday)
007	Dissolved Oxygen (DO)	1/day	5/week (1/day, Monday to Friday)
004	Total Suspended Solids (TSS)	3/week	1/week
159	Carbonaceous Biochemical Oxygen Demand (CBOD5)	1/week	2/Month
039	NH3-N (AMMONIA, AS N)	1/week	2/Month

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Altria Client Services

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PRO

December 17, 2008

Ms. Jamie Bauer
DEQ - Piedmont Regional Office
4949A Cox Road
Glen Allen, Virginia 23060

Dear Ms. Bauer:

On behalf of Philip Morris USA, enclosed is the monitoring data required by condition I.C.11 of their Permit, VA0026557 - Park 500 Plant. Should you have any questions, please contact Mark Davis at (804) 274-2253 or at mark.c.davis@altria.com.

Sincerely,

Charles T. Bridges
Staff Environmental Engineer

enclosure

ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]
DISSOLVED METALS						
7440-36-0	Antimony	200.7	20	< 20	G	1/5 YR
7440-38-2	Arsenic	200.7	20	< 20	G	1/5 YR
7440-39-3	Barium	200.7	20	< 20	G	1/5 YR (PWS)
7440-43-9	Cadmium	200.7	20	< 20	G	1/5 YR
16065-83-1	Chromium III [9]	200.7	20	< 20	G	1/5 YR
18540-29-9	Chromium VI [9]	200.7	20	< 20	G	1/5 YR
7440-50-8	Copper	200.7	20	50.0	G	1/5 YR
7439-89-6	Iron	200.7	20	630	G	1/5 YR (PWS)
7439-92-1	Lead	200.7	20	< 20	G	1/5 YR
7439-96-5	Manganese	200.7	20	110	G	1/5 YR (PWS)
7439-97-6	Mercury	245.1	0.20	< 0.20	G	1/5 YR
7440-02-0	Nickel	200.7	20	< 20	G	1/5 YR
7782-49-2	Selenium	200.7	20	< 20	G	1/5 YR
7440-22-4	Silver	200.7	20	< 20	G	1/5 YR
7440-28-0	Thallium	200.7	1.0	< 1.0		1/5 YR
7440-66-6	Zinc	200.7	10	20	G	1/5 YR
PESTICIDES/PCB'S						
309-00-2	Aldrin	608	0.05	< 0.05	G	1/5 YR
57-74-9	Chlordane	608	1.0	< 1.0	G	1/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	622	2.1	< 2.1	G	1/5 YR
72-54-8	DDD	608	0.05	< 0.05	G	1/5 YR
72-55-9	DDE	608	0.05	< 0.05	G	1/5 YR
50-29-3	DDT	608	0.05	< 0.05	G	1/5 YR
8065-48-3	Demeton	622	2.1	< 2.1	G	1/5 YR
94-75-7	2,4 Dichlorophenoxy acetic acid (synonym = 2,4-D)	SW846/8151A	0.20	< 0.20	G	1/5 YR
60-57-1	Dieldrin	608	0.05	< 0.05	G	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]
959-98-8	Alpha-Endosulfan	608	0.05	< 0.05	G	1/5 YR
33213-65-9	Beta-Endosulfan	608	0.05	< 0.05	G	1/5 YR
1031-07-8	Endosulfan Sulfate	608	0.05	< 0.05	G	1/5 YR
72-20-8	Endrin	608	0.05	< 0.05	G	1/5 YR
7421-93-4	Endrin Aldehyde	608	0.05	< 0.05	G	1/5 YR
86-50-0	Guthion	622	3.1	< 3.1	G	1/5 YR
76-44-8	Heptachlor	608	0.05	< 0.05	G	1/5 YR
1024-57-3	Heptachlor Epoxide	608	0.05	< 0.05	G	1/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	0.05	< 0.05	G	1/5 YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	0.05	< 0.05	G	1/5 YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	0.05	< 0.05	G	1/5 YR
143-50-0	Kepone	8081A	1.0	< 1.0	G	1/5 YR
121-75-5	Malathion	622	2.1	< 2.1	G	1/5 YR
72-43-5	Methoxychlor	8081A	0.50	< 0.50	G	1/5 YR
2385-85-5	Mirex	8081A	1.0	< 1.0	G	1/5 YR
56-38-2	Parathion	622	2.1	< 2.1	G	1/5 YR
11096-82-5	PCB 1260	608	0.50	< 0.50	G	1/5 YR
11097-69-1	PCB 1254	608	0.50	< 0.50	G	1/5 YR
12672-29-6	PCB 1248	608	0.50	< 0.50	G	1/5 YR
53469-21-9	PCB 1242	608	0.50	< 0.50	G	1/5 YR
11141-16-5	PCB 1232	608	0.50	< 0.50	G	1/5 YR
11104-28-2	PCB 1221	608	0.50	< 0.50	G	1/5 YR
12674-11-2	PCB 1016	608	0.50	< 0.50	G	1/5 YR
1336-36-3	PCB Total	608	7.0	< 7.0	G	1/5 YR
8001-35-2	Toxaphene	608	1.0	< 1.0	G	1/5 YR
93-72-1	2-(2,4,5-Trichlorophenoxy) propionic acid (synonym = Silvex)	SW846/8151A	0.20	< 0.20	G	1/5 YR
BASE NEUTRAL EXTRACTABLES						
83-32-9	Acenaphthene	625	5.0	< 5.0	G	1/5 YR
120-12-7	Anthracene	625	5.0	< 5.0	G	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]
92-87-5	Benzidine	625	5.0	< 5.0	G	1/5 YR
56-55-3	Benzo (a) anthracene	625	5.0	< 5.0	G	1/5 YR
205-99-2	Benzo (b) fluoranthene	625	5.0	< 5.0	G	1/5 YR
207-08-9	Benzo (k) fluoranthene	625	5.0	< 5.0	G	1/5 YR
50-32-8	Benzo (a) pyrene	625	5.0	< 5.0	G	1/5 YR
111-44-4	Bis 2-Chloroethyl Ether	625	5.0	< 5.0	G	1/5 YR
39638-32-9	Bis 2-Chloroisopropyl Ether	625	5.0	< 5.0	G	1/5 YR
85-68-7	Butyl benzyl phthalate	625	5.0	< 5.0	G	1/5 YR
91-58-7	2-Chloronaphthalene	625	5.0	< 5.0	G	1/5 YR
218-01-9	Chrysene	625	5.0	< 5.0	G	1/5 YR
53-70-3	Dibenz(a,h)anthracene	625	5.0	< 5.0	G	1/5 YR
