DuPont Teijin Films™

Hopewell Site
3600 Discovery Drive
Chester, VA. 23836
USA

April 13, 2016

Mr. Shawn Weimer
VPDES Water Permit Writer
Department of Environmental Quality
4949-A Cox Road
Glen Allen, VA 23060

Re: VPDES Permit No. VA0003077, DuPont Teijin Films, Renewal Application

Dear Mr. Weimer,

Please find attached the updated sheets per your comments and review of the initial application submission. The pages attached are as follows:

- Page V-2 Form 2C with radioactivity results for 101
- Page 1 Attachment A Water Quality Criteria Monitoring, including statement to reflect this is for Outfall 001
- Page 1 Form 2C with corrected sanitary plant flow for 001. The fire water diesel check has not yet been performed this week. As soon as it is, we will get the flow rate and include that number and resubmit this form.
- Page V-1 Form 2C with corrected long term average value temperatures for outfall 001 – winter is December 2015 – February 2016 and summer is June – August 2015
- Page V-2 Form 2C with the sulfate "believed present" being the only box checked for outfall 001
- Page V-1 Form 2C with corrected long term average value flow at outfall 101
- Pages 1 and 2 of the VPDES sewage sludge permit application form with corrections for generating sewage sludge and population count

In addition to these pages, I have follow up answers to supplemental questions you had.

> The well water that is used in the fire water suppression system is simply well water. We do not add anything to the water prior to it being put into the tanks you saw while on your site tour.
>
> For the water use at the facility, the easiest way to answer your question on it being mixed is to say yes and elaborate. We rely on groundwater for all process water use. For potable water (sinks, toilets, showers, etc.), we use county water. Additionally, drinking water stations can be found across the site. They are either bottled water that is brought in on a routine basis or filtered water from the county.

Please let me know if there are any further questions.

Sincerely,

Jennifer Forstner
Environmental Engineer

Mylar® and Melinex® are registered trademarks of DuPont Teijin Films for its polyester film. Only DuPont Teijin Films makes Mylar® and Melinex®.

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		2.3	0.153					1	mg/L	kg/d			
h. Oil and Grease		X	<5	<0.332					1	mg/L	kg/d			
i. Phosphorus (as P), Total (7723-14-0)	X		1.54	0.102			1.13	0.2	3	mg/L	kg/d			
j. Radioactivity														
(1) Alpha, Total	X		-1.69						1	pCi/L				
(2) Beta, Total	X		-0.125						1	pCi/L				
(3) Radium, Total	X		0.0839						1	pCi/L				
(4) Radium 226, Total	X		0.394						1	pCi/L				
k. Sulfate (*as SO_4*) (14808-79-8)	X		<10	<0.664					1	mg/L	kg/d			
l. Sulfide (*as S*)	X		1.4	0.093					1	mg/L	kg/d			
m. Sulfite (*as SO_3*) (14265-45-3)		X								mg/L	kg/d			
n. Surfactants	X		<0.1	<0.007					1	mg/L	kg/d			
o. Aluminum, Total (7429-90-5)	X		0.063	0.004					1	mg/L	kg/d			
p. Barium, Total (7440-39-3)	X		0.006	0.0004					1	mg/L	kg/d			
q. Boron, Total (7440-42-8)	X		<0.05	<0.003					1	mg/L	kg/d			
r. Cobalt, Total (7440-48-4)	X		0.024	0.0016					1	mg/L	kg/d			
s. Iron, Total (7439-89-6)	X		0.029	0.0019					1	mg/L	kg/d			
t. Magnesium, Total (7439-95-4)	X		1.06	0.070					1	mg/L	kg/d			
u. Molybdenum, Total (7439-98-7)	X		1.58	0.105					1	mg/L	kg/d			
v. Manganese, Total (7439-96-5)	X		0.028	0.0016					1	mg/L	kg/d			
w. Tin, Total (7440-31-5)	X		<0.005	<0.0003					1	mg/L	kg/d			
x. Titanium, Total (7440-32-6)	X		<0.005	<0.0003					1	mg/L	kg/d			

 CONTINUE ON PAGE V-3

ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

All data submitted is for DuPont Teijin Films Outfall 001

Effective January 1, 2012, all analyses shall be in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories.

