

South Carolina Department of Health and Environmental Control

Office of Environmental Quality Control Bureau of Air Quality Title V Operating Permit

Cytec Carbon Fibers LLC 7139 Augusta Road Piedmont, South Carolina 29673 **Greenville County**

In accordance with the provisions of the *Pollution Control Act*, Sections 48-1-50(5) and 48-1-110(a), the 1976 Code of Laws of South Carolina, as amended, and South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards, the Bureau of Air Quality authorizes the operation of this facility and the equipment specified herein in accordance with valid construction permits, and the plans, specifications, and other information submitted in the Title V permit application received on February 25, 2013, as amended.

The operation of this facility is subject to and conditioned upon the terms, limitations, standards, and schedules contained herein or as specified by this permit and its accompanying attachments.

> **Permit Number:** TV-1200-0374

Issue Date: Renewal Due Date: September 30, 2019

December 31, 2014

Effective Date: Expiration Date: April 1, 2015 March 31, 2020

Elychen j Baal

Director, Engineering Services Division Bureau of Air Quality

Cytec Carbon Fibers, LLC TV-1200-0374 Page 2 of 35

RECORD OF REVISIONS			
Date	Туре	Description of Change	
March 17, 2016	AA	Add initial startup date to EU09 for AN Storage Tank (TF3-342)	
AA .	Administ	ative Amendment	
MM	Minor Mo	dification	

SM Significant Modification

Cytec Carbon Fibers, LLC TV-1200-0374 Page 3 of 35

A. EMISSION UNIT DESCRIPTION

Emission Unit ID	Emission Unit Description		
01	Carbon Fiber Production (GP1)		
02	VOID - Spinning Process: GP1		
03	VOID - Oxidation Process: GP1		
04	VOID - Carbonization Process/Dryers: GP1		
05	Carbon Fiber Production (GP2)		
06	VOID - Spinning Process: GP2		
07	VOID - Oxidation Process: GP2		
08	VOID - Carbonization Process/Dryers: GP2		
09	Solvent Recovery & Tank Farm		
10	VOID - AN Recovery		
11	Fuel Burning Operations		
12	VOID - Utility Boiler		
13	R&D Area		
14	Resin B Production		
15	Pitch Fiber Treatment		
16	Carbon Fiber Production (GP3)		

B EQUIPMENT AND CONTROL DEVICE(S)

B.1 EQUIPMENT FOR EMISSION UNIT 01 - CARBON FIBER PRODUCTION (GP1)

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
	GP1 POLYMER PRODUCTION PRO	DCESS		
			WA-03300,	GP1-08,
DV 00400	Polymer Reactor	1091	WA-21200,	GP2-72,
F 1-00400		1901	GP1-CB,	GP1-CB
			GP2-CB	GP2- CB
			WA-03300,	GP1-08,
DV 02700	Polymer Cool Down Tank	2006	WA-21200,	GP2-72,
P1-02/00			GP1-CB,	GP1-CB
			GP2-CB	GP2- CB
		1981	WA-03300,	GP1-08,
DV 00600	Delymon Dessiving Tonly		WA-21200,	GP2-72,
P1-00000	Polymer Receiving Tank		GP1-CB,	GP1-CB
			GP2-CB	GP2- CB
PY-01000	Flash Deaerator	1981	None	None
			WA-03300,	GP1-08,
PY-01500	Dolumor DMSO Storage Tenk	1981	WA-21200,	GP2-72,
	Polymer DMSO Storage Tank		GP1-CB,	GP1-CB
			GP2-CB	GP2- CB

Cytec Carbon Fibers, LLC TV-1200-0374 Page 4 of 35

B.1 EQUIPMENT FOR EMISSION UNIT 01 - CARBON FIBER PRODUCTION (GP1)

Equipment	Equipment Description	Installation Date/	Control	Emission
ID	Equipment Description	Modification Date	Device ID	Point ID
			WA-03300,	GP1-08,
PY-01200	Done Storage Tank	1981	WA-21200,	GP2-72,
11-01200	Dope Storage Talk		GP1-CB,	GP1-CB
			GP2-CB	GP2- CB
			WA-03300,	GP1-08,
RS-01800	AN Checker Drain Tank	1981	WA-21200,	GP2-72,
10000		1901	GP1-CB,	GP1-CB
			GP2-CB	GP2- CB
			WA-03300,	GP1-08,
RS-04300	DMSO Receiver Tank	1981	WA-21200,	GP2-72,
100 0 1500		1901	GP1-CB,	GP1-CB
			GP2-CB	GP2- CB
	GP1 SPINNING PROCESS			
SP-00200, SP-00500	Filters	1981	None	N/A
			WA-03300,	GP1-08,
SD 06700	Spinning Dana Bland Tank	1091	WA-21200,	GP2-72,
SP-00700	Зрининд Доре влеец Танк	1901	GP1-CB,	GP1-CB
			GP2-CB	GP2-CB
SP-00800	Spinning Machine	1981	None	GP1-02
SP-00900	1 st Draw Machine	1981	None	GP1-02
SP-01000	Washer	1981	None	GP1-02
SP-01100	1 st PO Machine	1981	None	GP1-02
SP-01200	Dryer	1981	None	GP1-02
SP-01300	2 nd Draw Machine	1981	None	GP1-02
SP-03100	Coag Bath Pit Tank	1981	None	GP1-02
SP-02500	1 st Bath Pit Tank	1981	None	GP1-02
SP-02200	2 nd Bath Pit Tank	1981	None	GP1-02
SP-02000	3rd Bath Pit Tank	1981	None	GP1-02
OX-00100	Hot Drum	1981	None	GP1-02
OX-00200	2 nd PO Machine	1981	None	GP1-02
	GP1 OXIDATION PROCESS			
OX-00300	Oxidation Aging Rolls	1981	None	GP1-24
OX-00400	Oxidation Ovens	1981	WA-03300	GP1-08, GP1-24
	GP1 CARBONIZATION PROCESS/D	RYERS		
CB-24200	Pre-Carbonization Furnace	1981	WA-00700	GP1-72
CB-24400	Carbonization Furnace	1981	WA-00700	GP1-72
CB-25000	Sizing Dryer #2 - (electric)	1981	None	GP1-35
CB-25100	Sizing Dryer #3 - (electric)	1981	None	GP1-35

Cytec Carbon Fibers, LLC TV-1200-0374 Page 5 of 35

B.2 CONTROL DEVICE(S) FOR EMISSION UNIT ID 01 – CARBON FIBER PRODUCTION (GP1)

Control Device ID	Control Device Description	Installation Date/ Modification Date	Pollutant(s) Controlled
WA-03300	Waste Heat Recovery Boiler (7 MMBtu/hr natural gas-fired)	1982	VOC, HAP, TAP
WA-21200	Process Heater (2 MMBtu/hr natural gas-fired)	1997	VOC, HAP, TAP
GP1-CB	GP1 Carbon Bed Adsorbers – 2 trains	1981	VOC, HAP, TAP
GP2-CB	GP2 Carbon Bed Adsorbers – 2 trains	1988	VOC, HAP, TAP
WA-00700	Thermal Oxidizer (2 MMBtu/hr, natural gas-fired)	2006	VOC, HAP, TAP

B.3 EQUIPMENT FOR EMISSION UNIT 05 – CARBON FIBER PRODUCTION (GP2)

Equipment	Equipment Description	Installation Date/	Control Device ID	Emission Point ID	
10	CP2 ΡΟΙ ΥΜΕΡ ΡΡΟΠΙΟΤΙΟΝ ΡΡ Ο	Mounication Date	Device ID	I olitt ID	
	GIZI OLIMER I RODUCTION I RO		WA 02200	CD1 09	
			WA-03300,	GP1-08, CP2-72	
PY2-00900	Polymer Reactor	1988	WA-21200, CD1 CP	GP2-72, $GP1 CP$	
			GP2 CP	GP2 CB	
			WA 02200	CP1.09	
			WA - 03300, WA - 21200	GP2 72	
PY2-02600	Polymer Reactor Cleaning Tank	1988	WA-21200, CD1 CP	GF2-72, $GP1 CP$	
			CP2 CP	GP2 CB	
			WA 02200	CP1.09	
	Polymer Cool Down Tank		WA - 03300, WA - 21200	GP2 72	
PY2-05300		1995	GP1 CB	GP1 CB	
			GP2 CB	GP2 CB	
			WA 03300	GP1.08	
	Polymer Receiving Tank	1988	WA - 21200	GP2-72	
PY2-01000			GP1 CB	GP1 CB	
			GP2-CB	GP2-CB	
PY2-01300	Flash Deaerator	1988	None	N/A	
112 01300		1700	WA 03300	GP1.08	
		1988	WA - 03300, WA - 21200	GP2 72	
PY2-01700	Polymer DMSO Storage Tank		GP1_CB	$GP1_CB$	
			GP2-CB	GP2-CB	
			WA-03300	GP1-08	
			WA-21200	GP2-72	
PY2-01500	Dope Storage Tank	1988	GP1-CB	GP1-CB	
			GP2-CB	GP2-CB	
			WA-03300	GP1-08	
			WA-21200.	GP2-72.	
PY2-00500	AN Checker Drain Tank	1988	GP1-CB.	GP1-CB	
			GP2-CB	GP2-CB	
GP2 SPINNING PROCESS					
SP2-11500					
SP2-11600	Filters	1988	None	N/A	
SP2-00200			1.0110		

Cytec Carbon Fibers, LLC TV-1200-0374 Page 6 of 35

B.3 EQUIPMENT FOR EMISSION UNIT 05 – CARBON FIBER PRODUCTION (GP2)

Equipment	Equipment Description	Installation Date/	Control	Emission Boint ID	
ID .		Woull cation Date	WA-03300	GP1-08	
GD2 02200		1000	WA-21200,	GP2-72,	
SP2-03300	Spinning Dope Bleed Tank	1988	GP1-CB,	GP1-CB	
			GP2-CB	GP2-CB	
SP2-00800	Spinning Machine	1988	None	GP2-41	
SP2-00900	Draw Machine	1988	None	GP2-41	
SP2-01000	Washer	1988	None	GP2-41	
SP2-01100	1 st Process Oil Machine	1988	None	GP2-41	
SP2-01200	Spinning Dryer	1988	None	GP2-41	
SP2-01300	2 nd Draw Machine	1988	None	GP2-41	
SP2-01700	Coag Bath Pit Tank	1988	None	GP2-41	
SP2-02200	1 st Bath Pit Tank	1988	None	GP2-41	
SP2-02400	2 nd Bath Pit Tank	1988	None	GP2-41	
SP2-02600	3 rd Bath Pit Tank	1988	None	GP2-41	
SP2-01400	Hot Drum	1988	None	GP2-41	
SP2-01500	2 nd PO Machine	1988	None	GP2-41	
	GP2 OXIDATION PROCESS				
OX2-00200	Oxidation Aging Rolls	1988	None	GP2-100	
OX2-00400	Oxidization Ovens	1988	UT-24600	GP2-119	
0/12 00400		1700	01 24000	GP2-100	
GP2 CARBONIZATION PROCESS/DRYERS					
CB2-00300	Pre-Carbonization Furnace	1988	WA-21200	GP2-72	
CB2-00900	Carbonization Furnace	1988	WA-21200	GP2-72	
CB2-02800	Dryer #2 - (3.0 MMBtu/hr Natural Gas Direct-fired)	1988	None	GP2-23	
CB2-03000	Dryer #3 - (3.0 MMBtu/hr Natural Gas Direct-fired)	1988	None	GP2-23	

B.4 CONTROL DEVICE(S) FOR EMISSION UNIT ID 05 – CARBON FIBER PRODUCTION (GP2)

Control Device ID	Control Device Description	Installation Date/ Modification Date	Pollutant(s) Controlled
WA-03300	Waste Heat Recovery Boiler (7 MMBtu/hr, natural gas-fired)	1982	VOC, HAP, TAP
WA-21200	Process Heater (2 MMBtu/hr, natural gas-fired)	1997	VOC, HAP, TAP
GP1-CB	GP1 Carbon Bed Adsorbers – 2 trains	1981	VOC, HAP, TAP
GP2-CB	GP2 Carbon Bed Adsorbers – 2 trains	1988	VOC, HAP, TAP
UT-24600	Zurn Boiler	1988	VOC, HAP, TAP

B.5 EQUIPMENT FOR EMISSION UNIT 09 – SOLVENT RECOVERY AND TANK FARM

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
DMSO RECOVERY				
RS2-02300	DMSO Dehydration Tower	1988	None	N/A

Cytec Carbon Fibers, LLC TV-1200-0374 Page 7 of 35

B.5 EQUIPMENT FOR EMISSION UNIT 09 – SOLVENT RECOVERY AND TANK FARM

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
RS2-02900	DMSO Dehydration Column Condenser	1988	None	N/A
RS2-03000	DMSO Dehydration Column Surface Condenser	1988	None	N/A
	•		WA-03300,	GP1-08,
R\$2-05000	Fiector After condenser	1988	WA-21200,	GP2-72,
1052 05000		1700	GP1-CB,	GP1-CB
DC2 02600		1000	GP2-CB	GP2-CB
RS2-03600	GP2 Evaporator	1988	None	N/A
RS2-04000	GP2 Evaporator Partial Condenser	1988	None	N/A
RS2-04400	GP2 Evaporator Final Condenser	1988	None	N/A
RS2-045DO	GP2 Evaporator No. 1 Surface Condenser	1988	None	N/A
			WA-03300,	GP1-08,
RS2-045EO	GP2 Evaporator No. 2 Surface Condenser	1988	WA-21200,	GP2-72,
	•		GPI-CB, GP2 CB	GP1-CB
			WA-03300	GP1-08
		4000	WA-21200.	GP2-72.
RS2-03100	DMSO Residue Treatment Tank	1988	GP1-CB,	GP1-CB
			GP2-CB	GP2- CB
RS2-03200	DMSO Residue Treatment Tank Condenser	1988	None	N/A
RS2-03300	Crude DMSO Receiver	1988	None	N/A
RS2-035DO	Crude DMSO Receiver No. 1 Surface Condenser	1988	None	N/A
			WA-03300,	GP1-08,
RS2-035EO	Crude DMSO Receiver No. 2 Condenser	1988	WA-21200,	GP2-72,
102 00020		1900	GP1-CB,	GP1-CB
			GP2-CB	GP2-CB
			WA-03300, WA-21200	GP1-08, GP2-72
RS2-04100	DMSO Receiver	1988	GP1-CB.	GP1-CB
			GP2-CB	GP2- CB
			WA-03300,	GP1-08,
WW-21300	GP2 Recovery Hotwell	1988	WA-21200,	GP2-72,
		1900	GP1-CB,	GP1-CB
			GP2-CB	GP2-CB
			WA - 05500, WA - 21200	GP1-08
		September 12.	GP1-CB.	GP2-72
RS3-036	DMSO Evaporator	2013	& GP2-CB	GP1-CB
			(Process	GP2-CB
			Vent)	
			WA-03300,	
		Conton 10 10	WA-21200,	GP1-08
RS3-041	1086 gallon DMSO Receiver	September 12,	& GPI-CB,	GP2-72 GP1 CP
		2013	(Process	GP2-CB
			Vent)	0.200