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	5.0	< 5.0	G	1/5 YR
95-50-1	1,2-Dichlorobenzene	624	5.0	< 5.0	G	1/5 YR
541-73-1	1,3-Dichlorobenzene	624	5.0	< 5.0	G	1/5 YR
106-46-7	1,4-Dichlorobenzene	624	5.0	< 5.0	G	1/5 YR
91-94-1	3,3-Dichlorobenzidine	625	5.0	< 5.0	G	1/5 YR
84-66-2	Diethyl phthalate	625	5.0	< 5.0	G	1/5 YR
117-81-7	Di-2-Ethylhexyl Phthalate	625	5.0	< 5.0	G	1/5 YR
131-11-3	Dimethyl phthalate	625	5.0	< 5.0	G	1/5 YR
121-14-2	2,4-Dinitrotoluene	625	5.0	< 5.0	G	1/5 YR
206-44-0	Fluoranthene	625	5.0	< 5.0	G	1/5 YR
86-73-7	Fluorene	625	5.0	< 5.0	G	1/5 YR
118-74-1	Hexachlorobenzene	625	5.0	< 5.0	G	1/5 YR
87-68-3	Hexachlorobutadiene	625	5.0	< 5.0	G	1/5 YR
77-47-4	Hexachlorocyclopentadiene	625	5.0	< 5.0	G	1/5 YR
67-72-1	Hexachloroethane	625	5.0	< 5.0	G	1/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	5.0	< 5.0	G	1/5 YR
78-59-1	Isophorone	625	5.0	< 5.0	G	1/5 YR
98-95-3	Nitrobenzene	625	5.0	< 5.0	G	1/5 YR
62-75-9	N-Nitrosodimethylamine	625	5.0	< 5.0	G	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]
621-64-7	N-Nitrosodi-n-propylamine	625	5.0	< 5.0	G	1/5 YR
86-30-6	N-Nitrosodiphenylamine	625	5.0	< 5.0	G	1/5 YR
129-00-0	Pyrene	625	5.0	< 5.0	G	1/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	5.0	< 5.0	G	1/5 YR
	VOLATILES					
107-02-8	Acrolein	624	25	< 25	G	1/5 YR
107-13-1	Acrylonitrile	624	25	< 25	G	1/5 YR
71-43-2	Benzene	624	5.0	< 5.0	G	1/5 YR
75-25-2	Bromoform	624	5.0	< 5.0	G	1/5 YR
56-23-5	Carbon Tetrachloride	624	5.0	< 5.0	G	1/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	5.0	< 5.0	G	1/5 YR
124-48-1	Chlorodibromomethane	624	5.0	37	G	1/5 YR
67-66-3	Chloroform	624	5.0	326	G	1/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	5.0	< 5.0	G	1/5 YR
75-27-4	Dichlorobromomethane	624	5.0	182	G	1/5 YR
107-06-2	1,2-Dichloroethane	624	5.0	< 5.0	G	1/5 YR
75-35-4	1,1-Dichloroethylene	624	5.0	< 5.0	G	1/5 YR
156-60-5	1,2-trans-dichloroethylene	624	5.0	< 5.0	G	1/5 YR
78-87-5	1,2-Dichloropropane	624	5.0	< 5.0	G	1/5 YR
542-75-6	1,3-Dichloropropene	624	5.0	< 5.0	G	1/5 YR
100-41-4	Ethylbenzene	624	5.0	< 5.0	G	1/5 YR
74-83-9	Methyl Bromide	624	5.0	< 5.0	G	1/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	624	5.0	< 5.0	G	1/5 YR
127-18-4	Tetrachloroethylene	624	5.0	< 5.0	G	1/5 YR
10-88-3	Toluene	624	5.0	< 5.0	G	1/5 YR
79-00-5	1,1,2-Trichloroethane	624	5.0	< 5.0	G	1/5 YR
79-01-6	Trichloroethylene	624	5.0	< 5.0	G	1/5 YR
75-01-4	Vinyl Chloride	624	5.0	< 5.0	G	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]
	RADIONUCLIDES					
	Strontium 90 (pCi/L)	905.0m	2	< 2	G	1/5 YR
	Tritium (pCi/L)	906.0	1000	< 1000	G	1/5 YR
	Beta Particle & Photon Activity (pCi/L)	900.0	10.6 pCi/L	599 pCi/L	G	1/5 YR
	Gross Alpha Particle Activity (pCi/L)	900.0	13.4	< 13.4	G	1/5 YR
	ACID EXTRACTABLES [6] < 0.05					
95-57-8	2-Chlorophenol	625	5.0	< 5.0	G	1/5 YR
120-83-2	2,4 Dichlorophenol	625	5.0	< 5.0	G	1/5 YR
105-67-9	2,4 Dimethylphenol	625	5.0	< 5.0	G	1/5 YR
51-28-5	2,4-Dinitrophenol	625	20.0	< 20.0	G	1/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	625	20.0	< 20.0	G	1/5 YR
87-86-5	Pentachlorophenol	625	20.0	< 20.0	G	1/5 YR
108-95-2	Phenol [7]	625	5.0	< 5.0	G	1/5 YR
88-06-2	2,4,6-Trichlorophenol	625	5.0	< 5.0	G	1/5 YR
	MISCELLANEOUS					
	Ammonia as NH3-N	350.1	30.0	471	C	1/5 YR
16887-00-6	Chlorides (mg/L)	SM18/ 4500-Cl E	9	351	C	1/5 YR (FW and PWS)
7782-50-5	Chlorine Produced Oxidant	SM18/ 4500-Cl G	0.10	0.90	G	1/5 YR (SW)
7782-50-5	Chlorine, Total Residual (mg/L)	SM18/ 4500-Cl G	0.10	0.90	G	1/5 YR
57-12-5	Cyanide, Total	SM18/ 4500-CN C&E	10.0	< 10.0	G	1/5 YR
122-66-7	1,2-Diphenylhydrazine	625	5.0	< 5.0	G	1/5 YR (PWS)
1746-01-6	Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) (ppq)	1613	0.00001	< 0.00001	G	1/5 YR [Paper Mills & Oil Refineries]
N/A	*E. coli / Enterococcus* (N/CML)	SM20/9223B	1	3	G	1/5 YR
N/A	Foaming Agents (as MBAS)	SM18 5540C	10.0	19.0	G	1/5 YR (PWS)
7783-06-4	Hydrogen Sulfide (mg/L)	SM18/4500-S-2 F	0.5	2.8	G	1/5 YR
14797-55-8	Nitrate as N (mg/L)	SM18/4500NO3 F&NO2B-NO2B	0.02	1.34	G	1/5 YR (PWS)
N/A	Sulfate (mg/L)	SM15/426C	20	167	G	1/5 YR (PWS)
N/A	Total Dissolved Solids (mg/L)	SM18/2540 C	10	2190	G	1/5 YR (PWS)
60-10-5	Tributyltin [8] (ng/L)	NBSR 85-3295	30	< 30	G	1/5 YR

Name of Principal Exec. Officer or Authorized Agent/Title

Signature of Principal Officer or Authorized Agent/Date 12/18/08

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

FOOTNOTES:

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

Units for the quantification level are micrograms/liter unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

(2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period.

Composite samples for base/neutral/acid compounds, PCBs, and pesticides must be collected as 4 individual grab samples at 6-hour intervals over the course of one day. Grab samples must be analyzed separately and the concentrations averaged. Alternately, grab samples may be collected in the field and composited in the laboratory if the compositing procedure produces results equivalent to results produced by arithmetic averaging of the results of analysis of individual grab samples.

(3) Frequency: 1/5 YR = once after the start of the third year from the permit's effective date but 180 days prior to permit expiration.

(4) A specific analytical method is not specified. An appropriate method shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

Metal	Analytical Method
Antimony	200.7; 1639; 1638; 200.8; 200.9
Arsenic	200.7; 200.9; 200.8; 1632
Barium	200.7; 200.8 (PWS)
Cadmium	200.7; 200.9; 200.8; 1638; 1639; 1637; 1640
Chromium[9]	200.7; 218.2; 200.9; 1639; 200.8
Chromium VI	218.6; 1636
Copper	200.7; 200.9; 1638; 1640; 200.8

Iron	200.7; 200.9 (PWS)
Lead	200.7; 200.9; 200.8; 1638; 1637; 1640
Manganese	200.7; 200.9; 200.8 (PWS)
Mercury	200.7; 245.1; 200.8; 1631; 245.2; 245.7
Nickel	200.7; 1639; 200.9; 1638; 200.8; 1640
Selenium	200.7; 200.8; 1638; 1639; 200.9
Silver	200.7; 200.9; 1638; 200.8
Zinc	200.7; 1638; 1639; 200.8; 289.2

(5) Any approved method presented in 40 CFR Part 136.

(6) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

(7) Testing for phenol requires continuous extraction.

(8) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1996].

(9) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].

The lab may use SW846 Method 8270C provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270C

Bauer,Jaime

From: Davis, Mark [Mark.C.Davis@altria.com]
Sent: Tuesday, December 30, 2008 11:32 AM
To: Bauer,Jaime
Cc: Nobinger, Tony M; Patel, Chandra A
Subject: RE: VA0026557 - VPDES permit application review
Attachments: PK5 2008 12 Lab Data for Virginia DEQ for Condition I.C.11 for Permit VA0026557 12-30-2008.pdf

Confidential

Jaime, Here is the lab data that you requested on our submittal. Please let me know if need anything else.

Thanks

Mark Davis

Altria Client Services
Environmental Compliance

804-274-2253 (O)
804-905-2253 (P)

Mark.C.Davis@Altria.com

From: Bauer,Jaime [mailto:jlbauer@deq.virginia.gov]
Sent: Monday, December 29, 2008 3:17 PM
To: Davis, Mark
Subject: VA0026557 - VPDES permit application review

Good afternoon, Mark,

I have been reviewing the VPDES permit application and the Water Quality Monitoring Data that was submitted during our meeting on December 18th. I was wondering if in addition to the Attachment A – Water Quality Monitoring Data forms if I could also get a copy of the lab sheets for the testing. A few questions have come up during the review and hopefully review to the lab sheets will resolve them.

Scanned or faxed copies would be great. My fax number is 804-527-5106. If you have any questions, please feel free to give me a call.

Jaime L. Bauer | Environmental Specialist II | DEQ Piedmont Regional Office | 804.527.5015 | jlbauer@deq.virginia.gov

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elab: www.microbacinternational.com/clientservices/elab

CERTIFICATE OF ANALYSIS

August 14, 2008

LAB#: 0807559

CLIENT: Philip Morris (Park 500)
P.O. Box 26603
Richmond VA, 23261-6603
Chandra Patel

PROJECT: Wetlands Testing 6_2008
PROJECT NO.: 3400006962
SAMPLED BY: Chad Cox
RECEIVED: 07/30/08

PARAMETER	PREP DATE/TIME	ANALYSIS DATE/TIME	METHOD	ANALYST
Color	8/6/08 8:35	8/6/08 8:35	SM18/2120 B	SS
EPA 300.0		8/4/08 0:00	EPA 300.0	TAR
Fecal Coliform	7/30/08 16:10	7/30/08 16:10	SM18/9221E	KLC
Fluoride	8/4/08 10:00	8/4/08 10:00	SM18/4500F C	TG
Sulfite	7/30/08 13:30	7/30/08 13:30	SM18/4500-SO3 B	CC
Tin	7/31/08 9:15	8/4/08 13:30	EPA 200.7	TG

LAB #	0807559-01	-	-	-		
SAMPLE ID	Outfall 001	-	-	-		
DATE/TIME	07/30/2008 13:30	-	-	-	Quant	
MATRIX	Water	-	-	-	Limit:	Units
Metals (Water)						
Tin	<0.02	-	-	-	0.02	mg/L
Microbiology (Water)						
Fecal Coliform	**33**	-	-	-	2	MPN/100 mL
Wet Chemistry (Water)						
Color	**156 [2]**	-	-	-	5	PCU
Fluoride	<0.20	-	-	-	0.20	mg/L
Sulfite	**2**	-	-	-	2	mg/L
Bromide	**0.9 [1]**	-	-	-	0.5	mg/L

Audrey Brubeck
Technical Manager

CERTIFICATIONS: VIRGINIA DRINKING WATER - 00150
NORTH CAROLINA DENR - 432
SOUTH CAROLINA DHEC - 93010001 & 93010002
MARYLAND DRINKING WATER - 279

Microbac

Notes and Definitions

1 = Microbac Labs, Camp Hill

2 = This test was performed outside of the EPA recommended holding time.

mg/L = milligrams per Liter
µg/L = micrograms per Liter
BQL = Below the Quantitation Limit
mg/kg = milligrams per kilogram
ppm = parts per million
CFU/mL = Colony forming units per milliliter
su = standard units
NTU = Nephelometric Turbidity Units
MPN/100 mL = Most Probable Number per 100 milliliters

Reported results relate only to the samples analyzed, as received by the laboratory.

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mlab. www.microbacrichmond.com/elements/

CERTIFICATE OF ANALYSIS

April 10, 2008

LAB#: 0804194

CLIENT: Philip Morris (Park 500)
P.O. Box 26603
Richmond VA, 23261-6603
Chandra Patel

PROJECT: Final Effluent
PROJECT NO.:
SAMPLED BY: Chandra Patel
RECEIVED: 04/08/08

Lab ID: 0804194-01 (Water)
Client ID: Final Effluent
Sampled Date/Time: 4/8/08 13:30

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Microbiology								
Total Coliform	1990	1	MPN/100 mL	4/8/08 15:45	4/8/08 15:45	SMD 9221B	KLC	
E. Coli	3	1	"	4/8/08 15:45	4/8/08 15:45	"	KLC	

Notes and Definitions

mg/L	milligrams per Liter	mg/kg	milligrams per Kilogram	su	standard units
ug/L	micrograms per Liter	ppm	parts per million	NTU	Nephelometric Turbidity Units
pCi/L	picocuries per Liter	CFU/mL	Colony forming units per milliliter	MPN/100ml	Most Probable Number per 100 milliliters
BQL	Below the Quantitation Limit				

Reported results relate only to the sample(s) analyzed as received by the laboratory.

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Audrey N Brubeck

Audrey Brubeck
Technical Manager

CERTIFICATIONS

VIRGINIA DEQ/DCLS 00178
NORTH CAROLINA 04202
SOUTH CAROLINA DHEC 93009 & 93010
MARYLAND DENR/PHL 271

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elab: www.microbacultimyld.com/methodtweb/

CERTIFICATE OF ANALYSIS

April 07, 2008

LAB#: 0803200

CLIENT: Philip Morris (Park 500)
P.O. Box 26603
Richmond VA, 23261-6603
Chandra Patel

PROJECT: Final Effluent
PROJECT NO.:
SAMPLED BY: C. Patel/A. Bennett
RECEIVED: 03/11/08

Audrey N Brubeck

Audrey Brubeck
Technical Manager

CERTIFICATIONS

VIRGINIA DRINKING WATER - 00108
NORTH CAROLINA DWP - 12
NORTH CAROLINA DWP - 12
MARYLAND DRINKING WATER - 220

For the laboratory concerning our services, please contact Vice President/Managing Director, Tommy Blank, President, at tblank@microbac.com, or Robert Nelson, Chief Operating Officer, at rnelson@microbac.com

Microbac

Lab ID: 0803200-01 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:00

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Dioxin								
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND	10	pg/L	3/18/08 0:00	3/27/08 4:39	EPA 1613	BAL	ps
Semivolatile Organic Compounds								
Acenaphthene	BQL	5	µg/L	3/13/08 16:30	3/25/08 22:40	EPA 625	DSK	
Acenaphthylene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Anthracene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Benzidine	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Benzo(a)anthracene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Benzo(b)fluoranthene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Benzo(k)fluoranthene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Benzo(g,h,i)perylene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Benzo(a)pyrene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Bis(2-chloroethoxy)methane	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Bis(2-chloroethyl)ether	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Bis(2-chloroisopropyl)ether	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Bis(2-ethylhexyl)phthalate	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
4-Bromophenylphenylether	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Butyl benzyl phthalate	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
4-Chloro-3-methylphenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2-Chloronaphthalene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2-Chlorophenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
4-Chlorophenylphenylether	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Chrysene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Dibenz(a,h)anthracene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Di-n-butyl phthalate	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
3,3'-Dichlorobenzidine	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2,4-Dichlorophenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Diethyl phthalate	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2,4-Dimethylphenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Dimethyl phthalate	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
4,6-Dinitro-2-methylphenol	BQL	20	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2,4-Dinitrophenol	BQL	20	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2,4-Dinitrotoluene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	

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Lab ID: 0803200-01 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:00

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Semivolatile Organic Compounds								
2,6-Dinitrotoluene	BQL	5	µg/L	3/13/08 16:30	3/25/08 22:40	EPA 625	DSK	
Di-n-octyl phthalate	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Fluoranthene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Fluorene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Hexachlorobenzene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Hexachlorobutadiene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Hexachlorocyclopentadiene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Hexachloroethane	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Indeno(1,2,3-cd)pyrene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Isophorone	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Naphthalene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Nitrobenzene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2-Nitrophenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
4-Nitrophenol	BQL	20	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
N-Nitrosodimethylamine	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
N-Nitrosodiphenylamine	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
N-Nitroso-di-n-propylamine	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Pentachlorophenol	BQL	20	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Phenanthrene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Phenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Pyrene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
1,2,4-Trichlorobenzene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2,4,6-Trichlorophenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
1,2-Diphenylhydrazine (Azobenzene)	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Wet Chemistry								
Ammonia-Nitrogen	0.40	0.05	mg/L	3/17/08 16:26	3/17/08 16:26	SM18 4500-NH3 H	JCM	
Chloride	351	9	"	3/11/08 15:30	3/11/08 16:27	SM18 4500-Cl E	JCM	
Chlorine	0.9	0.1	"	3/11/08 14:30	3/11/08 14:30	SM18 4500-Cl G	TG	Initial
Hexavalent Chromium	BQL	0.01	"	3/11/08 13:30	3/11/08 13:30	SM18 3500-Cr D	TG	
Hardness (EDTA)	324	10.0	"	3/28/08 16:00	3/28/08 16:00	SM18 2340 C	ARS	
Nitrite-Nitrogen	0.02	0.02	"	3/11/08 13:30	3/11/08 13:30	SM18 4500-NO2 B	TG	
Nitrate-Nitrogen	1.34	0.02	"	3/12/08 12:12	3/13/08 12:11	SM18 4500-NO3 F & NO2B-NO3B	TG	

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Lab ID: 0803200-01 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:00

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Wet Chemistry								
Nitrate+Nitrite/Nitrogen	1.36	0.02	mg/L	3/12/08 10:12	3/13/08 12:11	SM18 4500-NO3 H & NO2 B	JG	
Sulfate	167	20.0	"	3/13/08 15:30	3/13/08 15:30	SM18 4500	JCM	
Sulfide	2.8	0.5	"	3/18/08 15:00	3/18/08 15:00	SM18 4500 S-2 F	JCM	
Total Dissolved Solids	2190	10.0	"	3/18/08 14:10	3/18/08 14:10	SM18 2540 C	JCM	
Subcontracted Analysis (Benchmark Analytics)								
Tritium	10.01	1000	pCi/L	3/27/08 11:49	3/31/08 0:00	EPA 906.0	anb	A-01
Radiologicals								
Strontium-90	2	2	pCi/L			EPA 905.0	SLNJ	

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Lab ID: 0803200-02 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:10

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Tributyltin								
Tributyltin	<30	60	ng/L		3/14/08 16:59	MSSB 8S-1998	JS	m
Wet Chemistry								
Surfactants/MBAS	**0.019**	0.01	mg/L		3/12/08 13:30	SM14 5540C	SS	pr
Chlorinated Herbicides								
Acifluorfen	BQL	0.20	µg/L	3/14/08 9:00	3/20/08 23:42	SW846 8151A	DSK	
Bentazon	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Chloramben	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
2,4-D	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
DCPA	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
2,4-DB	**1.06**	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Dalapon	**2.35**	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Dicamba	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
3,5-Dichlorobenzoic acid	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Dichloroprop	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Dinoseb	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
MCPA	BQL	20.0	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
MCPP	BQL	20.0	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
4-Nitrophenol	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Pentachlorophenol	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Picloram	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
2,4,5-T	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
2,4,5-TP (Silvex)	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Organochlorine Pesticides								
Aldrin	BQL	0.05	µg/L	3/17/08 11:40	3/20/08 21:10	TPA 608	DSK	
alpha-BHC	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
beta-BHC	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
delta-BHC	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
gamma-BHC	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
4,4'-DDD	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
4,4'-DDE	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
4,4'-DDT	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	

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Lab ID: 0803200-02 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:10

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Organochlorine Pesticides								
Dieldrin	BQL	0.05	µg/L	3/17/08 11:40	3/20/08 21:10	EPA 608	DSK	
Endosulfan I	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Endosulfan II	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Endosulfan sulfate	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Endrin	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Endrin aldehyde	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Heptachlor	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Heptachlor epoxide	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Chlordane	BQL	1.00	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Toxaphene	BQL	1.00	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1016	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1221	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1232	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1242	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1248	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1254	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1260	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Subcontracted Analysis (Benchmark Analytics)								
Gross Alpha	BQL	13.4	pCi/L	3/18/08 8:30	3/22/08 0:00	EPA 900.0	sub	A,01
Gross Beta	899	10.6	"	3/18/08 8:30	3/21/08 0:00	"	sub	A,01
Organophosphorus Pesticides								
Chlorpyrifos	< 2.1	2.1	µg/L	3/17/08 8:50	3/21/08 19:39	EPA 622	MDH	a
Demeton	< 2.1	2.1	"	3/17/08 8:50	3/21/08 19:39	"	MDH	a
Guthion	< 3.1	3.1	"	3/17/08 8:50	3/21/08 19:39	"	MDH	a
Malathion	2.1	2.1	"	3/17/08 8:50	3/21/08 19:39	"	MDH	a
Diazinon	< 3.1	3.1	"	3/17/08 8:50	3/21/08 19:39	"	MDH	a
Parathion	< 2.1	2.1	"	3/17/08 8:50	3/21/08 19:39	"	MDH	a

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Lab ID: 0803200-03 (Water)
Client ID: Final Effluent-Filtered
Sampled Date/Time: 3/11/08 7:00

Analyte	Result	Clean Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Metals								
Silver	BQL	0.02	mg/L	3/12/08 10:45	3/13/08 12:30	EPA 200.7	TG	
Arsenic	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Barium	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Cadmium	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Chromium	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Copper	**0.05**	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Iron	**0.65**	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Mercury	BQL	0.0002	"	3/24/08 8:30	3/24/08 14:36	EPA 245.1	RM	
Manganese	**0.11**	0.02	"	3/12/08 10:45	3/13/08 11:00	EPA 200.7	TG	
Nickel	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Lead	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Antimony	BQL	0.02	"	3/12/08 10:45	3/25/08 15:00	"	TG	
Selenium	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Zinc	**0.02**	0.01	"	3/12/08 10:45	3/13/08 11:00	"	TG	

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Lab ID: 080320-04 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:15

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Microbiology								
Total Coliform	Present		per 100 mL	3/11/08 12:00	3/11/08 12:00	SM20/9223 B	KLC	
E. Coli	Present		"	3/11/08 12:00	3/11/08 12:00	"	KLC	
Volatile Organic Compounds								
Acrolein	BQL	25	µg/L	3/17/08 14:19	3/18/08 0:04	EPA 624	SS	
Acrylonitrile	BQL	25	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Benzene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Bromodichloromethane	**182**	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Bromoform	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Bromomethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Carbon tetrachloride	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Chlorobenzene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Chloroethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
2-Chloroethyl vinyl ether	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Chloroform	**326**	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Chloromethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Dibromochloromethane	**37**	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,2-Dichlorobenzene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,3-Dichlorobenzene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,4-Dichlorobenzene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,1-Dichloroethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,2-Dichloroethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
cis-1,2-Dichloroethene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,1-Dichloroethene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
trans-1,2-Dichloroethene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,2-Dichloropropane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
trans-1,3-Dichloropropene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
cis-1,3-Dichloropropene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Ethylbenzene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Methylene chloride	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,1,2,2-Tetrachloroethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Tetrachloroethene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Toluene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	

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Lab ID: 0803200-04 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:15

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Volatile Organic Compounds								
1,1,1-Trichloroethane	BQL	5	µg/L	3/17/08 14:19	3/18/08 0:04	EPA 624	SS	
1,1,2-Trichloroethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Trichloroethene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Trichlorofluoromethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Vinyl chloride	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Total Xylenes	BQL	15	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Wet Chemistry								
Cyanide	BQL	0.01	mg/L	3/21/08 11:45	3/21/08 14:00	SM18 4500-CN C&E	ABS	

Notes and Definitions

Z-01	** 5.10.36
Y-01	** - 328.1
un	Subcontracted to Universal Lab
pr	Subcontracted to Primary Lab
pa	Subcontracted to Pace Analytical
la	Subcontracted to Lancaster Laboratory
Hold1	This test was performed outside of the EPA recommended holding time.
gs	Subcontracted to General Analytics
A-01	** - 2.11
P	Present

mg/L =	milligrams per Liter	mg/kg	milligrams per kilogram	su	standard units
ug/L =	micrograms per Liter	ppm	parts per million	NTU	Nephelometric Turbidity Units
pCi/L	picocuries per Liter	CFU/mL =	Colony forming units per milliliter	MPN/100mL	Most Probable Number per 100 milliliters
BQL	Below the Quantitation Limit				

Reported results relate only to the samples analyzed, as received by the laboratory.

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Bauer,Jaime

From: Davis, Mark [Mark.C.Davis@altria.com]

Sent: Friday, March 13, 2009 12:27 PM

To: Bauer,Jaime

Subject: Update Data for PMUSA Park 500 Wastewater

Attachments: PK5 2009 03 Lab Data from Microbac Laboratories Inc for Sulfide, Mirex, Kepone 03-04-2009.pdf; PMUSA 2009 02 Lab Data forVirginia DEQ for Condition I.C. Update Microbac Certificate of Analysis to include Methoxychlor and Thallium 02-24-2009.pdf

Good Afternoon;

The attached files are updates on the earlier lab data that was sent. Please call me if you have any questions.

Thanks

Mark Davis

Altria Client Services
Environmental Compliance

804-335-2658 (O)
804-905-2253 (P)

Mark.C.Davis@Altria.com

Microbac Laboratories, Inc.
Richmond Division
2028 Dabney Road, Suite E-17 ● Richmond, VA 23230
Telephone (804) 353-1999 ● FAX (804) 353-0330 ● www.microbac.com
elab: www.microbacrichmond.com/elementweb/

CERTIFICATE OF ANALYSIS

March 13, 2009

LAB#: 0903035

CLIENT: Philip Morris (Park 500)
P.O. Box 26603
Richmond VA, 23261-6603
Chandra Patel

PROJECT: Final Eff./Permit
PROJECT NO.:
SAMPLED BY: Chandra Patel
RECEIVED: 03/04/09

PARAMETER	PREP DATE/TIME	ANALYSIS DATE/TIME	METHOD	ANALYST
Air, Water & Soil Laboratories, Inc. [1]				
Pesticides/PCB		3/9/09 23:15	SW846/8081A	RPF
Semivolatile Organics		3/12/09 12:52	SW846/8270D	JHV
Microbac Laboratories, Inc.- Richmond				
Sulfide	3/10/09 11:20	3/10/09 11:20	SM18/4500-S-2 F	KLC

LAB #	0903035-01	0903035-02	0903035-03	-		
SAMPLE ID	Final Effluent	Final Effluent	Final Effluent	-		
DATE/TIME	03/04/2009 12:40	03/04/2009 12:42	03/04/2009 12:43	-		
MATRIX	Water	Water	Water	-	Quant Limit:	Units
Wet Chemistry (Water)						
Sulfide, S^{2-} *	-	-	**2.1**	-	0.5	mg/L
Organochlorine Pesticides (Water)						
Mirex	-	<0.1	-	-	0.1	µg/L
Semivolatile Organic Compounds (Water)						
Kepone	<20	-	-	-	20	µg/L

Notes and Definitions

* Sulfide, H_2S 2.2 mg/L

mg/L = milligrams per Liter
µg/L = micrograms per Liter
BQL = Below the Quantitation Limit
mg/kg = milligrams per kilogram
ppm = parts per million
CFU/mL = Colony forming units per milliliter
su = standard units
NTU = Nephelometric Turbidity Units
MPN/100 mL = Most Probable Number per 100 milliliters

Reported results relate only to the samples analyzed, as received by the laboratory.
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Audrey Brubeck
Technical Manager

CERTIFICATIONS: VIRGINIA DRINKING WATER - 00150
MARYLAND DRINKING WATER - 279

For any feedback concerning our services, please contact the Managing Director or Trevor Boyce, President, at tboyce@microbac.com or Robert Morgan, Chief Operating Officer, at rmorgan@microbac.com.