A listing of Virginia Environmental Laboratory Accreditation Program (VELAP) certified and/or accredited laboratories can be found at the following website:
http://www.dgs.state.va.us/DivisionofConsolidatedLaboratoryServices/Services/EnvironmentalLaboratoryCertification/tabid/1059/Default.aspx

Please be advised that additional water quality analyses may be necessary and/or required for permitting purposes.

CASRN	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
METALS						
7440-36-0	Antimony, dissolved	(3)	0.20	113	G	1/5 YR
7440-38-2	Arsenic, dissolved	(3)	1.0	8	G	1/5 YR
7440-39-3	Barium, dissolved	(3)	200	61	G	1/5 YR
7440-43-9	Cadmium, dissolved	(3)	0.30	3	G	1/5 YR
16065-83-1	Chromium III, dissolved [6]	(3)	0.50	< 3	G	1/5 YR
18540-29-9	Chromium VI, dissolved [6]	(3)	0.50	< 3	G	1/5 YR
7440-50-8	Copper, dissolved	(3)	0.50	73.5	G	1/5 YR
7439-89-6	Iron, dissolved	(3)	1.0	87	G	1/5 YR
7439-92-1	Lead, dissolved	(3)	0.50	<0.5	G	1/5 YR
7439-96-5	Manganese, dissolved	(3)	0.20	10	G	1/5 YR
7439-97-6	Mercury, dissolved	(3)	1.0	< 0.2	G	1/5 YR
7440-02-0	Nickel, dissolved	(3)	0.50	4	G	1/5 YR
7782-49-2	Selenium, Total Recoverable	(3)	2.0	7	G	1/5 YR
7440-22-4	Silver, dissolved	(3)	0.20	< 0.1	G	1/5 YR
7440-28-0	Thallium, dissolved	(3)	(4)	< 1	G	1/5 YR
7440-66-6	Zinc, dissolved	(3)	2.0	51	G	1/5 YR
PESTICIDES/PCBs						
309-00-2	Aldrin	608/625	0.05	< 0.05	G	1/5 YR

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VA0003077

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	21	10	77	17	29	James River
002	37	27	04	77	17	33	James River
003	37	21	08	77	17	30	James River
004	37	21	08	77	17	30	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. OUTFALL 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	Industrial WWTP (includes 3,000 gal	27,386 gpd	Extended aeration w/MBR		
	groundwater remediation water)				
	Sanitary WWTP	4,823 gpd	Extended aeration		
	Cooling tower	36,000 gpd		4A	
001 - cont.	Steam boiler	8,000 gpd		4A	
	Rainwater	30,107 gpd		4A	
	Cooling tower (IWWTP)	3,000 gpd		4A	
	Misc	38,344		4A	
001 - cont.	Fire water diesel checks			2K	
	River discharge	147,660 gpd	pH adjustment		
002	Rainwater	10,000 gpy	NA - normally discharges to 001	4A	
003	Rainwater	10,035 gpd	NA - Normally discharges to 001	4A	
	Cooling tower	36,000 gpd	NA - Normally discharges to 001	4A	
	Steam boiler	8,000 gpd	NA - Normally discharges to 001	4A	
004	Rainwater	100,350 gpd	NA	4A	