Cytec Carbon Fibers, LLC TV-1200-0374 Page 8 of 35

B.5 EQUIPMENT FOR EMISSION UNIT 09 – SOLVENT RECOVERY AND TANK FARM

Equipment	Equipment Description	Installation Date/	Control Device ID	Emission Point ID
RS3-055	DMSO Predistillation Column	July 24, 2013	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
RS3-064	Residue Concentrator	September 12, 2013	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
RS3-072	Residue Accumulator	September 12, 2013	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
RS3-065	DMSO Dehydration Column Hotwell	September 12, 2013	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
WW3-010	GP3 Recovery Hotwell	July 24, 2013	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
RS3-033	1841 Gallon Crude DMSO Receiver	September 12, 2013	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
	AN RECOVERY			
RS2-00100	AN Stripping Column	1988	None	N/A
RS2-00800	AN Stripping Column Condenser	1988	None	N/A
RS2-01400	AN Stripping Column Decanter	1988	None	N/A
RS2-02000	AN Receiver	1988	WA-03300, WA-21200, GP1-CB, GP2-CB	GP1-08, GP2-72, GP1-CB GP2- CB

Cytec Carbon Fibers, LLC TV-1200-0374 Page 9 of 35

B.5 EQUIPMENT FOR EMISSION UNIT 09 – SOLVENT RECOVERY AND TANK FARM

Equipment	Equipment Description	Installation Date/	Control	Emission Boint ID
ID		Wioumcation Date	WA 02200	CD1 08
			WA - 03300, WA - 21200	GP2 72
RS2-01000	AN Strip Column Ejector Liquid Circulation Tank	1988	GP1-CB	GP1-CB
			GP2-CB	GP2-CB
			WA-03300	GP1-08
			WA-21200	GP2-72
RS-02200	Monomer Tank (2,200 gallons)	1988	GP1-CB.	GP1-CB
			GP2-CB	GP2- CB
			WA-03300.	GP1-08.
TTTC C (C			WA-21200,	GP2-72,
TF3-342	12,000 gallon Recovered AN Storage Tank	January 14, 2016	GP1-CB,	GP1-CB
			GP2-CB	GP2- CB
	TANK FARM			
			WA-03300,	GP1-08,
TE 21000	Crude DMSO Storage Tank (220,000 gallons)	1988	WA-21200,	GP2-72,
16-21000			GP1-CB,	GP1-CB
			GP2-CB	GP2- CB
	Patinad DMSO Storage Tank (110,000 gallons)		WA-03300,	GP1-08,
TE 21600		1988	WA-21200,	GP2-72,
11-21000	Refined DWSO Storage Tank (110,000 ganons)		GP1-CB,	GP1-CB
			GP2-CB	GP2- CB
		1988	WA-03300,	GP1-08,
TE-01300	AN Strip Column Feed Tank (25,000 gallons)		WA-21200,	GP2-72,
11 01500	The Surp Column Food Funk (25,000 gunons)		GP1-CB,	GP1-CB
			GP2-CB	GP2- CB
			WA-03300,	GP1-08,
TE-02200	Coag Bath Feed Tank (25 000 gallons)	1988	WA-21200,	GP2-72,
11 02200	Coug Duill Food Fullik (20,000 guiloits)	1,000	GP1-CB,	GP1-CB
			GP2-CB	GP2- CB
			WA-03300,	GP1-08,
TF-00700	AN Storage Tank (25,000 gallons)	1988	WA-21200,	GP2-72,
			GP1-CB,	GP1-CB
			GP2-CB	GP2-CB
			WA-03300,	GP1-08,
TF3-307	110,500 gallon AN Storage Tank	July 16, 2014	WA-21200,	GP2-72,
			GP1-CB,	GP1-CB
			GP2-CB	GP2- CB

B.6 CONTROL DEVICE(S) FOR EMISSION UNIT ID 09 – SOLVENT RECOVERY AND TANK FARM

Control Device ID	Control Device Description	Installation Date/ Modification Date	Pollutant(s) Controlled
WA-03300	Waste Heat Recovery Boiler (7 MMBtu/hr, natural gas-fired)	1982	VOC, HAP, TAP
WA-21200	Process Heater (2 MMBtu/hr, natural gas-fired)	1997	VOC, HAP, TAP
GP1-CB	GP1 Carbon Bed Adsorbers – 2 trains	1981	VOC, HAP, TAP
GP2-CB	GP2 Carbon Bed Adsorbers – 2 trains	1988	VOC, HAP, TAP

Cytec Carbon Fibers, LLC TV-1200-0374 Page 10 of 35

B.7 EQUIPMENT FOR EMISSION UNIT 11 – FUEL BURNING OPERATIONS

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
UT-24600	Zurn Boiler (65.8 MMBtu/hr, natural gas-fired)	1988	None	GP2-119
UT-01	Utility Boiler (28.3 MMBtu/hr, natural gas-fired)	1982	None	UT1-24
UT3-246	Cleaver Brooks Boiler (33 MMBtu/hr, natural gas-fired)	October 31, 2013	None	GP34A
UT3-247	Cleaver Brooks Boiler (33 MMBtu/hr, natural gas-fired)	October 31, 2013	None	GP34B

B.8 RESERVED

B.9 EQUIPMENT FOR EMISSION UNIT 13 – R&D AREA

Equipment	Equipment Description	Installation Date/	Control	Emission
ID	Equipment Description	Modification Date	Device ID	Point ID
RD-PR	Pilot Reactor	2009	RD-CB	RD-PR
RD-PCL2	Pilot Carbonization Line (Two electric oxidation ovens, two carbonization ovens)	2008	Voluntary (R&D–TO)	PCL-2
RD-DSL	Developmental Spin Line	2002 / 2010	None	DSL

B.10 CONTROL DEVICE(S) FOR EMISSION UNIT ID 13 – R&D AREA

Control Device ID	Control Device Description	Installation Date/ Modification Date	Pollutant(s) Controlled
RD-CB	R&D Carbon Bed Adsorbers	2009	VOC, HAP, TAP
RD-TO	R&D Thermal Oxidizer (Voluntary Control Device)	2008	VOC, HAP, TAP

B.11 EQUIPMENT FOR EMISSION UNIT 14 – RESIN B PRODUCTION

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
394-1	560 gallon Hot Oil Storage Tank	1980	None	None
391	15,000 Gallon Pitch Storage Tank	1980	F-332	RB-03
301	12,000 Gallon Pitch Storage Tank	1974	F-332	RB-03
381	Pitch Filters	1980	F-332	RB-03
315	2,100 Gallon Pitch Storage Tank	1980	F-332	RB-03
309	3,000 Gallon Pitch Storage Tank	1974	F-332	RB-03
312	Reactor	1980	F-332	RB-03
313	Reactor	1974	F-332	RB-03
314	Reactor	1974	F-332	RB-03
317	Resin B Conveyor	1974	F-332	RB-03
330	2,000 Gallon Condensate Tank 6	1974	F-332	RB-03
342	Pitch Crusher	1974	F-341	RB-02
340	Pitch Blender	1974	F-341	RB-02

Cytec Carbon Fibers, LLC TV-1200-0374 Page 11 of 35

B.12 CONTROL DEVICE(S) FOR EMISSION UNIT ID 14 – RESIN B PRODUCTION

Control Device ID	Control Device Description	Installation Date/ Modification Date	Pollutant(s) Controlled
F-332	6.2 MMBtu/hr Thermal Oxidizer	1996	VOC, HAP, TAP
F-341	Dust Collector	1974	PM/PM10/PM2.5

B.13 EQUIPMENT FOR EMISSION UNIT 15 – PITCH FIBER TREATMENT

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
56-203	Pitch Fiber Low Temp Dryer	1974	None	PT-76
0021	Pyrolization Furnace	1974	None	PT-56
CP-327	Cool-Down Booth	1974	None	PT-57

B.14 RESERVED

B.15 EQUIPMENT FOR EMISSION UNIT 16 – Carbon Fiber Production (GP3)

Equipment	Equipment Description	Installation Date/	Control	Emission
ID		Modification Date	Device ID	Point ID
	GP3 POLYMER PRODUCTION	N		
			WA-03300,	
			WA-21200,	GP1-08
PV3 022	2 000 AN Charge Tank	April 11 2014	GP1-CB,	GP2-72
115-022	2,000 AIV Charge Talik	April 11, 2014	& GP2-CB	GP1-CB
			(Process	GP2-CB
			Vent)	
			WA-03300,	
			WA-21200,	GP1-08
PV3-009	Polymer Reactor	April 11, 2014	GP1-CB,	GP2-72
115 007			& GP2-CB	GP1-CB
			(Process	GP2-CB
			Vent)	
			WA-03300,	
		April 11, 2014	WA-21200,	GP1-08
PY3-053	16,000 gallon GP3 Polymer Cool Down Tank		GP1-CB,	GP2-72
115 055	10,000 ganon GI 5 I orynier Coor Down Tank		& GP2-CB	GP1-CB
			(Process	GP2-CB
			Vent)	
			WA-03300,	
			WA-21200,	GP1-08
DV3 013	AN Separator/Removal System	April 11 2014	GP1-CB,	GP2-72
115015	Any Separator/ Keniovar System	April 11, 2014	& GP2-CB	GP1-CB
			(Process	GP2-CB
			Vent)	

Cytec Carbon Fibers, LLC TV-1200-0374 Page 12 of 35

B.15 EQUIPMENT FOR EMISSION UNIT 16 – Carbon Fiber Production (GP3)

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
PY3-051	700 gallon DMSO Separator Ejector Tank	April 11, 2014	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
PY3-075	500 gallon Poly DMSO Collection Tank	April 11, 2014	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
PY3-064	DMSO Separator Column	April 11, 2014	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
PY3-043	150 gallon DMSO Separator Reflux Pot	April 11, 2014	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
PY3-070	500 gallon Flash Deaerator DMSO Tank	April 11, 2014	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
PY3-067	Flash Deaerator	April 11, 2014	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
SP3-015	5,250 gallon Dope Supply Tank	April 11, 2014	WA-03300, WA-21200, GP1-CB, & GP2-CB (Process Vent)	GP1-08 GP2-72 GP1-CB GP2-CB
	GP3 SPINNING PROCESS			
SP3-005, SP3-007, SP3-122, SP3-010, and SP3-009	Spinning, Washing, and Drawing Baths	June 06,2104	None	GP3-1 GP3-2 GP3-3

Cytec Carbon Fibers, LLC TV-1200-0374 Page 13 of 35

B.15 EQUIPMENT FOR EMISSION UNIT 16 – Carbon Fiber Production (GP3)

Equipment	Equipment Description	Installation Date/	Control	Emission Design ID
ID ID		Modification Date	Device ID	GP3 1
SP3-017	1 188 Coag Bath Pit Tank	June 06 2104	None	GP3-2
515 017	1,100 Coug Built I it Tulk	June 00,2101	Ttone	GP3-3
				GP3-1
SP3-012	Spinning Dryer	June 06,2104	None	GP3-2
				GP3-3
				GP3-1
SP3-013	2nd Draw	June 06,2104	None	GP3-2
				GP3-3
SD2 022	75 gallon CD2 1 st Draw, 1 st Dath Dit Tank	$J_{\rm upp} 06.2104$	Nona	GP3-1 GP3-2
5F5-022	75 ganon GF5 1 Diaw, 1 Baui Fit Tank	Julie 00,2104	None	GP3-3
				GP3-1
SP3-024	75 gallon GP3 1 st Draw, 2 nd Bath Pit Tank	June 06,2104	None	GP3-2
		,		GP3-3
	GP3 OXIDATION AND CARBONIZATION PR	OCESS LINE 3-1		
	Electric Oxidation Oven	October 01, 2014	OGT1	GP3-6
OX3-003	Oxidation Oven Vestibules	October 01, 2014	None	GP3-5
		0.4.101.2014	0071	GP3-14
OV3 006	Electric Oxidation Oven	October 01, 2014	OGII	GP3-0
0A3-000	Oxidation Oven Vestibules	October 01, 2014	None	GP3-15 GP3-16
CB3-003	Electric Pre-Carbonization Oven	October 01, 2014	OGT1	GP3-6
CB3-009	Carbonization Oven	October 01, 2014	OGT1	GP3-6
CB3-026	Sizing Application and 3 MMBtu/hr natural gas direct-fired dryer	October 01, 2014	None	GP3-7
	GP3 OXIDATION AND CARBONIZATION PR	OCESS LINE 3-2		
	Electric Oxidation Oven	October 01, 2014	OGT2	GP3-9
OX4-003	Oxidation Oven Vestibules	October 01, 2014	None	GP3-8 GP3-17
	Electric Oxidation Oven	October 01, 2014	OGT2	GP3-9
OX4-006	Oxidation Oven Vestibules	October 01 2014	None	GP3-18
		0010001 01, 2014	NULLE	GP3-19
CB4-003	Electric Pre-Carbonization Oven	October 01, 2014	OGT2	GP3-9
CB4-009	Carbonization Oven	October 01, 2014	OGT2	GP3-9
CB4-026	Sizing Application and 3 MMBtu/hr natural gas direct-fired drver	October 01, 2014	None	GP3-10