Microbac Laboratories, Inc.
Richmond Division
2028 Dabney Road, Suite E-17 ■ Richmond, VA 23230
Telephone (804) 353-1999 ● FAX (804) 353-0330 ● www.microbac.com
elab. www.microbacrichmond.com/elementweb/

CERTIFICATE OF ANALYSIS

February 24, 2009 Reissued to include Methoxychlor and Thallium

LAB#: 0803200

CLIENT: Philip Morris (Park 500)
P.O. Box 26603
Richmond VA, 23261-6603
Chandra Patel

PROJECT: Final Effluent
PROJECT NO.:
SAMPLED BY: C. Patel/A. Bennett
RECEIVED: 03/11/08

Audrey N Brubeck

Audrey Brubeck
Technical Manager

CERTIFICATIONS: VIRGINIA DRINKING WATER - 00150
MARYLAND DRINKING WATER - 279

Microbac

Lab ID: 0803200-01 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:00

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Pace Analytical Services, Inc.								
Dioxin								
2,3,7,8-Tetrachlorodibenzo-p-dioxin	<10	10	pg/L	3/18/08 0:00	3/27/08 4:39	EPA 1613	BAL	pa
Microbac Laboratories, Inc., Richmond Division								
Semivolatile Organic Compounds								
Acenaphthene	BQL	5	µg/L	3/13/08 16:30	3/25/08 22:40	EPA 625	DSK	
Acenaphthylene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Anthracene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Benzidine	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Benzo(a)anthracene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Benzo(b)fluoranthene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Benzo(k)fluoranthene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Benzo(g,h,i)perylene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Benzo(a)pyrene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Bis(2-chloroethoxy)methane	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Bis(2-chloroethyl)ether	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Bis(2-chloroisopropyl)ether	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Bis(2-ethylhexyl)phthalate	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
4-Bromophenylphenylether	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Butyl benzyl phthalate	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
4-Chloro-3-methylphenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2-Chloronaphthalene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2-Chlorophenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
4-Chlorophenylphenylether	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Chrysene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Dibenz(a,h)anthracene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Di-n-butyl phthalate	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
3,3'-Dichlorobenzidine	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2,4-Dichlorophenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Diethyl phthalate	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2,4-Dimethylphenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Dimethyl phthalate	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
4,6-Dinitro-2-methylphenol	BQL	20	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2,4-Dinitrophenol	BQL	20	"	3/13/08 16:30	3/25/08 22:40	"	DSK	

Microbac

Lab ID: 0803200-01 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:00

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Microbac Laboratories, Inc., Richmond Division								
Semivolatile Organic Compounds								
2,4-Dinitrotoluene	BQL	5	µg/L	3/13/08 16:30	3/25/08 22:40	EPA 625	DSK	
2,6-Dinitrotoluene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Di-n-octyl phthalate	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Fluoranthene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Fluorene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Hexachlorobenzene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Hexachlorobutadiene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Hexachlorocyclopentadiene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Hexachloroethane	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Indeno(1,2,3-cd)pyrene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Isophorone	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Naphthalene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Nitrobenzene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2-Nitrophenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
4-Nitrophenol	BQL	20	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
N-Nitrosodimethylamine	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
N-Nitrosodiphenylamine	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
N-Nitroso-di-n-propylamine	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Pentachlorophenol	BQL	20	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Phenanthrene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Phenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Pyrene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
1,2,4-Trichlorobenzene	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
2,4,6-Trichlorophenol	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
1,2-Diphenylhydrazine (Azobenzene)	BQL	5	"	3/13/08 16:30	3/25/08 22:40	"	DSK	
Wet Chemistry								
Ammonia-Nitrogen	**0.40**	0.05	mg/L	3/17/08 10:26	3/17/08 10:26	SM18/4500-NH3 H	JCM	
Chloride	**351**	9	"	3/11/08 15:56	3/11/08 16:27	SM18/4500-Cl E	JCM	
Chlorine	**0.9**	0.1	"	3/11/08 14:30	3/11/08 14:30	SM18/4500-Cl G	TG	Hold1
Hexavalent Chromium	BQL	0.01	"	3/11/08 13:30	3/11/08 13:30	SM18/3500-Cr D	TG	
Hardness (EDTA)	**324**	10.0	"	3/28/08 16:00	3/28/08 16:00	SM18/2340 C	ABS	
Nitrite-Nitrogen	**0.02**	0.02	"	3/11/08 15:30	3/11/08 15:30	SM18/4500-NO2 B	TG	

Microbac

Lab ID: 0803200-01 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:00

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Microbac Laboratories, Inc., Richmond Division								
Wet Chemistry								
Nitrate-Nitrogen	1.34	0.02	mg/L	3/12/08 15:12	3/13/08 12:11	SM18-4500NO3F&NO2B-NO3B	TG	
Nitrate+Nitrite/Nitrogen	1.36	0.02	"	3/12/08 15:12	3/13/08 12:11	SM18/4500-NO3 F & NO2 B	TG	
Sulfate	167	20.0	"	3/13/08 15:30	3/13/08 15:30	SM15/426C	JCM	
Sulfide	2.8	0.5	"	3/18/08 15:00	3/18/08 15:00	SM18/4500-S-2 F	JCM	
Total Dissolved Solids	2190	10.0	"	3/18/08 14:10	3/18/08 14:10	SM18/2540 C	JCM	
Subcontracted Analysis (Benchmark Analytics)								
Tritium	BQL	1000	pCi/L	3/27/08 11:40	3/31/08 0:00	EPA 906.0	sub	V-01
General Engineering Laboratories								
Radiologicals								
Strontium-90	<2	2	pCi/L			EPA 905.0m	SLND	gc

Microbac

Lab ID: 0803200-02 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:10

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Universal Laboratories, Inc. [1]								
Tributyltin								
Tributyltin	<30	30	ng/L		3/14/08 16:59	NBSR 85-3295	JA	un
Primary Laboratories, Inc.								
Wet Chemistry								
Surfactants/MBAS	**0.019**	0.01	mg/L		3/12/08 13:30	SM18 5540C	AS	pr
Microbac Laboratories, Inc., Richmond Division								
Chlorinated Herbicides								
Acifluorfen	BQL	0.20	µg/L	3/14/08 9:00	3/20/08 23:42	SW846/8151A	DSK	
Bentazon	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Chloramben	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
2,4-D	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
2,4-DB	**1.06**	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
DCPA	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Dalapon	**2.35**	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Dicamba	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
3,5-Dichlorobenzoic acid	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Dichloroprop	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Dinoseb	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
MCPA	BQL	20.0	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
MCPP	BQL	20.0	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
4-Nitrophenol	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Pentachlorophenol	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Picloram	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
2,4,5-T	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
2,4,5-TP (Silvex)	BQL	0.20	"	3/14/08 9:00	3/20/08 23:42	"	DSK	
Organochlorine Pesticides								
Aldrin	BQL	0.05	µg/L	3/17/08 11:40	3/20/08 21:10	EPA 608	DSK	
alpha-BHC	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
beta-BHC	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
delta-BHC	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
gamma-BHC	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	

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Lab ID: 0803200-02 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:10

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Microbac Laboratories, Inc., Richmond Division								
Organochlorine Pesticides								
4,4'-DDD	BQL	0.05	µg/L	3/17/08 11:40	3/20/08 21:10	EPA 608	DSK	
4,4'-DDE	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
4,4'-DDT	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Dieldrin	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Endosulfan I	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Endosulfan II	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Endosulfan sulfate	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Endrin	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Endrin aldehyde	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Heptachlor	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Heptachlor epoxide	BQL	0.05	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Chlordane	BQL	1.00	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Toxaphene	BQL	1.00	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1016	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1221	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1232	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1242	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1248	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1254	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Aroclor 1260	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Methoxychlor	BQL	0.50	"	3/17/08 11:40	3/20/08 21:10	"	DSK	
Radiologicals, Benchmark Analytics								
Gross Alpha	BQL	13.4	pCi/L	3/18/08 8:30	3/22/08 0:00	EPA 900.0	sub	A-01
Gross Beta	**599**	10.6	"	3/18/08 8:30	3/22/08 0:00	"	sub	Z-01
Lancaster Laboratories								
Organophosphorus Pesticides								
Chlorpyrifos	<2.1	2.1	µg/L	3/17/08 8:50	3/21/08 19:39	EPA 622	MDH	1a
Demeton	<2.1	2.1	"	3/17/08 8:50	3/21/08 19:39	"	MDH	1a
Guthion	<3.1	3.1	"	3/17/08 8:50	3/21/08 19:39	"	MDH	1a
Malathion	<2.1	2.1	"	3/17/08 8:50	3/21/08 19:39	"	MDH	1a
Diazinon	<3.1	3.1	"	3/17/08 8:50	3/21/08 19:39	"	MDH	1a

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Lab ID: 0803200-02 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:10

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Lancaster Laboratories								
Organophosphorus Pesticides								
Parathion	<2.1	2.1	µg/L	3/17/08 8:50	3/21/08 19:39	EPA 622	MEH	fa

Microbac

Lab ID: 0803200-03 (Water)
Client ID: Final Effluent-Filtered
Sampled Date/Time: 3/11/08 7:00

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Microbac Laboratories, Inc., Richmond Division								
Metals								
Silver	BQL	0.02	mg/L	3/12/08 10:45	3/13/08 12:30	EPA 200.7	TG	
Arsenic	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Barium	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Cadmium	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Chromium	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Copper	**0.05**	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Iron	**0.63**	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Mercury	BQL	0.0002	"	3/24/08 8:30	3/24/08 14:36	EPA 245.1	JCM	
Manganese	**0.11**	0.02	"	3/12/08 10:45	3/13/08 11:00	EPA 200.7	TG	
Nickel	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Lead	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Antimony	BQL	0.02	"	3/12/08 10:45	3/19/08 15:00	"	TG	
Selenium	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Thallium	BQL	0.02	"	3/12/08 10:45	3/13/08 11:00	"	TG	
Zinc	**0.02**	0.01	"	3/12/08 10:45	3/13/08 11:00	"	TG	

Microbac

Lab ID: 0803200-04 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:15

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Microbac Laboratories, Inc., Richmond Division								
Microbiology								
Total Coliform	Present		per 100 mL	3/11/08 12:00	3/11/08 12:00	SM20-9223 B	KLC	
E. Coli	Present		"	3/11/08 12:00	3/11/08 12:00	"	KLC	
Volatile Organic Compounds								
Acrolein	BQL	25	µg/L	3/17/08 14:19	3/18/08 0:04	EPA 624	SS	
Acrylonitrile	BQL	25	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Benzene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Bromodichloromethane	**182**	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Bromoform	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Bromomethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Carbon tetrachloride	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Chlorobenzene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Chloroethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
2-Chloroethyl vinyl ether	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Chloroform	**326**	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Chloromethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Dibromochloromethane	**37**	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,2-Dichlorobenzene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,3-Dichlorobenzene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,4-Dichlorobenzene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,1-Dichloroethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,2-Dichloroethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,1-Dichloroethene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
cis-1,2-Dichloroethene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
trans-1,2-Dichloroethene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,2-Dichloropropane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
trans-1,3 Dichloropropene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
cis-1,3-Dichloropropene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Ethylbenzene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Methylene chloride	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
1,1,2,2-Tetrachloroethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Tetrachloroethene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Toluene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	

Microbac

Lab ID: 0803200-04 (Water)
Client ID: Final Effluent
Sampled Date/Time: 3/11/08 7:15

Analyte	Result	Quant Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Microbac Laboratories, Inc., Richmond Division								
Volatile Organic Compounds								
1,1,1-Trichloroethane	BQL	5	µg/L	3/17/08 14:19	3/18/08 0:04	EPA 624	SS	
1,1,2-Trichloroethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Trichloroethene	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Trichlorofluoromethane	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Vinyl chloride	BQL	5	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Total Xylenes	BQL	15	"	3/17/08 14:19	3/18/08 0:04	"	SS	
Wet Chemistry								
Cyanide	BQL	0.01	mg/L	3/21/08 11:45	3/21/08 14:00	SM18:4500-CN C&I	ABS	

Notes and Definitions

Z-01	+/- 16.36
V-01	+/- 328.3
un	Subcontracted to Universal Lab.
pr	Subcontracted to Primary Lab
pa	Subcontracted to Pace Analytical
la	Subcontracted to Lancaster Laboratory
HoldH	This test was performed outside of the EPA recommended holding time.
gc	Subcontracted to General Analytics
A-01	+/- 2.11
P	Present

mg/L = milligrams per Liter
ug/L = micrograms per Liter
pCi/L = picocuries per Liter
BQL = Below the Quantitation Limit
mg/kg = milligrams per kilogram
ppm = parts per million
CFU/mL = Colony forming units per milliliter
su = standard units
NTU = Nephelometric Turbidity Units
MPN/100mL = Most Probable Number per 100 milliliters

Reported results relate only to the samples analyzed, as received by the laboratory

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