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

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*): VA0003077

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) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	10	5.03					1	mg/L	kg/d			
b. Chemical Oxygen Demand (*COD*)	172	86.58	566		156.04		52	mg/L	kg/d			
c. Total Organic Carbon (*TOC*)	45.6	22.95					1	mg/L	kg/d			
d. Total Suspended Solids (*TSS*)	2.4	1.21	10.6	9.6	16.51	9.51	52	mg/L	kg/d			
e. Ammonia (*as N*)	< 0.10	<0.05	0.07	0.04	0.31	0.15	52	mg/L	kg/d			
f. Flow	VALUE 132996		VALUE 262569		VALUE 133154		365	gal		VALUE		
g. Temperature (*winter*)	VALUE 26		VALUE 26		VALUE 17		91	°C		VALUE		
h. Temperature (*summer*)	VALUE 35.5		VALUE 35.5		VALUE 29.1		92	°C		VALUE		
i. pH	MINIMUM 6.1	MAXIMUM 8.6	MINIMUM 5.5	MAXIMUM 9.4			30	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	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)	X		< 1.00						1	mg/L	kg/d			
b. Chlorine, Total Residual	X		0.10						1	mg/L	kg/d			
c. Color	X		55						1	mg/L	kg/d			
d. Fecal Coliform	X		23						1	mg/L	kg/d			
e. Fluoride (16984-48-8)	X		0.14						1	mg/L	kg/d			
f. Nitrate-Nitrite (*as N*)	X		1.81						1	mg/L	kg/d			

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		2.61	1.31					1	mg/L	kg/d			
h. Oil and Grease		X	<5.0	<2.52					1	mg/L	kg/d			
i. Phosphorus (as P), Total (7723-14-0)	X		1.26	.63					1	mg/L	kg/d			
j. Radioactivity														
(1) Alpha, Total	X		-0.809						1	pCi/L	kg/d			
(2) Beta, Total	X		3.67						1	pCi/L	kg/d			
(3) Radium, Total	X		0.537						1	pCi/L	kg/d			
(4) Radium 226, Total	X		1.18						1	pCi/L	kg/d			
k. Sulfate (*as* SO_4) (14808-79-8)	X		39	19.63					1	mg/L	kg/d			
l. Sulfide (*as S*)	X		1.2	0.60					1	mg/L	kg/d			
m. Sulfite (*as* SO_3) (14265-45-3)		X												
n. Surfactants	X		<0.10	<0.0503					1	mg/L	kg/d			
o. Aluminum, Total (7429-90-5)	X		0.083	0.0418					1	mg/L	kg/d			
p. Barium, Total (7440-39-3)	X		0.032	0.0161					1	mg/L	kg/d			
q. Boron, Total (7440-42-8)	X		<0.05	<0.0252					1	mg/L	kg/d			
r. Cobalt, Total (7440-48-4)	X		0.015	0.0076					1	mg/L	kg/d			
s. Iron, Total (7439-89-6)	X		0.136	0.0685					1	mg/L	kg/d			
t. Magnesium, Total (7439-95-4)	X		2.34	1.1779					1	mg/L	kg/d			
u. Molybdenum, Total (7439-98-7)	X		1.18	0.5940					1	mg/L	kg/d			
v. Manganese, Total (7439-96-5)	X		0.020	0.0101					1	mg/L	kg/d			
w. Tin, Total (7440-31-5)	X		<0.005	<0.0025					1	mg/L	kg/d			
x. Titanium, Total (7440-32-6)	X		<0.005	<0.0025					1	mg/L	kg/d			

 CONTINUE ON PAGE V-3

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*): VA0003077

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)* [redacted] OUTFALL NO. 101

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) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	2	0.133	>258	>8.1	106.96	7.13	52	mg/L	kg/d			
b. Chemical Oxygen Demand (*COD*)	239	15.89	892		395.53		53	mg/L	kg/d			
c. Total Organic Carbon (*TOC*)	65.6	4.36					1		kg/d			
d. Total Suspended Solids (*TSS*)	<1.0	<0.066	<1.0		0.52	0.04	183		kg/d			
e. Ammonia (*as N*)	<1.10	<0.007			1.97	0.17	101		kg/d			
f. Flow	VALUE 17540		VALUE 48410		VALUE 26,953		327	gal		VALUE		
g. Temperature (*winter*)	VALUE		VALUE		VALUE		1	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM			1	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	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)	X		<1.00	<0.066					1	mg/L	kg/d			
b. Chlorine, Total Residual	X		0.06						1	mg/L	kg/d			
c. Color	X		62						1	mg/L	kg/d			
d. Fecal Coliform	X		<1.8						1	mg/L	kg/d			
e. Fluoride (16984-48-8)	X		0.13	0.009					1	mg/L	kg/d			
f. Nitrate-Nitrite (*as N*)	X		<0.05	<0.003					1	mg/L	kg/d			