B.16 CONTROL DEVICE(S) FOR EMISSION UNIT ID 16 – Carbon Fiber Production (GP3)

Control Device ID	Control Device Description	Installation Date/ Modification Date	Pollutant(s) Controlled
WA-03300	Waste Heat Recovery Boiler (7 MMBtu/hr, natural gas-fired)	1982	VOC, HAP, TAP
WA-21200	Process Heater (2 MMBtu/hr, natural gas-fired)	1997	VOC, HAP, TAP
GP1-CB	GP1 Carbon Bed Adsorbers – 2 trains	1981	VOC, HAP, TAP

Cytec Carbon Fibers, LLC TV-1200-0374 Page 14 of 35

B.16 CONTROL DEVICE(S) FOR EMISSION UNIT ID 16 – Carbon Fiber Production (GP3)

Control Device ID	Control Device Description	Installation Date/ Modification Date	Pollutant(s) Controlled
GP2-CB	GP2 Carbon Bed Adsorbers – 2 trains	1988	VOC, HAP, TAP
OGT1	GP3 Oxidation/Carbonization Thermal Oxidizer No. 1 (11.5 MMBtu/hr, natural gas-fired)	June 9, 2014	VOC, HAP, TAP
OGT2	GP3 Oxidation/Carbonization Thermal Oxidizer No. 2 (11.5 MMBtu/hr, natural gas-fired)	June 9, 2014	VOC, HAP, TAP

C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

(S.C. Regulation 61-62.1, Section II; S.C. Regulation 61-62.70.6.a.3.i.B)

Condition Number	Condition			
C.1	Emission Unit ID: All Equipment/Control Device ID: All Equipment capacities provided under the Equipment Description column of the Equipment Tables above are not intended to be permit limits unless otherwise specified within the Table of Conditions for the particular equipment. However, this condition does not exempt the facility from the construction permitting process, from PSD review, nor from any other applicable requirements that must be addressed prior to increasing production rates.			
C.2	Emission Unit ID: All Equipment/Control Device ID: All (S.C. Regulation 61-62.1, Section II.J.1.g) A copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. The owner or operator shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least 5 years from the date the record was generated and shall be made available to a Department representative upon request.			
C.3	 Emission Unit ID: 01, 05, 09, 11, 14, 16 Equipment/Control Device ID: All For any source test required under an applicable standard or permit condition, the owner, operator, or representative shall comply with S.C. Regulation 61-62.1, Section IV - Source Tests. Unless approved otherwise by the Department, the owner, operator, or representative shall ensure that source tests are conducted while the source is operating at the maximum expected production rate or other production rate or operating parameter which would result in the highest emissions for the pollutants being tested. Some sources may have to spike fuels or raw materials to avoid being subjected to a more restrictive feed or process rate. Any source test performed at a production rate less than the rated capacity may result in permit limits on emission rates, including limits on production if necessary. The owner or operator shall comply with any limits that result from conducting a source test at less than rated capacity. A copy of the most recent Department issued source test summary letter, whether it imposes a limit or not, shall be 			

Cytec Carbon Fibers, LLC TV-1200-0374 Page 15 of 35

Condition Number	Condition			
	maintained with the operating permit, for each source that is required to conduct a source test.			
	Site-specific test plans and amendments, notifications, and source test reports shall be submitted to the Manager of the Source Evaluation Section, Bureau of Air Quality.			
	Emission Unit ID: 01, 05, 09, 13, 14, 16			
	Equipment/Control Device ID: WA-03300, WA-21200, GP1-CB, GP2-CB, WA-00700, RD-CB, F-332, F-341, OGT1, OGT2			
C.4	The owner/operator shall inspect, calibrate, adjust, and maintain continuous monitoring systems, monitoring devices, and gauges in accordance with manufacturer's specifications or good engineering practices. The owner or operator shall maintain on file all measurements including continuous monitoring system or monitoring device performance measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring devices; and all other information required in a permanent form suitable for inspection by Department personnel.			
	Emission Unit ID: 01, 05, 09, 13, 14, 16			
C.5	Equipment/Control Device ID: WA-03300, WA-21200, GP1-CB, GP2-CB, WA-00700, RD-CB, F-332, F-341, OGT1, OGT2			
	All gauges shall be readily accessible and easily read by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Monitoring parameter readings (i.e., pressure drop readings, etc.) and inspection checks shall be maintained in logs (written or electronic), along with any corrective action taken when deviations occur. Each incidence of operation outside the operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site. Exceedance of operational range shall not be considered a violation of an emission limit of this permit, unless the exceedance is also accompanied by other information demonstrating that a violation of an emission limit has taken place. Reports of these incidences shall be submitted semiannually. If no incidences occurred during the reporting period then a letter shall indicate such.			
	Any alternative method for monitoring control device performance must be preapproved by the Bureau and shall be incorporated into the permit as set forth in SC Regulation 61-62.70.7.			
	Emission Unit ID: 11			
	Equipment/Control Device ID: UT-24600, UT-01			
C.6	(S. C. Regulation 61-62.5, Standard No. 5.2) Any existing source where a burner assembly is replaced with another burner assembly after June 25, 2004, regardless of size or age of the burner assembly to be replaced shall be replaced with a low NO_X burner assembly or equivalent technology capable of achieving a 30 percent reduction from uncontrolled NO_X emission levels based upon manufacturer's specifications. The replacement of individual components such as burner heads, nozzles, or windboxes does not trigger this requirement. An exemption from this requirement shall be granted when a single burner assembly is being replaced in a source with multiple burners due to non-routine maintenance.			
	The owner or operator shall notify and register the burner assembly replacement with the Department, in writing, within 7 days of replacing the existing burner assembly. Notification will be provided on the Department's <i>Low NO_x Burner</i>			

Cytec Carbon Fibers, LLC TV-1200-0374 Page 16 of 35

Condition			
Assembly Replacement Notification Form D-2935. Those sources that wish to receive an emission reduction credit for the control device will be required to submit a construction permit application. Those sources requesting an alternative control methodology must receive written approval prior to burner replacement.			
The owner/operator of a subject combustion source shall develop a tune-up plan and perform tune-ups every two years in accordance with manufacturer's specifications or with good engineering practices from replacement of burner. The first tune-up shall be conducted no more than two years after the burner replacement. Each subsequent tune-up shall be conducted no more than two years after the previous tune-up. All tune-up records are required to be maintained on site.			
Emission Unit ID: 01, 05, 09, 13, 14			
Equipment/Control Device ID: WA-03300, WA-21200, GP1-CB, GP2-CB, WA-00700, RD-CB, F-332, F-341			
Operational ranges for the monitored parameters have been established to ensure proper operation of the pollution control equipment. These operational ranges for the monitored parameters were derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment. The facility shall maintain the established ranges and supporting documentation for these monitored parameters. Operating ranges may be updated following submittal to the Director of Engineering Services.			
Emission Unit ID: 11			
Equipment/Control Device ID: UT-24600, UT-01 (S.C. Regulation 61-62.5, Standard No. 1, Section I) The fuel burning sources shall not discharge into the ambient air			
smoke which exceeds an opacity of 20% The opacity limit may be exceeded for sootblowing, but may not be exceeded for more than 6 minutes in a one hour period nor be exceeded for more than a total of 24 minutes in a 24 hour period. Emissions caused by sootblowing shall not exceed an opacity of 60%.			
The opacity standards set forth above do not apply during startup or shutdown. The owner/operator shall, to the extent practicable, maintain and operate any source including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. The owner/operator shall maintain a log of the time, magnitude, duration, and any other pertinent information to determine periods of startup and shutdown and make these records available to a Department representative upon request.			
(S.C. Regulation 61-62.5, Standard No. 1, Section II) The maximum allowable discharge of particulate matter resulting from these sources is 0.6 pounds per million BTU input.			
The owner/operator shall perform a visual inspection on a semiannual basis. Visual inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and correction action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. No periodic monitoring for opacity will be required during periods of burning natural gas. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. The owner/operator shall submit semiannual reports. The report shall include records of abnormal emissions, if any, and corrective actions taken. If only natural gas was combusted or if the unit did not operate during the semiannual period, the report shall state so.			

Cytec Carbon Fibers, LLC TV-1200-0374 Page 17 of 35

Condition Number	Condition				
	Emission Unit ID: 11				
	Equipment/Control Device ID: UT3-246 & UT3-247				
	These sources must demonstrate simultaneous compliance with requirements and associated record keeping as detailed below:				
	• (S.C. Regulation 61-62.5, Standard No. 1, Section I.B) The boilers shall not discharge into the ambient air smoke which exceeds opacity of 20%. During times of soot blowing the opacity may be exceeded for a total of 6 minutes in any hour or 24 minutes in any 24-hour period, but shall in no case exceed opacity of 60%. This opacity standard does not apply during startup and shutdown.				
	• (40 CFR 60.43c(c)) The boilers shall not discharge into the ambient air smoke which exceeds an opacity of 20% except for one six-minute period per hour of not more than 27% opacity. This opacity standard does not apply during startup, shutdown, and malfunction.				
C.9	The owner/operator shall, to the extent practicable, maintain and operate any source including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. In addition, the owner/operator shall maintain a log of the time, magnitude, duration, and any other pertinent information to determine periods of startup and shutdown and make these records available to a Department representative upon request.				
	(S.C. Regulation 61-62.5, Standard No. 1, Section II) The maximum allowable discharge of particulate matter resulting from these sources is 0.6 pounds per million BTU input.				
	The owner/operator shall perform a visual inspection on a semiannual basis. Visual inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and correction action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. No periodic monitoring for opacity will be required during periods of burning natural gas. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. The owner/operator shall submit semiannual reports. The report shall include records of abnormal emissions, if any, and corrective actions taken. If only natural gas was combusted or if the unit did not operate during the semiannual period, the report shall state so.				
	Emission Unit ID: 11				
	Equipment/Control Device ID: UT-24600, UT-01, UT3-246, UT3-247				
C.10	(S.C. Regulation 61-62.5, Standard No. 1, Section III) The maximum allowable discharge of sulfur dioxide (SO ₂) resulting from these sources is 2.3 pounds per million BTU input.				
	Compliance with the emission limitation will be achieved by burning only natural gas and No. 2 Fuel Oil with a sulfur content of less than or equal to 0.05% sulfur, by weight, as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality. Fuel Oil supplier certification shall be obtained for each shipment of No. 2 Fuel Oil received and stored on site. Reports of the recorded sulfur content shall be submitted semiannually.				

Cytec Carbon Fibers, LLC TV-1200-0374 Page 18 of 35

C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

(S.C. Regulation 61-62.1, Section II; S.C. Regulation 61-62.70.6.a.3.i.B)

Condition Number	Condition			
	Emission Unit ID: 11			
C.11	Equipment/Control Device ID: UT3-246 & UT3-247			
	New Source Performance Standards (NSPS), 40 CFR 60 Subparts A and Dc, Small Industrial-Commercial-Institutional Steam Generating Units In accordance with §60.42c(d), no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The SO ₂ fuel oil sulfur limits apply at all times, including periods of startup, shutdown, and malfunction.			
	Compliance with the fuel sulfur limit shall be determined based on certification from the fuel supplier as specified in 40 CFR 60.48c(f). Records of these certifications shall be kept on site. Reports shall be submitted every six-month period. The reports shall consist of the fuel certification records and a signed statement from the owner/operator that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.			
	The owner/operator shall record and maintain records of the amounts and types of each fuel combusted by these source(s). The amount and type of fuel combusted shall be recorded monthly. As an alternative, the owner/operator may record and maintain records of the total amount of each source's fuel delivered to the facility during each calendar month.			
	Emission Unit ID: 01, 05, 14, 15, 16			
C.12	Equipment/Control Device ID: WA-00700, WA-03300, WA-21200, F-332, OGT1, OGT2			
	(SC Regulation 61-62.5, Standard No. 3, Section III(I)) - Waste Combustion And Reduction, Industrial Incinerators, opacity shall not exceed 20%.			
	"This is a state only requirement."			
	Emission Unit ID: 01, 05, 14, 15, 16			
	Equipment/Control Device ID: WA-00700, WA-03300, WA-21200, F-332, OGT1, OGT2			
	(SC Regulation 61-62.5, Standard No. 3, Section III(I)) - Waste Combustion And Reduction, Industrial Incinerators:			
C.13	Particulate matter emissions shall not exceed 0.5 lbs/MM Btu total heat input. The total heat input value from waste and virgin fuel used for production shall not exceed the BTU used to affect the combustion of the waste and shall not include any BTU input from auxiliary burners located outside of the primary combustion chamber such as those found in secondary combustion chambers, tertiary combustion chambers or afterburners unless those auxiliary burners are fired with waste. In the case where waste is fired in the auxiliary burners located outside of the primary combustion chamber, only the Btu value of the fuel for the auxiliary burner which is from waste shall be added to the total heat input value.			
	The owner/operator shall continue to operate and maintain combustion zone and/or afterburner temperature indicators on each incinerator and maintained on site. Temperature readings shall be recorded at least every fifteen (15) minutes during source operation for each incinerator. The temperature indicators must be installed, maintained and calibrated in accordance with manufacture recommendations. Each incinerator shall be in place and operational whenever processes controlled by it are running, except during periods of flame incinerator malfunction or mechanical failure.			

Cytec Carbon Fibers, LLC TV-1200-0374 Page 19 of 35

Condition Number	Condition				
	"This is a state only requirement."				
	Emission Unit ID: 11				
	Equipment/Control Device II	D: UT-24600			
C.14	(SC Regulation 61-62.5, Standa Boiler (UT-24600) is subject to	rd No. 3, Section III(J)) - Waste Combustion And the following emission limitations when burning	Reduction, Industrial Boilers, The Zurn g vented process emissions:		
	Nickel6.0x10-3 lb/ million BTU total heat input;Cadmium1.0x10-4 lb/ million BTU total heat input;Chromium7.4.x10-4 lb/ million BTU total heat input;Arsenic1.7x10-3 lb/ million BTU total heat input;Lead5.0x10-3 lb/ million BTU total heat input;Hydrochloric Acid0.45 lb/ million BTU total heat input		; ; ; ;		
	Due to the nature of the material being combusted all source testing required under Standard No. 3 is waived. SC Regulation 61-62.5, Standard No. 3, Section $V(G)$ - Waste Analysis, waste analysis is exempted based on the facility's special knowledge of the waste being combusted.				
	"This is a state only requirement	ıt."			
	Emission Unit ID: 01, 05, 09, 13, 16				
	Equipment/Control Device ID: All equipment				
	(S.C. Regulation 61-62.5, Standard No. 4, Section IX) - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%.				
	The owner/operator shall perform a visual inspection of the equipment listed in the table below on a semiannual basis.				
	EQUIPMENT OR CONTROL DEVICE ID	DESCRIPTION	EMISSION POINT ID		
C.15	OX2-00200, OX2-00400	EU05: GP2 Oxidation Aging Rolls and Area Ventilation	GP2-100		
	CB2-02800, CB2-03000	EU05: GP2 Sizing Dryers (3 MMBtu/hr natural gas direct-fired)	GP2-23		
	PCL-2	EU13: Pilot Carbonization Line – 2	PCL-2		
	OX3-003, OX3-006 OX4-003, OX4-006	EU16: GP3 Oxidation Oven Vestibules	GP3-5, GP3-14, GP3-15, GP3-16 GP3-8, GP3-17, GP3-18, GP3-19		
	CB3-026, CB4-026	EU16: GP3 Sizing Dryers (3 MMBtu/hr natural gas direct-fired)	GP3-7, GP3-10		
	Visual inspection means a quali log, noting color, duration, dens observer does not need to be cer	tative observation of opacity during daylight hours sity (heavy or light), cause and correction action t tified to conduct valid visual inspections. However	s where the inspector records results in a aken for any abnormal emissions. The er, at a minimum, the observer should be		

Cytec Carbon Fibers, LLC TV-1200-0374 Page 20 of 35

Condition Number	Condition				
	trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. The owner/operator shall submit semiannual reports. The report shall include records of abnormal emissions, if any, and corrective actions taken. If the unit did not operate during the semiannual period, the report shall state so.				
	CB2-02800, CB2-0300, CB3-026 and CB4-026 are permitted to burn only natural gas as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.				
	Emission Unit ID: 01, 14, 15				
	Equipment/Control Device ID:	All equipment			
	(S.C. Regulation 61-62.5, Standa construction or modification bega exhibit an opacity greater than 40 The owner/operator shall perform	ard No. 4, Section IX) - Visible Emissions (Where Not Spe an on or before December 31, 1985, emissions (including fu)%.	cified Elsewhere), Where gitive emissions) shall not ow on a semiannual basis.		
	EQUIPMENT OR CONTROL	DESCRIPTION	EMISSION POINT ID		
C.16	OX-00300, OX-00400 F-341	GP1 Oxidation Aging Rolls and Oxidation Area Ventilation Resin B Dust Collector	GP1-24 RB-02		
	Visual inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and correction action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. The owner/operator shall submit semiannual reports. The report shall include records of abnormal emissions, if any, and corrective actions taken. If the unit did not operate during the semiannual period, the report shall state so.				
	Emission Unit ID: 01, 05, 13, 14	4, 16			
C.17	Equipment/Control Device ID: All (S.C. Regulation 61-62.5, Standard No. 4, Section VIII) Particulate matter emissions shall be limited to the rate specified by use of the following equations: For process weight rates less than or equal to 30 tons per hour $E = (F) 4.10P^{0.67}$ and For process weight rates greater than 30 tons per hour				
	WI	E = (F) 53.0F - 40 here E = the allowable emission rate in pounds per hour P = process weight rate in tons per hour			

Cytec Carbon Fibers, LLC TV-1200-0374 Page 21 of 35

Condition	Condition				
Number					
	F = effect factor from Table B in S.C. Regulation 61-62.5, Standard No. 4 The owner/operator shall continue to operate and maintain pressure drop gauge(s) on each module of the Resin B Dust				
	Collector (EU14; Equip ID F-341). Pressure drop readings shall be recorded daily during source operation. The dust collector shall be in place and operational whenever processes controlled by the dust collector are running, except during periods of dust collector malfunction or mechanical failure. The following operation and maintenance checks will be made on at least a weekly basis for the Resin B Dust collector:				
	 a) The dust collector cleaning systems will be checked for proper operation. b) Check dust collection hoppers and conveying systems for proper operation. 				
	Emission Unit ID: 13				
	Equipment/Control Device ID: RD-PR/RD-CB				
C.18	(S.C. Regulation 61 62.5, Standard No. 8) The owner/operator shall operate and maintain an outlet organic vapor concentration monitor on the carbon adsorber and outlet organic vapor concentration readings shall be recorded each day during source operation. The carbon adsorber shall be in place and operational whenever processes controlled by the carbon adsorbers are running, except during periods of carbon adsorber malfunction or mechanical failure.				
	"This is a state only requirement."				
	Emission Unit ID: 01, 05, 09, 16				
C.19	Equipment/Control Device ID: All equipment in the GP1 Spinning Process, GP2 Spinning Process, GP3 Spinning Process, DMSO Recovery in addition to the following equipment in the Tank Farm: TF-21000, TF-21600, TF-01300, TF-02200.				
	New Source Performance Standard (NSPS) 40CFR 60, Subpart A, General Provisions and Subpart HHH, Standards of Performance For Synthetic Fiber Production Facilities, applies to solvent-spun synthetic fiber process at the facility. The owner/operator shall comply with all applicable parts of 40CFR 60, Subparts A and HHH. The affected facility is each solvent-spun synthetic fiber process that produces more than 500 megagrams (551 tons) of fiber per year. Solvent-spun synthetic fiber process is defined as "the total of all equipment having a common spinning solution preparation system or a common solvent recovery system, and that is used in the manufacture of solvent-spun synthetic fiber. It includes spinning solution preparation, spinning, fiber processing and solvent recovery, but does not include the polymer production equipment".				
	On and after the date on which the initial performance test required to be conducted by 40CFR60.8 is completed, no owner/operator shall cause the discharge into the atmosphere from any affected facility that produces acrylic fibers, VOC emissions that exceed 10 kilograms per megagram of solvent feed to the spinning solution preparation or precipitation bath. The "solvent feed" includes the solvent used to dissolve the polymer and the solvent used to formulate the precipitation bath. Compliance with the emission limitation is determined on a 6-month rolling average basis in accordance with 40CFR60.603.				
	The owner/operator shall determine compliance with the emission limit by determining and recording the VOC emissions per unit mass solvent feed from each affected unit for the current and preceding five (5) consecutive calendar months and using these values to calculate the six-month average emissions. Each calculation is considered a performance test. The owner/operator shall measure and record the amount of polymer introduced into the affected facility and the solvent-to-				

Cytec Carbon Fibers, LLC TV-1200-0374 Page 22 of 35

Condition Number	Condition		
	polymer ratio of the spinning solutions, and use the equation in 40CFR 60.603(b)(1)(ii) to determine the amount of solvent feed. The permittee may include solvent that is fed to the spinning process to formulate the precipitation bath (i.e. coagulation bath feed) in addition to the solvent that is used to formulate the spinning solution. VOC emissions shall be determined each calendar month by use of the equations in 40CFR 60.603(b)(2) and (b)(3).		
	The owner/operator of an affected facility shall submit a written report to the Bureau that includes the results of the initial performance test and, if the results of subsequent performance tests indicate that the 6-month average VOC emissions exceed the standards in 40CFR60.602, reports shall be submitted quarterly at 3-month intervals after the initial performance test. If no exceedances occur during a particular quarter, a report stating this shall be submitted to the Bureau semiannually.		
	Emission Unit ID: 09		
	Equipment/Control Device ID: TF3-307		
C.20	New Source Performance Standard (NSPS) 40 CFR 60, Subpart A, General Provisions and Subpart Kb Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 is applicable to storage tank TF3-307. The owner/operator shall comply with all applicable parts of Subparts A and Kb.		
	In accordance with $60.112b(a)(3)$ and $60.113(b)(c)$, this source will demonstrate compliance with the control requirements of 40 CFR 60 Subpart Kb by routing emissions from the storage tank to a closed vent system and a control device in accordance with $60.113b(c)(2)$.		
	Emission Unit ID: 11		
	Equipment/Control Device ID: UT-24600		
C.21	SC Regulation 61-62.1, Section II(E), NOx emissions for Oxidizing Boiler (Zurn Boiler (UT-24600)) shall be less than 40 tons per year to avoid SC Regulation 61-62.5, Standard No. 7. This emission limit is only applicable to NOx emissions from fuel combustion.		
	The Oxidizing Boiler (Zurn) is permitted to burn no more than 1,125,000 gallons per year of No. 2 Fuel Oil in order to demonstrate compliance with this requirement. The owner/operator must record fuel consumption monthly and calculate yearly fuel consumption on a twelve-month rolling sum. Reports of the calculated values and the twelve-month rolling sum shall be submitted semiannually to the Department.		
	Emission Unit ID: 11, 16		
	Equipment/Control Device ID: UT3-246, UT3-247, OGT1, OGT2, CB3-026, CB4-026		
C.22	SC Regulation 61-62.1, Section II(E), All SO ₂ sources installed under the GP3 expansion project are subject to Federally Enforceable Limits to avoid triggering PSD		
	The GP3 Boilers (UT3-246 and UT3-247) are permitted to burn up to 300,000 gallons per year per boiler of No. 2 Fuel Oil with a maximum sulfur content of 0.05% by weight. The owner/operator shall maintain fuel usage records, including fuel grade and supplier certification of the sulfur content of the Fuel Oil, and any other records necessary to determine SO_2 emissions from all sources associated with this project. SO_2 emissions shall be calculated on a monthly basis, and a twelve		

Cytec Carbon Fibers, LLC TV-1200-0374 Page 23 of 35

Condition Number	Condition				
	month rolling sum shall be calculated for total SO_2 emissions from these sources. The twelve month rolling sum shall be less than 40 tons per year for this project. Reports of the calculated values and the twelve-month rolling sum shall be submitted semiannually to the Department.				
	Emission Unit ID: 16				
	Equipment/Control	Device ID: OGT1, OGT2			
C.23	In accordance with SC Regulation 61-62.5, Standards 5.1 and 7, the BACT emission limit is 20 parts per million by volume (ppmv) TOC outlet concentration from each Oxidation and Carbonization Oven Thermal Oxidizer.				
	An initial source test shall be conducted within 180 days after startup of the Oxidation and Carbonization Lines. A TOC test shall be conducted at the outlet of the thermal oxidizer to demonstrate compliance with the 20 parts per million by volume (ppmv) TOC emission limits.				
	All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to SC Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.				
	The owner/operator must perform tune-ups on each boiler and each thermal oxidizer every year in accordance with the manufacturers' instructions, a tune-up plan must be developed and kept on file, and records of tune-ups must be kept on site for a minimum of 5 years.				
	Emission Unit ID: 11, 16				
	Equipment/Control Device ID: UT3-246, UT3-247, OGT1, OGT2				
	In accordance with SC Regulation 61-62.5, Standards 5.1 and 7, the BACT limits for CO, PM/PM10, and NO _x emissions from each Boiler & each Thermal Oxidizer have been determined to be the following:				
	Process	BACT limits for CO and PM/PM ₁₀	BACT limits for NO _X		
C 24	Boilers	Good Combustion Practices for Design	0.036 lb NO _X /Million Btu (30 ppmv @3% oxygen, dry) for natural gas and 0.15 lb NO _X / Million Btu for No. 2 Fuel Oil		
0.21	Thermal Oxidizers	Good Combustion Practices	13.31 pounds per hour per unit		
	An initial source test Carbonization and C the thermal oxidizer thermal oxidizers, the are identical. The rec	for NO _x emissions shall be cond arbonization Ovens Thermal Ox to demonstrate compliance wit e owner/operator may test only o juest for the reduced testing shall ations and final reports shall be s	ducted within 180 days after startup of each Oxidation Ovens / Pre- idizers. A test for NO_x emissions shall be conducted at the outlet of h the 13.31 lb/hr emission limit. As an alternative to testing both ne thermal oxidizer if they can show both thermal oxidizers installed ll be submitted to and approved by the Department.		
	All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section				

Cytec Carbon Fibers, LLC TV-1200-0374 Page 24 of 35

Condition	Condition			
Number				
	according to SC Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.			
	The owner/operator must perform tune-ups on each boiler and each thermal oxidizer every year in accordance with the manufacturers' instructions, a tune-up plan must be developed and kept on file, and records of tune-ups must be kept on site for a minimum of 5 years.			
	Emission Unit ID: 01, 05, 09, 16			
	to WA-03300 and WA-21200			
C.25	In accordance with SC Regulation 61-62.5, Standards 5.1 and 7, the BACT limit for VOC emissions from these sources is 0.4 pounds per hour when venting emissions to WA-03300 and 1.4 pounds per hour when venting emissions to WA-03200. Each source is also subject to an outlet concentration limit of 20 parts per million by volume (ppm) total organic carbon (TOC).			
	An initial source test shall be conducted within 180 days after startup of the GP3 on the existing control devices (waste heat recovery boiler (WA-03300) and process heater (WA-21200)). A 90 day extension for initial source testing has been granted (in combination with the initial 180 days). Source testing shall be completed no later then January 6, 2015. A TOC test shall be conducted to demonstrate compliance with the 20 parts per million by volume (ppmv) TOC emission limits.			
	All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to SC Regulation 61-62.1 Section IV and 40 CFR 63. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.			
	Emission Unit ID: 16			
	Equipment/Control Device ID: GP3 Spinning Line			
C 26	In accordance with SC Regulation 61-62.5, Standards 5.1 and 7, the permittee will demonstrate BACT for VOC emissions from the process by complying with the applicable requirements of 40 CFR 60 Subpart HHH and 40 CFR 63 Subpart YY.			
	NSPS and MACT requirements	BACT limits for VOC		
	40 CFR 60, Subpart HHH for synthetic fiber manufacture	20 pounds of solvent per ton of solvent feed		
	40 CFR 63, Subpart YY for acrylic fiber manufacture	Concentration of AN in the spin dope to be 100 ppmw or less		
	Emission Unit ID: 16			
C.27	Equipment/Control Device ID: OX3-003, OX3-006, OX4-003,	OX4-006		

Cytec Carbon Fibers, LLC TV-1200-0374 Page 25 of 35

C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

(S.C. Regulation 61-62.1, Section II; S.C. Regulation 61-62.70.6.a.3.i.B)

Condition Number	Condition		
In accordance with SC Regulation 61-62.5, Standards 5.1 and 7, the BACT limit for VOC emissions from vestibules is 21.4 tons per year per unit.			
	The owner/operator shall maintain production records and any other records necessary to determine VOC emissions from each oxidation oven (inlet and outlet vestibules). VOC emissions shall be calculated on a monthly basis, and a twelve month rolling sum shall be calculated for VOC emissions from the oxidation oven vestibules. Emissions from malfunctions are required to be quantified and included in the calculations. The twelve month rolling sum shall be less than 21.4 tons per year per unit Reports of the calculated values and the twelve-month rolling sum shall be submitted semiannually.		
	The permittee must implement a work practice which includes the design of the units to minimize air flow and entrained emissions from the ovens.		
	An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall only be included in the initial report. Subsequent submittals of the algorithm are required within 30 days of the change if the algorithm or basis for emissions is modified or the Department requests additional information.		
	Emission Unit ID: 09 and 16		
C 28	Equipment/Control Device ID: TF3-307, TF3-342, RS3-036, RS3-041, RS3-055, RS3-064, RS3-072, RS3-065, RS3-033 and all equipment in EU16		
C.28	In accordance with SC Regulation 61-62.5, Standards 5.1 and 7, the BACT limit for VOC fugitive emissions from equipment leaks associated with the GP3 process requires the application of 40 CFR 63 Subpart H/TT/UU for all process streams containing greater than 5 weight percent VOC.		
	Emission Unit ID: 16		
	Equipment/Control Device ID: CB3-026, CB4-026		
	In accordance with SC Regulation 61-62.5, Standards 5.1 and 7, the BACT limit for VOC emissions from the application of sizing is 4.63 tons per year per unit.		
C.29	The owner/operator shall maintain production records and any other records necessary to determine VOC emissions from each sizing application process. VOC emissions shall be calculated on a monthly basis, and a twelve month rolling sum shall be calculated for VOC emissions from the sizing application. Emissions from malfunctions are required to be quantified and included in the calculations. The twelve month rolling sum shall be less than 4.63 tons per year per unit. Reports of the calculated values and the twelve-month rolling sum shall be submitted semiannually.		
	The permittee must implement a work practice standard to keep concentrated sizing materials in sealed containers at all times except when sampling or preparing for production use. All spill and leaks of concentrated sizing material must be cleaned up immediately.		
	An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall only be included in the initial report. Subsequent submittals of the algorithm are required within 30 days of the change if the algorithm or basis for emissions is modified or the Department requests additional information.		

Cytec Carbon Fibers, LLC TV-1200-0374 Page 26 of 35

Condition Number	Condition				
	Emission Unit ID: 16				
	Equipment/Control Device ID: OGT1 and OGT2				
	In accordance with SC Regulation 61-0 BACT for VOC from each Thermal O	52.5, Standard 7 (PSD) and SC Regulation kidizer have been determined to be the for	on 61-62.5, Standard No. 5.1 (BACT). llowing:		
	Process	BACT limit for VOC			
	Oxidation and Carbonization	20 parts per million by volume (ppmv)	20 parts per million by volume (ppmv) TOC (as a surrogate for complete		
	Thermal Oxidizer	combustion)			
	The Oxidation and Carbonization There comply with all applicable provisions.	nal Oxidizer is subject to 40 CFR 64, Con	npliance Assurance Monitoring and shall		
	To meet the requirements of 40 CFR 64 the owner/operator shall continue to operate, and maintain the indicators as shown below:				
		Indicator No. 1	Indicator No. 2		
	Measurement Approach	Combustion chamber temperature	Closed vent system inspection		
		An excursion is defined as a daily			
		temperature below the temperature	An excursion is defined as		
	Indicator Range	established in the latest performance	failure to perform annual		
C.30		test; excursions will trigger an	inspection		
		inspection and corrective action.			
		Temperature sensors are located to			
	Daufarran az Critaria	obtain a representative combustion	Nat applicable		
	Performance Criteria	chamber temperature and have minimum tolerance of at least $\downarrow 4^{\circ}\text{F}$	Not applicable		
		or $\pm 0.75\%$ whichever is greater			
		Thermocouple accuracy will be			
	Quality assurance and Quality	verified according to manufacturer's	Not applicable		
	control	recommendations.			
	Monitoring Frequency	Every 15 minutes	Annual inspection		
	Data Collection Procedures	Recorded electronically	Records of annual inspections		
	Data Averaging Period	Daily	Daily		
	The indicators shown shall be used to j	provide assurance of compliance with each	ch applicable requirement.		
	These operational ranges for the monitored parameters were derived from stack test data, which demonstrate a reasonable assurance of compliance.				
	QA/QC practices, etc. shall consist of manufacturer's recommendations.	installing, operating, and maintaining th	e thermocouple in accordance with the		
	An excursion is defined as a daily average performance test.	ge combustion chamber temperature below	v the temperature established in the latest		

Cytec Carbon Fibers, LLC TV-1200-0374 Page 27 of 35

C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

(S.C. Regulation 61-62.1, Section II; S.C. Regulation 61-62.70.6.a.3.i.B)

Condition Number	Condition		
	Upon detecting an excursion, the owner/operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing any startup, shutdown or malfunction period and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion (other than those caused by excused startup and shutdown conditions).		
	A semiannual report for monitoring shall include, at a minimum, the information required under § 70.6(a)(3)(iii) and the following information as applicable:		
	Summary information of the number, duration, and cause (including unknown cause, if applicable) of excursions, as applicable, and the corrective actions taken; Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero span or other daily calibration checks, if applicable); If applicable, a description of the actions taken to implement a Quality Improvement Plan (QIP) during the reporting period as specified in §64.8. Upon completion of a QIP, the owner/operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions occurring.		
	improvement plans.		
	Emission Unit ID : 01, 05, 11, 14, 15		
	Equipment/Control Device ID: WA-03300, UT-01, All of Unit ID 14 and 15		
C.31	(S.C. Regulation 61-62.1, Section II.E) This facility is a potential major source for SO_2 emissions as defined by South Carolina Regulation 61-62.5, Standard No. 7. The facility has agreed to federally enforceable operating limitations to limit its potential to emit to less than 100 tons per year for SO_2 emissions from the sources listed above. This emission limit was established on existing SO_2 emitting equipment at the time of the initial Title V in order to avoid PSD review.		
	The owner/operator shall maintain production records and any other records necessary to determine SO_2 emissions. SO_2 emissions shall be calculated on a monthly basis, and a twelve month rolling sum shall be calculated for total SO_2 emissions. Emissions from malfunctions are required to be quantified and included in the calculations. The twelve month rolling sum shall be less than 100 tons. Reports of the calculated values and the twelve-month rolling sum, calculated for each month in the reporting period, shall be submitted semiannually.		
	An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall only be included in the initial report. Subsequent submittals of the algorithm are required within 30 days of the change if the algorithm or basis for emissions is modified or the Department requests additional information.		

D. PERMIT FLEXIBILITY

Condition	Conditions
Number	Conditions

Cytec Carbon Fibers, LLC TV-1200-0374 Page 28 of 35

D. PERMIT FLEXIBILITY

Condition Number	Conditions
D.1	The facility may install, remove, and modify insignificant activities as defined in S.C. Regulation 61-62.70.5.c and exempt sources as listed in S.C. Regulation 61-62.1, Section II.B, without revising or reopening the Title V Operating Permit. A list of insignificant activities/exempt sources must be maintained on site, along with any necessary documentation to support the determination that the activity is insignificant and/or exempt, and shall be made available to a Department representative upon request. The list shall be submitted with the next renewal application.

E. MODELING REQUIREMENTS

Condition Number	Condition		
E.1	Air dispersion modeling analysis or other information has demonstrated that emissions from this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air quality standard. Any changes in the parameters used in the air dispersion modeling may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are listed in Attachment - Modeled Emission Rates of this permit. Higher emission rates may be administratively incorporated into Attachment - Modeled Emission Rates of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal ambient air quality standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded.		
	The owner or operator shall maintain this facility at or below the emission rates as listed in Attachment - Modeled Emission Rates, not to exceed the pollutant limitations of this operating permit. Should the facility wish to increase the emission rates listed in Attachment - Modeled Emission Rates, not to exceed the pollutant limitations in the body of this permit, it may do so by the administrative process specified above. This is a State Only enforceable requirement.		

F. NESHAP PERIODIC REPORTING SCHEDULE SUMMARY

NESHAP Part	NESHAP Subpart	Compliance Monitoring Report Submittal Frequency	Reporting Period	Report Due Date
63	YY	Semi-Annual	October 1 through March 31 April 1 through September 31	No later than 60 days after the end of each 6-month period
63	FFFF	Semi-Annual	January 1 through June 30 July 1 through December 31	Postmarked or delivered no later than August 31 or February 28, whichever date is the first date following the end of the semiannual reporting period
63	ZZZZ	N/A	N/A	N/A
 This table summarizes only the periodic compliance reporting schedule. Additional reports may be required. See specific NESHAP Subpart for additional reporting requirements and associated schedule. This reporting schedule does not supersede any other reporting requirements including but not limited to 40 CFR Part 60, 40 CFR Part 61, 40 CFR Part 63, and/or Title V. The MACT reporting schedule may be adjusted to coincide with the Title V reporting schedule with prior approval from the Department in accordance with 40 CFR Part 63.10.a.5. This request may be made 1 year after the compliance date for the associated MACT standard 				

Cytec Carbon Fibers, LLC TV-1200-0374 Page 29 of 35

G NESHAP - CONDITIONS

Condition Number	Condition	
G.1	All NESHAP notifications and reports shall be sent to the Manager of the Air Toxics Section, South Carolina Department	
	of Health and Environmental Control - Bureau of Air Quality.	
	Protection Agency (US EPA) at the following address:	
6.2	US EPA, Region 4	
G.2	Air, Pesticides and Toxics Management Division	
	61 Forsyth Street SW	
	Atlanta, GA 30303	
G.3	Standards for Hazardous Air Pollutants, Subparts A and Subpart YYNational Emission Standards For Hazardous Air Pollutants For Source Categories: Generic Maximum Achievable Control. Existing affected sources shall be in compliance with the requirements of these Subparts on the compliance date, unless otherwise noted. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up unless otherwise noted.	
G.4	This facility has processes subject to the provisions of S.C. Regulation 61-62.63 and 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants, Subparts A and Subpart FFFFNational Emission Standards For Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing. Existing affected sources shall be in compliance with the requirements of these Subparts on the compliance date, unless otherwise noted. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up unless otherwise noted.	
G.5	This facility has processes subject to the provisions of S.C. Regulation 61-62.63 and 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants, Subparts A and Subpart ZZZZNational Emission Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines. Existing affected sources shall be in compliance with the requirements of these Subparts on the compliance date, unless otherwise noted. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up unless otherwise noted.	

H. TITLE V PERIODIC REPORTING SCHEDULE

Compliance Monitoring Report Submittal Frequency	Reporting Period (Begins on the effective date of the permit)	Report Due Date
	January-March	April 30 th
Quartarly	April-June	July 30 th
Quaneny	July-September	October 30 th
	October-December	January 30 th
	January-June	July 30 th
Somionnual	April-September	October 30 th
Semiainuai	July-December	January 30 th
	October-March	April 30 th
Note: This reporting schedule does not supersede any Federal reporting requirements including but not limited to 40 CFR Part 60, 40		

CFR Part 61, and 40 CFR Part 63. All Federal reports must meet the reporting time frames specified in the Federal standard unless the Department or EPA approves a change.

I. TITLE V COMPLIANCE CERTIFICATION REPORTING SCHEDULE

Cytec Carbon Fibers, LLC TV-1200-0374 Page 30 of 35

Title V ComplianceReporting PeriodCertification Submittal Frequency(Begins on the effective date of the permit)		Report Due Date
	January-December	February 14 th
Annual	April-March	May 15 th
Allilual	July-June	August 14 th
	October-September	November 14 th

J. TITLE V RECORD KEEPING AND REPORTING REQUIREMENTS

Condition Number	Condition		
Tumber	Reporting required in this permit, shall be submitted in a timely manner as directed in the Title V Periodic Reporting		
J.1	Schedule and the Title V Compliance Certification Reporting Schedule of this permit. All required reports must be		
	certified by a responsible official consistent with S C. Regulation 61-62.70.5 d		
	All reports and potifications required under this permit shall be submitted to the person indicated in the specific condition		
	at the following address:		
	2600 Bull Street		
J .2	Columbia, SC 29201		
	The contact information for the local EQC Regional office can be found at:		
	http://www.scdhec.gov		
1.2	Unless elsewhere specified within this permit, all reports required under this permit shall be submitted to the Manager of		
J.5	the Technical Management Section, Bureau of Air Quality.		
	All Title V Annual Compliance Certifications shall be sent to the US EPA, Region 4, Air Enforcement Branch and to the		
	Manager of the Technical Management Section, Bureau of Air Quality.		
I.4	US EPA, Region 4		
J. 4	Air Enforcement Branch		
	61 Forsyth Street SW		
Atlanta, GA 30303			
	(S.C. Regulation 61-62.70.6.a.3.ii) The owner or operator shall comply, where applicable, with the following		
	monitoring/support information collection and retention record keeping requirements:		
	1. Records of required monitoring information shall include the following:		
	a. The date, place as defined in the permit, and time of sampling or measurements;		
	b. The date(s) analyses were performed;		
1.5	c. The company of entity that performed the analyses;		
J.5	a. The analytical techniques of methods used;		
	e. The results of such analyses; and f The operating conditions as avisting at the time of sampling or measurement:		
	2. Records of all required monitoring data and support information shall be retained for a pariod of at least 5 years		
	2. Records of an required monitoring data and support information shall be related for a period of at least 5 years from the data of the monitoring sample measurement report or application. Support information includes all		
	calibration and maintenance records and all original strip-chart recordings for continuous monitoring		
	instrumentation and copies of all reports required by the permit		
	instantion and copies of an reports required by the permit.		

Cytec Carbon Fibers, LLC TV-1200-0374 Page 31 of 35

J. TITLE V RECORD KEEPING AND REPORTING REQUIREMENTS

nissions monitors, e which results in ges described for l Quality Control
nis report shall be shall include, at a
and the operating
ecurrence of such
11
were at all times
good practice for
conditions of this
e following:
n.
g the compliance
y the certification,
shall identify each
shan identify eden
ource.
cility, the current
Services a written
fer of the source
address; the name,
tive upon written
ive upon written

K. COMPLIANCE SCHEDULE

Condition Number	Conditions
K.1	Not applicable.

L. PERMIT SHIELD

Cytec Carbon Fibers, LLC TV-1200-0374 Page 32 of 35

Condition Number		Condition					
	(S.C. Regulation 61-62.70.6.f) A copy of the "applicability determination" submitted with the Part 70 permit application is included as Attachment – Applicable and Non-Applicable Federal and State Regulations. With the exception of those listed below, compliance with the terms and conditions of this permit shall be deemed compliance with the applicable requirements specified in Attachment – Applicable and Non-Applicable Federal and State Regulations as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in the permit. Exceptions to this are stated below in the <i>Permit Shield Exceptions</i> Table. The owner or operator shall also be shielded from the non-applicable requirements specified in Attachment – Applicable and Non-Applicable and Non-Applicable and Non-Applicable Regulations. Exceptions to this are stated below in the <i>Permit Shield Exceptions</i> Table.						
	Permi	t Shield Exceptions					
	40 CFR 60 Subpart A	General Provisions					
	40 CFR Part 61	All Subparts					
	40 CFR Part 63 Subpart A	General Provisions					
	40 CFR Part 63	All Subparts					
	SC Regulation 61-62.61	All Subparts					
L.1	SC Regulation 61-62.63	All Subparts					
	SC Regulation 61-62.3	Air Pollution Episodes					
	SC Regulation 61-62.4	Hazardous Air Pollution Conditions					
	SC Regulation 61-62.5, Standard No. 7	Prevention of Significant Deterioration					
	SC Regulation 61-62.5, Standard No. /(c)	Ambient Air Increments					
	SC Regulation 61-62.5, Standard No. 7.1	Nonattainment New Source Review					
	Nothing in the permit shield or in any Part 70 permit shall alter or affect the provisions of Section 303 of the Act, Emergency Orders, of the Clean Air Act; the liability of the owner or operator for any violation of applicable requirements prior to or at the time of permit issuance; the applicable requirements of the Acid Rain Program, consistent with Section 408.a of the Clean Air Act; or the ability of US EPA to obtain information from a source pursuant to Section 114 of the Clean Air Act. In addition, the permit shield shall not apply to emission units in noncompliance at the time of permit issuance, minor permit modifications (S.C. Regulation 61-62.70.7.e.5.i), except as specified in S.C. Regulation 61-62.70.7.e.5.ii)						

Condition Number	Condition
M.1	The owner or operator shall comply with S.C. Regulation 61-62.2 "Prohibition of Open Burning."
M.2	The owner or operator shall comply with S.C. Regulation 61-62.3 "Air Pollution Episodes."
M.3	The owner or operator shall comply with S.C. Regulation 61-62.4 "Hazardous Air Pollution Conditions."
N 4	The owner or operator shall comply with S.C. Regulation 61-62.6 "Control of Fugitive Particulate Matter", Section III
101.4	"Control of Fugitive Particulate Matter Statewide."
	The owner or operator shall comply with the standards of performance for asbestos abatement operations pursuant to 40
M.5	CFR Part 61.145, including, but not limited to, requirements governing training, licensing, notification, work practice,
	cleanup, and disposal.
	The owner or operator shall comply with the standards of performance for asbestos abatement operations pursuant to
M.6	S.C. Regulation 61-86.1, including, but not limited to, requirements governing training, licensing, notification, work
	practice, cleanup, and disposal.

Cytec Carbon Fibers, LLC TV-1200-0374 Page 33 of 35

Condition Number	Condition
M.7	The owner or operator shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, Protection of Stratospheric Ozone, Recycling and Emissions Reduction, except as provided for motor vehicle air conditioners (MVACs) in Subpart B. If the owner or operator performs a service on motor (fleet) vehicles that involves ozone-depleting substance refrigerant in MVACs, the owner or operator is subject to all applicable requirements of 40 CFR Part 82, Subpart B, Servicing of MVACs.
M.8	(S.C. Regulation 61-62.70.6.a.5) The provisions of this permit are severable, and if any provision of this permit, or application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.
M.9	(S.C. Regulation 61-62.70.6.a.6.i) The owner or operator must comply with all of the conditions of this permit. Any permit noncompliance constitutes a violation of the S.C. Pollution Control Act and/or the Federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of permit renewal application.
M.10	(S.C. Regulation 61-62.70.6.a.6.ii) It shall not be a defense for an owner or operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
M.11	(S.C. Regulation 61-62.70.6.a.6.iii) The permit may be modified, revoked, reopened and reissued, or terminated for cause by the Department. The filing of a request by the owner or operator for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
M.12	(S.C. Regulation 61-62.70.6.a.6.iv) The permit does not convey any property rights of any sort, or any exclusive privilege.
M.13	(S.C. Regulation 61-62.70.6.a.6.v) The owner or operator shall furnish to the Department, within a reasonable time, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the owner or operator shall also furnish to the Department copies of records required to be kept by the permit or, for information claimed to be confidential, the owner or operator may furnish such records directly to the Administrator along with a claim of confidentiality. The Department may also request that the owner or operator furnish such records directly to the Administrator along with a claim of confidentiality.
M.14	(S.C. Regulation 61-62.70.6.a.8) No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
M.15	 (S.C. Regulation 61-62.70.6.c.2) Upon presentation of credentials and other documents as may be required by law, the owner or operator shall allow the Department or an authorized representative to perform the following: Enter upon the owner or operator's premises where a Part 70 source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit. As authorized by the Act and/or the S.C. Pollution Control Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
M.16	 (S.C. Regulation 61-62.70.6.g) In the case of an emergency, as defined in S.C. Regulation 61-62.70.6.g.1, the owner or operator shall demonstrate an affirmative defense of emergency through properly signed, contemporaneous operating logs, or other relevant evidence that: 1. An emergency occurred and that the owner or operator can identify the cause(s) of the emergency; 2. The permitted facility was at the time being properly operated; and 3. During the period of the emergency the owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and 4. The owner or operator shall submit verbal notification of the emergency to the Department within twenty-four (24) hours of the time when emission limitations were exceeded, followed by written notifications within thirty

Cytec Carbon Fibers, LLC TV-1200-0374 Page 34 of 35

Condition Number	Condition
	(30) days. This notice fulfills the requirement of S.C. Regulation 61-62.70.6.a.3.iii.B. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.This provision is in addition to any emergency or upset provision contained in any applicable requirement. In any enforcement proceeding, the owner or operator seeking to establish the occurrence of an emergency has the burden of proof.
M.17	(S.C. Regulation 61-62.70.6.a.1.ii) Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be incorporated into the permit and shall be enforceable by the Administrator.
M.18	(S.C. Regulation 61-62.70.6.a.4) According to S.C. Regulation 61-62.70.6.a.4, the owner or operator is prohibited from emissions exceeding any allowances that the source lawfully holds under Title IV of the Act or the regulations promulgated thereunder. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement. No limit shall be placed on the number of allowances held by a source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement. Any such allowances shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Act.
M.19	(S.C. Regulation 61-62.70.7.c.1.ii) Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with S.C. Regulation 61-62.70.5.a.1.iii, 62.70.5.a.2.iv, and 62.70.7.b. In this case, the permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the permit including any permit shield that may be granted pursuant to S.C. Regulation 61-62.70.6.f shall remain in effect until the renewal permit has been issued or denied.
M.20	Requests for permit modification and amendments shall be submitted on the appropriate Department approved Title V Modification Form(s).
M.21	(S.C. Regulation 61-62.70.6.a.7) The owners or operators of Part 70 sources shall pay fees to the Department consistent with the fee schedule approved pursuant to S.C. Regulation 61-62.70.9. Failure to pay applicable fee can be considered grounds for permit revocation.
M.22	(S.C. Regulation 61-62.1, Section III) The owners or operators of Part 70 sources shall complete and submit a new updated emissions inventory consistent with the schedule approved pursuant to S.C. Regulation 61-62.1, Section III. These Emissions Inventory Reports shall be submitted to the Manager of the Emissions Inventory Section, Bureau of Air Quality. This requirement notwithstanding, an emissions inventory may be required at any time in order to determine the compliance status of any facility.
M.23	This permit expressly incorporates insignificant activities. Emissions from these activities shall be included in the emissions inventory submittals as required by S.C. Regulation 61-62.1, Section III.B.2.g.
M.24	Emergency power generators, if applicable, have been determined to be exempt from construction permitting requirements in accordance with South Carolina Regulation 61-62.1 Section II.B.2.f and as such are listed as exempt sources in this permit. These sources shall still comply with the requirements of all applicable regulations including but not limited to New Source Performance Standards (NSPS) 40 CFR 60 Subparts A (General Provisions) and IIII (Stationary
M.25	 Compression Ignition Internal Combustion Engines); and JJJJ (Stationary Spark Ignition Internal Combustion Engines). It has been determined that this facility is subject to SC Regulation 61-62.68, Chemical Accident Prevention Provisions, due to in-process storage or use of a regulated substance in quantities above the specified threshold and that a Risk Management Plan (RMP) has already been submitted to the EPA; therefore, the following must be completed: Submittal of subsequent revisions/corrections/updates of the RMP in accordance with SC Regulation 61-62.68.190 and 68.195.

Cytec Carbon Fibers, LLC TV-1200-0374 Page 35 of 35

Condition Number	Condition					
	2. If it is determined by the Department that additional relevant information is needed, this facility will be required to submit the information in a timely manner.					
	3. For Program 1 processes, the owner or operator shall submit along with the RMP the certification statement provided in Section 68.12(b)(4). For all other covered processes, the owner or operator shall submit along with the RMP a single certification that, to the best of the signer's knowledge, information, and belief formed after reasonable inquiry, the information submitted is true, accurate, and complete.					

Attachment - Modeled Emission Rates

Cytec Carbon Fibers, LLC TV-1200-0374 Page 1 of 3

The emission rates listed herein are not considered federally enforceable limitations but are used to evaluate ambient air quality impact. Until the Department makes a determination that a facility is causing or contributing to an exceedance of a state or federal ambient air quality standard, increases to these emission rates are not in themselves considered violations of these ambient air quality standards (see Modeling Condition(s)).

STANDARD NO	D. 2 - MODE	LED AA	QS EMIS	SION RA'	TES (LBS	/HR)
STACK ID	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	Lead
GP1_08	0.197		0.004	13.265	0.576	
GP1_24	0.014					
GP1_72	0.593		0.001	3.502	2.825	
GP2_100	0.015					
GP2_119	1.160		3.408	26.978	5.419	
GP2_23	0.138		0.011	1.814	1.524	
GP2_72	0.814		0.002	4.773	3.848	
GP3_10	0.022		0.002	0.111	0.247	
GP3_6	0.591		0.007	8.219	0.947	
GP3_7	0.022		0.002	0.111	0.247	
GP3_9	0.591		0.007	8.219	0.947	
GP34A	0.778		1.674	1.764	2.718	
GP34B	0.778		1.674	1.764	2.718	
GP4_4A	0.778		1.674	1.764	2.718	
GP4_4B	0.778		1.674	1.764	2.718	
GP4 4C	0.778		1.674	1.764	2.718	
GP4 4D	0.778		1.674	1.764	2.718	
GP4 6	0.591		0.007	8.219	0.947	
GP4 7	0.022		0.002	0.111	0.247	
GP4 9	0.591		0.007	8.219	0.947	
GP4 10	0.022		0.002	0.111	0.247	
 GP4_12	0.591		0.007	8.219	0.947	
 GP4_13	0.022		0.002	0.111	0.247	
GP4 15	0.591		0.007	8.219	0.947	
 GP4_16	0.022		0.002	0.111	0.247	
PCL 2	0.038					
 PT 03	0.004			0.049	0.041	
 PT_105	0.030					
 PT_106	0.030					
 PT_56			0.750			
 PT_59	0.022					
PT 63	0.011					
PT 85	0.006					
PY1 02	0.003					
PY2 12	0.004					
 RB_02	0.044					
RB 03	0.046		4.171	0.608	0.510	
RD TO	0.005			2.628	0.080	
SOL 1	0.001					
UT1 24	0.408		1.448	4.080	2.331	
						L

Attachment - Modeled Emission Rates

Cytec Carbon Fibers, LLC TV-1200-0374 Page 2 of 3

STANDARD NO. 2 - EXEMPTED AAQS EMISSION RATES (LBS/HR)							
STACK ID	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	Lead	HF
Facility wide						0.00014	
Thermoplastic Yarn Line	0.0107	0.0107	0.023	0.029	0.025	1.47E-07	

TANDARD NO. 8 - MODELED AIR TOXIC EMISSION RATES (LBS/HR)				
	Acrylonitrile	Dimethyl Formamide	Hydrogen Cyanide	
STACK ID	107-13-1	68-12-2	74-90-8	
DSL	(1)	1.730		
GP1_08	0.0936		0.068	
GP1_2	4.525			
GP1_24	(1)		0.684	
GP1_35	(1)	2.051		
GP2_100	(1)		0.720	
GP2_119	(1)		0.095	
GP2_23	(1)	1.638		
GP2_72	0.1825		0.788	
GP3_10	(1)	1.730		
GP3_14	(1)		0.563	
GP3_15	(1)		0.563	
GP3_16	(1)		0.563	
GP3_17	(1)		0.563	
GP3_18	(1)		0.563	
GP3_19	(1)		0.563	
GP3_5	(1)		0.563	
GP3_6	(1)		1.214	
GP3_7	(1)	1.730		
GP3_8	(1)		0.563	
GP3_9	(1)		1.214	
GP4_10	(1)	1.730		
GP4_11	(1)		0.563	
GP4_12	(1)		1.214	
GP4_13	(1)	1.730		
GP4_14	(1)		0.563	
GP4_15	(1)		1.214	
GP4_16	(1)	1.730		
GP4_20	(1)		0.563	
GP4_21	(1)		0.563	
GP4_22	(1)		0.563	
GP4_23	(1)		0.563	
GP4_24	(1)		0.563	
GP4_25	(1)		0.563	
GP4_30	(1)		0.563	
GP4_31	(1)		0.563	

Attachment - Modeled Emission Rates

Cytec Carbon Fibers, LLC TV-1200-0374 Page 3 of 3

TANDARD NO. 8 - MODELED AIR TOXIC EMISSION RATES (LBS/HR)					
	Acrylonitrile	Dimethyl Formamide	Hydrogen Cyanide		
STACK ID	107-13-1	68-12-2	74-90-8		
GP4_32	(1)		0.563		
GP4_33	(1)		0.563		
GP4_34	(1)		0.563		
GP4_35	(1)		0.563		
GP4_5	(1)		0.563		
GP4_6	(1)		1.214		
GP4_7	(1)	1.730			
GP4_8	(1)		0.563		
GP4_9	(1)		1.214		
GPL_1	(1)	0.00013			
PCL_2	(1)		2.400		
RD_PCL1	(1)	-	0.138		
RD_PCL2	(1)		0.138		
RD_PCL3	(1)	-	0.138		
RD_PCL4	(1)	-	0.138		
RD_PCL5	(1)		0.007		
RD_PCL6	(1)		0.007		
RD_PCL7	(1)		0.007		
RD_PCL8	(1)		0.007		
SCL_1	(1)	0.00013	0.077		
SOL_1	(1)		0.037		

Cytec Carbon Fibers, LLC TV-1200-0374 PAGE 1 OF 9

The following contains the Federal and South Carolina air pollution regulations and their applicability, as specified in the Part 70 permit application.

Citation Regulation		Applicable (Y/N)
SC Regulation 61-62.1	Definitions and General Requirements	Y
SC Regulation 61-62.2	Prohibition of Open Burning	Y
SC Regulation 61-62.3	Air Pollution Episodes	Y
SC Regulation 61-62.4	Hazardous Air Pollution Conditions	Y
SC Regulation 61-62.5, Std. No. 1	Emissions from Fuel Burning Operations	Y
SC Regulation 61-62.5, Std. No. 2	Ambient Air Quality Standards	Y
SC Regulation 61-62.5, Std. No. 3	Waste Combustion and Reduction	Y
SC Regulation 61-62.5, Std. No. 3.1	Hospital, Medical, Infectious Waste Incinerators (HMIWI)	Ν
SC Regulation 61-62.5, Std. No. 4	Emissions from Process Industries	Y
SC Regulation 61-62.5, Std. No. 5	Volatile Organic Compounds`	Ν
SC Regulation 61-62.5, Std. No. 5.1	LAER Applicable to VOCs	Ν
SC Regulation 61-62.5, Std. No. 5.2	Control of Oxides of Nitrogen (NO _X)	Ν
SC Regulation 61-62.5, Std. No. 6	Alternative Emission Limitation Options	Ν
SC Regulation 61-62.5, Std. No. 7	Prevention of Significant Deterioration	Ν
SC Regulation 61-62.5, Std. No. 8	Toxic Air Pollutants	Y
SC Regulation 61-62.6	Control of Fugitive Particulate Matter	Y
SC Regulation 61-62.7	Good Engineering Practice Stack Height	Y
SC Regulation 61-62.60	NSPS Standards	Y
SC Regulation 61-62.63	NESHAPs MACT Standards	Y
SC Regulation 61-62.68	Chemical Accident Prevention Provisions	Y
SC Regulation 61-62.70	Title V Operating Permit Program	Y
SC Regulation 61-62.72	Acid Rain	Ν
SC Regulation 61-62.96	NO _x Budget Trading Program	Ν
SC Regulation 61-62.99	NO _x Budget Trading Program Requirements for Stationary Sources Not in the Trading Program	Ν
40CFR 60 subpart A	General Provisions	Ν
40CFR 60 subpart B	Adoption and Submittal of State Plans for Designated Facilities	Ν
40CFR 60 subpart C	Emission Guidelines and Compliance Times	Ν
40CFR 60 subpart Ca	Emissions Guidelines and Compliance Times for Municipal Waste Combustors	Ν
40CFR 60 subpart Cb	Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors that are Constructed on or Before September 20, 1994	Ν
40CFR 60 subpart Cc	Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills	Ν
40CFR 60 subpart Cd	Emissions Guidelines and Compliance Times for Sulfuric Acid Production Units	N
40CFR 60 subpart Ce	Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators	N
40CFR 60 subpart D	Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971	Ν

Cytec Carbon Fibers, LLC TV-1200-0374 PAGE 2 OF 9

Citation	Regulation	Applicable (Y/N)
40CFR 60 subpart Da	Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978	Ν
40CFR 60 subpart Db	Industrial-Commercial-Institutional Steam Generating Units	Ν
40CFR 60 subpart Dc	Small Industrial-Commercial-Institutional Steam Generating Units	Y
40CFR 60 subpart E	Incinerators	Ν
40CFR 60 subpart Ea	Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989 and on or Before September 20, 1994	Ν
40CFR 60 subpart Eb	Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996	Ν
40CFR 60 subpart Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20,1996	Ν
40CFR 60 subpart F	Portland Cement Plants	Ν
40CFR 60 subpart G	Nitric Acid Plants	Ν
40CFR 60 subpart H	Sulfuric Acid Plants	Ν
40CFR 60 subpart I	Hot Mix Asphalt Facilities	Ν
40CFR 60 subpart J	Petroleum Refineries	Ν
40CFR 60 subpart K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	Ν
40CFR 60 subpart Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	Ν
40CFR 60 subpart Kb	Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	Y
40CFR 60 subpart L	Secondary Lead Smelters	Ν
40CFR 60 subpart M	Secondary Brass and Bronze Production Plants	Ν
40CFR 60 subpart N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11,1973	Ν
40CFR 60 subpart Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20,1983	Ν
40CFR 60 subpart O	Sewage Treatment Plants	Ν
40CFR 60 subpart P	Primary Copper Smelters	Ν
40CFR 60 subpart Q	Primary Zinc Smelters	Ν
40CFR 60 subpart R	Primary Lead Smelters	Ν
40CFR 60 subpart S	Primary Aluminum Reduction Plants	Ν
40CFR 60 subpart T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	Ν
40CFR 60 subpart U	Phosphate Fertilizer Industry: Super Phosphoric Acid Plants	Ν
40CFR 60 subpart V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	N
40CFR 60 subpart W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	Ν

Cytec Carbon Fibers, LLC TV-1200-0374 PAGE 3 OF 9

Citation	Regulation	Applicable (Y/N)
AOCER 60 subpart X	Phosphate Fertilizer Industry: Granular Triple Superphosphate	N
	Storage Facilities	11
40CFR 60 subpart Y	Coal Preparation Plants	Ν
40CFR 60 subpart Z	Ferroalloy Production Facilities	Ν
40CFR 60 subpart AA	Steel Plants: Electric Arc Furnaces Constructed After October 21,	Ν
	1974 and on or Before August 17, 1983	
40CFR 60 subpart AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen	Ν
	Decarburization Vessels Constructed After August 7, 1983	
40CFR 60 subpart BB	Kratt Pulp Mills	N
40CFR 60 subpart CC	Glass Manufacturing Plants	Ν
40CFR 60 subpart DD	Grain Elevators	N
40CFR 60 subpart EE	Surface Coating of Metal Furniture	N
40CFR 60 subpart FF	Reserved	Ν
40CFR 60 subpart GG	Stationary Gas Turbines	Ν
40CFR 60 subpart HH	Lime Manufacturing Plants	Ν
40CFR 60 subpart KK	Lead-Acid Battery Manufacturing Plants	Ν
40CFR 60 subpart LL	Metallic Mineral Processing Plants	Ν
40CFR 60 subpart MM	Automobile and Light Duty Truck Surface Coating Operations	Ν
40CFR 60 subpart NN	Phosphate Rock Plants	Ν
40CFR 60 subpart PP	Ammonium Sulfate Manufacture	Ν
40CFR 60 subpart QQ	Graphic Arts Industry: Publication Rotogravure Printing	Ν
40CFR 60 subpart RR	Pressure Sensitive Tape and Label Surface Coating Operations	Ν
40CFR 60 subpart SS	Industrial Surface Coating: Large Appliances	Ν
40CFR 60 subpart TT	Metal Coil Surface Coating	Ν
40CFR 60 subpart UU	Asphalt Processing and Asphalt Roofing Manufacture	Ν
	Equipment Leaks of VOC in the Synthetic Organic Chemicals	
40CFR 60 subpart VV	Mfg. Industry	Ν
40CFR 60 subpart WW	Beverage Can Surface Coating Industry	Ν
40CFR 60 subpart XX	Bulk Gasoline Terminals	Ν
40CFR 60 subpart AAA	New Residential Wood Heaters	Ν
40CFR 60 subpart BBB	Rubber Tire Manufacturing Industry	Ν
40CFR 60 subpart CCC	Reserved	Ν
	Volatile Organic Compound Emissions from the Polymer). Y
40CFR 60 subpart DDD	Manufacturing Industry	Ν
40CFR 60 subpart EEE	Reserved	Ν
40CFR 60 subpart FFF	Flexible Vinyl and Urethane Coating and Printing	Ν
40CFR 60 subpart GGG	Equipment Leaks of VOC in Petroleum Refineries	Ν
40CFR 60 subpart HHH	Synthetic Fiber Production Facilities	Y
*	Volatile Organic Compound Emissions from the Synthetic	
40CFR 60 subpart III	Organic Chemical Manufacturing Industry Air Oxidation Unit	Ν
L .	Processes	
40CFR 60 subpart JJJ	Petroleum Dry Cleaners	Ν
	Equipment Leaks of VOC from Onshore Natural Gas Processing	N
40CFK OU SUDPART KKK	Plants	IN

Cytec Carbon Fibers, LLC TV-1200-0374 PAGE 4 OF 9

Citation	Regulation	Applicable (Y/N)
40CFR 60 subpart LLL	Onshore Natural Gas Processing: SO2 Emissions	Ν
40CFR 60 subpart MMM	Reserved	Ν
40CFR 60 subpart NNN	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry Distillation Operations	Ν
40CFR 60 subpart OOO	Nonmetallic Mineral Processing Plants	Ν
40CFR 60 subpart PPP	Wool Fiberglass Insulation Manufacturing Plants	Ν
40CFR 60 subpart QQQ	VOC Emissions from Petroleum Refinery Wastewater Systems	Ν
40CFR 60 subpart RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry Reactor Processes	Ν
40CFR 60 subpart SSS	Magnetic Tape Coating Facilities	Ν
40CFR 60 subpart TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	Ν
40CFR 60 subpart UUU	Calciners and Dryers in Mineral Industries	Ν
40CFR 60 subpart VVV	Polymeric Coating of Supporting Substrates Facilities	Ν
40CFR 60 subpart WWW	Municipal Solid Waste Landfills	Ν
40CFR 60 subpart AAAA	Small Municipal Waste Combustion Units After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001	Ν
40CFR 60 subpart BBBB	Emission Guidelines and Compliance Times for Small Municipal Waste Constructed on or Before August 30, 1999	Ν
40CFR 60 subpart CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction is Commenced After November 30, 1999 or for Which Modification or Reconstruction is Commenced on or After June 1, 2001	Ν
40CFR 60 subpart DDDD	Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units that Commenced Construction On or Before November 30, 1999	Ν
40CFR 60 subpart EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006	Ν
40CFR 60 subpart FFFF	Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units that Commenced Construction on or Before December 9, 2004	Ν
40CFR 60 subpart GGGG	Reserved	Ν
40CFR 60 subpart HHHH	Reserved	Ν
40CFR 60 subpart IIII	Stationary Compression Ignition Internal Combustion Engines	Ν
40CFR 60 subpart JJJJ	Stationary Spark Ignition Internal Combustion Engines	Ν
40CFR 60 subpart KKKK	Stationary Combustion Turbines	Ν
40CFR 60 subpart LLLL	New Sewage Sludge Incineration Units	Ν
40CFR 60 subpart MMMM	Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units	Ν
40CFR 60 subpart NNNN	Reserved	Ν
40CFR 60 subpart OOOO	Crude Oil and Natural Gas Production, Transmission and Distribution	Ν
40CFR 61 subpart A	General Provisions	Ν

Cytec Carbon Fibers, LLC TV-1200-0374 PAGE 5 OF 9

Citation	Regulation	Applicable (Y/N)
40CFR 61 subpart B	Radon Emissions from Underground Uranium Mines	Ν
40CFR 61 subpart C	Beryllium	Ν
40CFR 61 subpart D	Beryllium Rocket Motor Firing	Ν
40CFR 61 subpart E	Mercury	Ν
40CFR 61 subpart F	Vinyl chloride	Ν
40CFR 61 subpart H	Radionuclides Other Than Radon From Department of Energy Facilities	Ν
40CFR 61 subpart I	Radionuclide Emissions From Facilities Licensed by the Nuclear Regulatory Commission and Federal Facilities Not covered by Subpart H	Ν
40CFR 61 subpart J	Equipment Leaks (Fugitive Emission Source) of Benzene	Ν
40CFR 61 subpart K	Radionuclide Emissions from Elemental Phosphorus Plants	Ν
40CFR 61 subpart L	Benzene Emissions From Coke By-Product Recovery Plants	Ν
40CFR 61 subpart M	Asbestos	Y
40CFR 61 subpart N	Inorganic Arsenic Emissions From Glass Manufacturing Plants	Ν
40CFR 61 subpart O	Inorganic Arsenic Emissions From Primary Copper Smelters	Ν
40CFR 61 subpart P	Inorganic Arsenic Emissions From Arsenic Trioxide and Metallic Arsenic Production Facilities	Ν
40CFR 61 subpart Q	Radon Emissions From Department of Energy Facilities	Ν
40CFR 61 subpart R	Radon Emissions From Phosphogypsum Stacks	Ν
40CFR 61 subpart S	Reserved	Ν
40CFR 61 subpart T	Radon Emissions From the Disposal of Uranium Mill Tailings	Ν
40CFR 61 subpart U	Reserved	Ν
40CFR 61 subpart V	Equipment Leaks (Fugitive Emission Sources)	Ν
40CFR 61 subpart W	Radon Emissions From Operating Mill Tailings	Ν
40CFR 61 subpart X	Reserved	Ν
40CFR 61 subpart Y	Benzene Emissions From Benzene Storage Vessels	Ν
40CFR 61 subpart Z	Reserved	Ν
40CFR 61 subpart AA	Reserved	Ν
40CFR 61 subpart BB	Benzene Emissions From Benzene Transfer Operations	Ν
40CFR 61 subpart CC	Reserved	Ν
40CFR 61 subpart DD	Reserved	Ν
40CFR 61 subpart EE	Reserved	Ν
40CFR 61 subpart FF	Benzene Waste Operations	Ν
40CFR 63 subpart A	General Provisions	Y
40CFR 63 subpart B	Requirements for Control Technology Determinations for Major Sources	Ν
40CFR 63 subpart C	De-Listings	Ν
40CFR 63 subpart D	Compliance Extensions for Early Reduction Sources	Ν
40CFR 63 subpart E	Approval of State Programs and Delegation of Authority	Ν
40CFR 63 subpart F	Synthetic Organic Chemical Manufacturing Industry, HON	N

Cytec Carbon Fibers, LLC TV-1200-0374 PAGE 6 OF 9

Citation	Regulation	Applicable (Y/N)
ADCEP 63 subpart G	Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater	N
	HON	19
40CFR 63 subpart H	Synthetic Organic Chemical Manufacturing Industry for Equipment Leaks, HON	Ν
40CFR 63 subpart I	Synthetic Organic Chemical Manufacturing Industry for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks, HON	Ν
40CFR 63 subpart J	Polyvinyl Chloride and Copolymers Production	Ν
40CFR 63 subpart K	Reserved	Ν
40CFR 63 subpart L	Coke Ovens	Ν
40CFR 63 subpart M	Dry Cleaning	Ν
40CFR 63 subpart N	Chrome Electroplating	Ν
40CFR 63 subpart O	Ethylene Oxide Commercial Sterilization Facilities	Ν
40CFR 63 subpart P	Reserved	Ν
40CFR 63 subpart Q	Industrial Process Cooling Towers	Ν
40CFR 63 subpart R	Gasoline Distribution (Bulk Gasoline Terminals and Pipeline Breakout Stations), Stage I	Ν
40CFR 63 subpart S	Pulp and Paper Cluster Rule	Ν
40CFR 63 subpart T	Degreasing Organic Cleaners (Halogenated Solvent Cleaning)	Ν
40CFR 63 subpart U	Polymers and Resins Group I	Ν
40CFR 63 subpart W	Polymers and Resins Group II, Epoxy Resins Production and Non-Nylon Polyamides Production	Ν
40CFR 63 subpart X	Secondary Lead Smelting	Ν
40CFR 63 subpart Y	Marine Vessel Unloading Operations	Ν
40CFR 63 subpart AA	Phosphoric Acid Manufacturing Plants	Ν
40CFR 63 subpart BB	Phosphate Fertilizers	Ν
40CFR 63 subpart CC	Petroleum Refineries	Ν
40CFR 63 subpart DD	Off-Site Waste and Recovery Operations	Ν
40CFR 63 subpart EE	Magnetic Tape Manufacturing	Ν
40CFR 63 subpart FF	Reserved	Ν
40CFR 63 subpart GG	Aerospace Manufacturing and Rework Facilities	Ν
40CFR 63 subpart HH	Oil and Gas Production Facilities	Ν
40CFR 63 subpart II	Shipbuilding and Ship repair Facilities (Coating Operations)	Ν
40CFR 63 subpart JJ	Wood Furniture Manufacturing Operations	Ν
40CFR 63 subpart KK	Printing and Publishing	Ν
40CFR 63 subpart LL	Primary Aluminum Reduction Plants	Ν
40CFR 63 subpart MM	Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills	Ν
40CFR 63 subpart OO	Tanks- Level 1	Ν
40CFR 63 subpart PP	Containers	N
40CFR 63 subpart OO	Surface Impoundments	N
40CFR 63 subpart RR	Individual Drain Systems	Ν

Cytec Carbon Fibers, LLC TV-1200-0374 PAGE 7 OF 9

Citation	Regulation	Applicable (Y/N)
ACCEP 63 subport SS	Closed Vent Systems, Control Devices, Recovery Devices and	V
	Routing to a Fuel Gas System or Process	1
40CFR 63 subpart TT	Equipment Leaks-Control Level 1	Y
40CFR 63 subpart UU	Equipment Leaks-Control Level 2	Y
40CFR 63 subpart VV	Oil-Water Separators and Organic-Water Separators	Ν
40CFR 63 subpart WW	Tanks - Level 2	Ν
AOCER 63 subpart XX	Ethylene Manufacturing Process Units: Heat Exchange Systems	N
	and Waste Operations	IN IN
40CFR 63 subpart YY	Generic Maximum Achievable Control Technology (MACT)	Y
	Standards	
40CFR 63 subpart CCC	Steel Pickling Facilities	N
40CFR 63 subpart DDD	Mineral Wool Production	N
40CFR 63 subpart EEE	Hazardous Waste Combustors	Ν
40CFR 63 subpart GGG	Pharmaceuticals Production	Ν
40CFR 63 subpart HHH	Natural Gas Transmission and Storage Facilities	N
40CFR 63 subpart III	Flexible Polyurethane Foam Production	N
40CFR 63 subpart JJJ	Polymers and Resins Group IV	N
40CFR 63 subpart LLL	Portland Cement Manufacturing	Ν
40CFR 63 subpart MMM	Pesticide Active Ingredients Production	Ν
40CFR 63 subpart NNN	Wool Fiberglass Production	Ν
40CFR 63 subpart OOO	Manufacture of Amino/Phenolic Resins	Ν
40CFR 63 subpart PPP	Polyether Polyols Production	Ν
40CFR 63 subpart QQQ	Primary Copper	Ν
40CFR 63 subpart RRR	Secondary Aluminum Production	Ν
40CFR 63 subpart TTT	Primary Lead Smelting	Ν
40CFR 63 subpart UUU	Petroleum Refineries (catalytic cracking, catalytic reforming and	Ν
AOCER 63 subpart VVV	Publicly Owned Treatment Works	N
40CFR 63 subpart XXX	Ferroallov Production	N
40 CFR 63 subpart $\Delta \Delta \Delta \Delta$	Municipal Solid Waste (MSW) Landfills	N
40CFR 63 subpart CCCC	Manufacturing of Nutritional Veast	N
40CER 63 subpart DDDD	Plywood and Composite Wood Products	N
40CER 63 subpart EEEE	Organic Liquids Distribution (non-gasoline)	N
40CER 63 subpart EEEE	Mise, Organic Chemical Manufacturing (MON)	V
40CFR 63 subpart GGGG	Solvent Extraction for Vegetable Oil Production	N
40CFR 63 subpart HHHH	Wetted Formed Fiberglass Mat Production	N
40CFP 63 subpart IIII	Automobile and Light Duty Trucks (surface costing)	N
40CFR 63 subpart IIII	Paper & Other Web Costings (paper plastic film feil etc.)	N N
AOCER 63 subpart KKKK	Metal Cans (Surface Coating)	N
40CFR 63 subpart MMMM	Mise Metal Parts and Products (Surface Coating)	N
AOCER 63 subpart NININI	Large Appliance (surface coating)	IN N
40CFR 63 subpart MMMM	Eabric Printing Costing and Ducing	
40CFR 03 Subpart DDDD	Plastic Parts and Products (Surface Costing)	
40CFR 03 SUDDATL PPPP	Wood Duilding Droducts (surface coating)	IN N
40CFK 05 subpart QQQQ	wood Building Products (surface coating)	IN

Cytec Carbon Fibers, LLC TV-1200-0374 PAGE 8 OF 9

Citation	Regulation	Applicable (Y/N)
40CFR 63 subpart RRRR	Metal Furniture (surface coating)	N
40CFR 63 subpart SSSS	Metal Coil (surface coating)	N
40CFR 63 subpart TTTT	Leather Finishing Operations	Ν
40CFR 63 subpart UUUU	Cellulose Production Manufacturing	Ν
40CFR 63 subpart VVVV	Boat Manufacturing	Ν
40CFR 63 subpart WWWW	Reinforced Plastics Composites Production	Ν
40CFR 63 subpart XXXX	Tire Manufacturing	Ν
40CFR 63 subpart YYYY	Combustion Turbines	Ν
40CFR 63 subpart ZZZZ	Reciprocating Internal Combustion Engines (RICE)	Ν
40CFR 63 subpart AAAAA	Lime Manufacturing	Ν
40CFR 63 subpart BBBBB	Semiconductor Manufacturing	Ν
40CFR 63 subpart CCCCC	Coke Ovens: Pushing, Quenching and Battery Stacks	Ν
40CFR 63 subpart DDDDD	Industrial, Commercial, and Institutional Boilers and Process Heaters	Y
40CFR 63 subpart EEEEE	Iron and Steel Foundries	Ν
40CFR 63 subpart FFFFF	Integrated Iron and Steel	Ν
40CFR 63 subpart GGGGG	Site Remediation	Ν
40CFR 63 subpart HHHHH	Misc. Coating Manufacturing	Ν
40CFR 63 subpart IIIII	Mercury Cell Chlor-Alkali Plants	N
40CFR 63 subpart JJJJJ	Brick and Structural Clay Products Manufacturing	N
40CFR 63 subpart KKKKK	Clay Ceramic Manufacturing	N
40CFR 63 subpart LLLLL	Asphalt Roofing and Asphalt Processing	N
40CFR 63 subpart MMMMM	Flexible Polyurethane Foam Fabrication Operation	N
40CFR 63 subpart NNNNN	Hydrochloric Acid Production and Fumed Silica Production	N
40CFR 63 subpart PPPPP	Engine Test Cells/Stands	N
40CFR 63 subpart QQQQQ	Friction Materials Manufacturing	N
40CFR 63 subpart RRRRR	Taconite Iron Ore Processing	N
40CFR 63 subpart SSSSS	Refractory Products Manufacturing	N
40CFR 63 subpart TTTTT	Primary Magnesium Refining	N
40CFR 63 subpart UUUUU	Coal- and Oil-Fired Electric Utility Steam Generating Units	N
40CFR 63 subpart WWWWW	Hospital Ethylene Oxide Sterilizers	N
40CFR 64	Compliance Assurance Monitoring	Y
40CFR 68	Risk Management Programs Under Section 112(r)	Y
40CFR 72	Permits Regulation	N
40CFR 73	SO ₂ Allowance System	N
40CFR 74	Sulfur Dioxide Opt-Ins	N
40CFR 75	Continuous Emission Monitoring	N
40CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	N
40CFR 77	Excess Emissions	N
40CFR 78	Appeal Procedures for Acid Rain	N
40CFR 82 subpart A	Production and Consumption Controls	N
40CFR 82 subpart B	Servicing of Motor Vehicle Air Conditioners	N

Cytec Carbon Fibers, LLC TV-1200-0374 PAGE 9 OF 9

Citation	Regulation	Applicable (Y/N)
40CFR 82 subpart C	Ban on Nonessential Products Containing Class I Substances and Ban on Nonessential Products Containing or Manufactured With	Ν
	Class II Substances	
40CFR 82 subpart D	Federal Procurement	Ν
40CFR 82 subpart E	The Labeling of Products Using Ozone-Depleting Substances	Ν
40CFR 82 subpart F	Recycling and Emissions Reduction	Y
40CFR 82 subpart G	Significant New Alternatives Policy Program	Ν