 CONTINUE ON REVERSE

FACILITY NAME: DuPont Teijin Films VPDES PERMIT NUMBER: VA0003077

VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM

SCREENING INFORMATION

This application is divided into sections. Sections A pertain to all applicants. The applicability of Sections B, C and D depend on your facility's sewage sludge use or disposal practices. The information provided on this page will help you determine which sections to fill out.

1. All applicants must complete Section A (General Information).

2. Will this facility generate sewage sludge? X Yes __No

   Will this facility derive a material from sewage sludge? __Yes X No

   If you answered Yes to either, complete Section B (Generation Of Sewage Sludge Or Preparation Of A Material Derived From Sewage Sludge).

3. Will this facility apply sewage sludge to the land? __Yes X No

   Will sewage sludge from this facility be applied to the land? __Yes X No

   If you answered No to both questions above, skip Section C.

   If you answered Yes to either, answer the following three questions:

   a. Will the sewage sludge from this facility meet the ceiling concentrations, pollutant concentrations, Class A pathogen reduction requirements and one of the vector attraction reduction requirements 1-8, as identified in the instructions?
      __Yes __No

   b. Will sewage sludge from this facility be placed in a bag or other container for sale or give-away for application to the land? __Yes __No

   c. Will sewage sludge from this facility be sent to another facility for treatment or blending? __Yes __No

   If you answered No to all three, complete Section C (Land Application Of Bulk Sewage Sludge).

   If you answered Yes to a, b or c, skip Section C.

4. Do you own or operate a surface disposal site? __Yes X No

   If Yes, complete Section D (Surface Disposal).

FACILITY NAME: DuPont Teijin Films VPDES PERMIT NUMBER: VA0003077

SECTION A. GENERAL INFORMATION

All applicants must complete this section.

1. Facility Information.
   a. Facility name: DuPont Teijin Films
   b. Contact person: Jennifer Forstner
      Title: Environmental Engineer
      Phone: (804) 530-9844
   c. Mailing address:
      Street or P.O. Box: 3600 Discovery Drive
      City or Town: Chester State: VA Zip: 23836
   d. Facility location:
      Street or Route #: 3600 Discovery Drive
      County: Chesterfield
      City or Town: Chester State: VA Zip: 23836
   e. Is this facility a Class I sludge management facility? __Yes X No
   f. Facility design flow rate: 0.009 mgd
   g. Total population served: 450
   h. Indicate the type of facility:
      __ Publicly owned treatment works (POTW)
      X Privately owned treatment works
      __ Federally owned treatment works
      __ Blending or treatment operation
      __ Surface disposal site
      __ Other (describe):

2. Applicant Information. If the applicant is different from the above, provide the following:
   a. Applicant name:
   b. Mailing address:
      Street or P.O. Box:
      City or Town: _____ State: _____ Zip:
   c. Contact person:
      Title:
      Phone: ( )
   d. Is the applicant the owner or operator (or both) of this facility?
      _____owner _____ operator
   e. Should correspondence regarding this permit be directed to the facility or the applicant? (Check one)
      _____ facility _____ applicant

3. Permit Information.
   a. Facility's VPDES permit number (if applicable): VA0003077
   b. List on this form or an attachment, all other federal, state or local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:
      Permit Number: Type of Permit:
      _____
      _____

4. Indian Country. Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country? __Yes X No If yes, describe: