



Connecticut Department of  
**ENERGY &  
ENVIRONMENTAL  
PROTECTION**

## BUREAU OF AIR MANAGEMENT TITLE V OPERATING PERMIT

Issued pursuant to Title 22a of the Connecticut General Statutes (CGS) and Section 22a-174-33 of the Regulations of Connecticut State Agencies (RCSA) and pursuant to the Code of Federal Regulations (CFR), Title 40, Part 70.

<b>Title V Permit Number</b>	<i>178-0132-TV</i>
<b>Client/Sequence/Town/Premises Numbers</b>	<i>5988/1/178/223</i>
<b>Date Issued</b>	<i>May 3, 2019</i>
<b>Expiration Date</b>	<i>May 3, 2024</i>

**Corporation:**

*Hampford Research, Incorporated*

**Premises Location:**

*54 Veterans Boulevard, Stratford, CT 06615*

**Name of Responsible Official and Title:**

*Timothy P. Hampford, Sr. EHS&S Engineer*

All the following attached pages, 2 through 33, are hereby incorporated by reference into this Title V permit.

/s/Tracy Babbidge for  
Betsey C. Wingfield  
Deputy Commissioner

May 3, 2019  
Date

## TABLE OF CONTENTS

	PAGE
<b>List of Abbreviations/Acronyms</b> .....	4
<b>Section I. Premises Information/Description</b>	
A. Premises Information .....	5
B. Premises Description .....	5
<b>Section II. Emissions Units Information</b>	
A. Emissions Units Description - Table II.A .....	6
B. Control Equipment Description – Table II.B .....	13
C. Grouped Emissions Units – Table II.C .....	13
D. Operating Scenario Identification .....	13
<b>Section III. Applicable Requirements and Compliance Demonstration</b>	
A. Grouped Emissions Unit 1 .....	14
B. Emission Unit 77 .....	19
C. Premises-Wide General Requirements .....	22
<b>Section IV. Compliance Schedule - Table IV</b> .....	24
<b>Section V. State Enforceable Terms and Conditions</b> .....	25
<b>Section VI. Title V Requirements</b>	
A. Submittals to the Commissioner & Administrator .....	27
B. Certifications [RCSA §22a-174-33(b)] .....	27
C. Signatory Responsibility [RCSA §22a-174-2a(a)] .....	27
D. Additional Information [RCSA §§22a-174-33(j)(1)(X), -33(h)(2)] .....	28
E. Monitoring Reports [RCSA §22a-174-33(o)(1)] .....	28
F. Premises Records [RCSA §22a-174-33(o)(2)] .....	29
G. Progress Reports [RCSA §22a-174-33(q)(1)] .....	29
H. Compliance Certifications [RCSA §22a-174-33(q)(2)] .....	30
I. Permit Deviation Notifications [RCSA §22a-174-33(p)] .....	30
J. Permit Renewal [RCSA §22a-174-33(j)(1)(B)] .....	30
K. Operate in Compliance [RCSA §22a-174-33(j)(1)(C)] .....	30
L. Compliance with Permit [RCSA §22a-174-33(j)(1)(G)] .....	30
M. Inspection to Determine Compliance [RCSA §22a-174-33(j)(1)(M)] .....	31
N. Permit Availability .....	31
O. Severability Clause [RCSA §22a-174-33(j)(1)(R)] .....	31
P. Need to Halt or Reduce Activity [RCSA §22a-174-33(j)(1)(T)] .....	31
Q. Permit Requirements [RCSA §22a-174-33(j)(1)(V)] .....	31
R. Property Rights [RCSA §22a-174-33(j)(1)(W)] .....	31
S. Alternative Operating Scenario Records [RCSA §22a-174-33(o)(3)] .....	31
T. Operational Flexibility and Off-Permit Changes [RCSA §22a-174-33(r)(2)] .....	32
U. Information for Notification [RCSA §22a-174-33(r)(2)(A)] .....	32
V. Transfers [RCSA §22a-174-2a(g)] .....	32
W. Revocation [RCSA §22a-174-2a(h)] .....	32
X. Reopening for Cause [RCSA §22a-174-33(s)] .....	33
Y. Credible Evidence .....	33

## **Title V Operating Permit**

**All conditions in Sections III, IV, and VI of this Title V permit are enforceable by both the Administrator and the commissioner unless otherwise specified. Applicable requirements and compliance demonstration are set forth in Section III of this Title V permit. The Administrator or any citizen of the United States may bring an action to enforce all permit terms or conditions or requirements contained in Sections III, IV, and VI of this Title V permit in accordance with the Clean Air Act, as amended.**

## LIST OF ABBREVIATIONS/ACRONYMS

<i>Abbreviation/Acronym</i>	<i>Description</i>
cfm	Cubic feet per minute
CFR	Code of Federal Regulations
CGS	Connecticut General Statutes
CMPU	Chemical Manufacturing Process Unit
CP/OP	Construction Permit/Operating Permit
EU	Emission Unit
EPA	Environmental Protection Agency
ft <sup>2</sup>	Feet square
°F	Degree Fahrenheit
GEU	Grouped Emission Unit
HAP	Hazardous Air Pollutant
hp	Horse power
hr	hour
lb	Pound
MASC	Maximum Allowable Stack Concentration
MMBtu	Million British Thermal Units
RCSA	Regulations of Connecticut State Agencies
SIC	Standard Industrial Code
TPY	Tons per year
VOC	Volatile Organic Compound
yr	Year

## Section I: Premises Information/Description

### A. PREMISES INFORMATION

Nature of Business: custom manufacturer of electronic and dental chemical additives, specialty monomers, photoinitiators and other specialty organic chemicals

Primary SIC: 2869

Facility Mailing Address: Hampford Research, Incorporated  
54 Veterans Boulevard  
Stratford, CT 06615

Telephone Number: (203) 375-1137

### B. PREMISES DESCRIPTION

Hampford Research, Incorporated (HRI) is a custom manufacturer of electronic and dental chemical additives, specialty monomers, photoinitiators, and other specialty organic chemicals. The production plant consists of reactors, condensers, pilot units, filtration units, dryers, and ancillary equipment, such as vacuum pumps, receiving tanks, chillers and centrifuges. Many of HRI's batch processes are interrelated; products are often made in one reactor and then transferred to another reactor for further processing. The products made are sold as intermediate products.

The site includes two adjacent properties: 301 and 375 Barnum Avenue Cut-Off. The site has three interconnected buildings and a separate fourth building. All process manufacturing equipment is located in two interconnected buildings: 54 Veterans Boulevard and 301 Barnum Avenue Cut-Off.

Other equipment at the premises are: two storage tanks used to store No. 2 fuel oil for combustion units, one office heater to provide comfort heat for the facility, two Cleaver Brooks boilers (EU-77 and EU-86A) to provide process steam for the facility and an office heater to provide comfort heat for the facility.

HRI is located in a severe non-attainment area for ozone. **HRI is an area source of HAPs.**

Federal Regulations:

40 CFR Part 63 Subpart VVVVVV – National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources: Pursuant to 40 CFR §63.11494, HRI is subject to this subpart because it operates a Chemical Manufacturing Process Unit (CMPU) that is located at an area source of HAP emissions and it utilizes Methylene Chloride which is a HAP listed in Table 1 of Subpart VVVVVV.

This Title V permit is issued under the requirements of 40 CFR §63.11494(e) because HRI has a control device on the affected CMPU which is necessary to maintain the source's emissions at area source level. Since HRI commenced construction before October 6, 2008, it is considered an existing affected source.

40 CFR Part 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers Area Sources: Only one of the two boilers at HRI burns No. 2 fuel oil. Pursuant to 40 CFR §63.11200(e) the oil-fired boiler with heat input capacity of equal to or less than 5 MMBtu/hr is subject to the requirements of Subpart JJJJJJ.

## Section II: Emissions Units Information

### A. EMISSIONS UNITS DESCRIPTION

Emissions units are set forth in Table II.A. It is not intended to incorporate by reference these NSR Permits or Regulations into this Title V permit.

<b>TABLE II.A: EMISSIONS UNITS DESCRIPTION</b>			
<b>Emissions Unit</b>	<b>Emissions Unit Description</b>	<b>Control Unit Description</b>	<b>Permit or Regulation Number</b>
EU-1	<b>Pilot line No. 1</b> 50 gallon pilot reactor (P-1) P-1 Receiver A (TP-1a) P-1 Receiver B (TP-1b)	Chiller/Condenser System <sup>1</sup> 27.5 ft <sup>2</sup> P-1 condenser (HX-P1) <sup>2</sup> 24 ft <sup>2</sup> P-1 secondary condenser (HXA-P1) Scrubber (acid gas and local ventilation) <sup>3</sup>	CP/OP 178-0120  40 CFR Part 63 Subpart VVVVVV
EU-2	<b>Pilot line No. 2</b> 30 gallon pilot reactor No. 2 (P-2) 5 gallon P-2 receiver tank (TP-2)	Chiller/Condenser System <sup>1</sup> 27.5 ft <sup>2</sup> P-1 condenser (HX-P1) <sup>2</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-3	<b>Pilot line No. 3</b> 50 gallon pilot reactor No. 3 (P-3) 35 ft <sup>2</sup> P-3 condenser (HX-P3) 25 gallon P-3 receiver tank (TP-3)	Chiller/Condenser System <sup>1</sup> 35 ft <sup>2</sup> P-3 condenser (HX-P3) <sup>2</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-4	<b>Pilot line No. 4</b> 100 gallon pilot reactor No. 4 (P-4) 45 ft <sup>2</sup> P-4 condenser (HX-P4) 50 gallon P-4 receiver tank (TP-4)	Chiller/Condenser System <sup>1</sup> 45 ft <sup>2</sup> P-4 condenser (HX-P4) <sup>2</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-5	<b>Pilot line No. 5</b> 100 gallon pilot reactor No. 5 (P-5) 50 gallon P-5 storage tank (TP-5)	Chiller/Condenser System <sup>1</sup> 55 ft <sup>2</sup> P-5 condenser (HX-P5) <sup>2</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-6	<b>Pilot line No. 6</b> 200 gallon pilot reactor No. 6 (P-6) 30 gallon P-6 charge vessel (P6-WT1) 50 gallon P-6 charge vessel (P6-WT2) 125 gallon P-6 receiver tank (TP-6)	Chiller/Condenser System <sup>1</sup> 47 ft <sup>2</sup> P-6 condenser (HX-P6) <sup>2</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-8	<b>Pilot line No. 7 (Old P-9)</b> 50 gallon pilot reactor (P-7)	Chiller/Condenser System <sup>1</sup> 30 ft <sup>2</sup> P-7 condenser (HX-P7) <sup>2</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-7	<b>Pilot line No. 8</b> 50 gallon pilot reactor (P-8)	Chiller/Condenser System <sup>1</sup> 30 ft <sup>2</sup> P-8 condenser (HX-P8) <sup>2</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	

## Section II: Emissions Units Information

<b>TABLE II.A: EMISSIONS UNITS DESCRIPTION</b>			
<b>Emissions Unit</b>	<b>Emissions Unit Description</b>	<b>Control Unit Description</b>	<b>Permit or Regulation Number</b>
EU-9	<b>Reactor line No. 1</b> 500 gallon reactor No. 1 (R-1) 200 gallon R-1 receiving tank (TR-1)	Chiller/Condenser System <sup>1</sup> 47 ft <sup>2</sup> R-1 secondary condenser (HXA-R1) <sup>1</sup> 100 ft <sup>2</sup> R-1 condenser (HX-R1) <sup>2</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	CP/OP 178-0120  40 CFR Part 63 Subpart VVVVVV
EU-10	<b>Reactor line No. 2</b> 750 gallon reactor No. 2 (R-2) 500 gallon R-2 weight tank (R2-WT) 125 gallon R-2 receiver tank (TR-2)	Chiller/Condenser System <sup>1</sup> 47 ft <sup>2</sup> R-2 secondary condenser (HXA-R2) <sup>2</sup> 150 ft <sup>2</sup> R-2 condenser (HX-R2) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-11	<b>Reactor line No. 3</b> 750 gallon reactor No. 3 (R-3) 200 gallon R-3 receiver tank (TR-3)	Chiller/Condenser System <sup>1</sup> 125 ft <sup>2</sup> R3 condenser (HX-R3) <sup>2</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-12	<b>Reactor line No. 4</b> 2,000 gallon reactor No. 4 (R-4)	Chiller/Condenser System <sup>1</sup> 333 ft <sup>2</sup> R-4 condenser (HX-R4) <sup>2</sup> 47 ft <sup>2</sup> R-4 secondary condenser (HXA-R4) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-13	<b>Reactor line No. 5</b> 1,000 gallon reactor No. 5 (R-5)	Chiller/Condenser System <sup>1</sup> 200 ft <sup>2</sup> R-5 condenser (HX-R5) <sup>2</sup> 20 ft <sup>2</sup> R-6 wt tank condenser (HX-TR6) Scrubber (aid gas and local ventilation) <sup>3</sup>	
EU-14	<b>Reactor line No. 6</b> 1,000 gallon reactor No. 6 (R-6) 500 gallon R-6 weight tank (TR-6)	Chiller/Condenser System <sup>1</sup> 200 ft <sup>2</sup> R-6 condenser (HX-R6) <sup>2</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-15	<b>Reactor line No. 7</b> 500 gallon reactor No. 7 (R-7) 350 gallon R-7 receiver tank (TR-7) 150 gallon R-7 receiver tank (TR-7A)	Chiller/Condenser System <sup>1</sup> 120 ft <sup>2</sup> R-7 condenser (HX-R7) <sup>2</sup> 50 ft <sup>2</sup> TR-7 condenser (HX-TR7) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-16	<b>Reactor line No. 8</b> 2,000 gallon reactor No. 8 (R-8)	Chiller/Condenser System <sup>1</sup> 333 ft <sup>2</sup> R-8 condenser (HX-R8) <sup>2</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-17	<b>Reactor line No. 9</b> 1,000 gallon reactor No. 9 (R-9) 750 gallon R-9 receiver tank (TR-9) 250 gallon TR-weight tank (TR-9A)	Chiller/Condenser System <sup>1</sup> 240 ft <sup>2</sup> R-9 condenser (HX-R-9) 50 ft <sup>2</sup> TR-9 condenser (HX-TR-9) Scrubber (acid gas and local ventilation) <sup>3</sup>	

## Section II: Emissions Units Information

<b>TABLE II.A: EMISSIONS UNITS DESCRIPTION</b>			
<b>Emissions Unit</b>	<b>Emissions Unit Description</b>	<b>Control Unit Description</b>	<b>Permit or Regulation Number</b>
EU-18	<b>Reactor line No. 10</b> 200 gallon reactor No. 10 (R-10) 200 gallon R-10 receiver tank (TR-10)	Chiller/Condenser System <sup>1</sup> 100 ft <sup>2</sup> R-10 condenser (HX-R10) <sup>2</sup> 47 ft <sup>2</sup> R-10 secondary condenser (HXA-R10) Scrubber (acid gas and local ventilation) <sup>3</sup>	CP/OP 178-0120  40 CFR Part 63 Subpart VVVVVV
EU-19	<b>Reactor line No. 11</b> 500 gallon reactor No. 11 (R-11)	Chiller/Condenser System <sup>1</sup> 150 ft <sup>2</sup> R-11 condenser (HX-R11) <sup>2</sup> 47 ft <sup>2</sup> R-11 secondary condenser (HXA-R11) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-20	<b>Reactor line No. 12</b> 500 gallon reactor No. 12 (R-12)	Chiller/Condenser System <sup>1</sup> 150 ft <sup>2</sup> R-12 condenser (HX-R12) <sup>2</sup> 47 ft <sup>2</sup> R-12 secondary condenser (HXA-R12) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-21	<b>Reactor line No. 13</b> 200 gallon reactor No. 13 (R-13)	Chiller/Condenser System <sup>1</sup> 102 ft <sup>2</sup> R-13 condenser (HX-R13) <sup>2</sup> 47 ft <sup>2</sup> R-13 secondary condenser (HXA-R13) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-22	<b>Reactor line No. 16</b> 500 gallon reactor No. 16 (R-16) 200 gallon R-16 receiver (TR-16)	Chiller/Condenser System <sup>1</sup> 141 ft <sup>2</sup> R-16 condenser (HX-R16) <sup>2</sup> 47 ft <sup>2</sup> R-16 secondary condenser (HXA-R16) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-23	<b>Plant vacuum pumps</b> 125 cfm vacuum pump No. 1 (VP-1)	Chiller/Condenser System <sup>1</sup> 30 ft <sup>2</sup> VP-1 condenser (HX-VP1)	
EU-24	<b>Plant vacuum pumps</b> 125 cfm vacuum pump No. 2 (VP-2)	Chiller/Condenser System <sup>1</sup> 70 ft <sup>2</sup> VP-2 condenser (HX-VP2)	
EU-25	<b>Plant vacuum pumps</b> 75 cfm vacuum pump No. 4 (VP-4)	Chiller/Condenser System <sup>1</sup> 30 ft <sup>2</sup> VP-4 condenser (HX-VP4)	
EU-26	<b>Plant vacuum pumps</b> 75 cfm vacuum pump No. 7 (VP-7)	Chiller/Condenser System <sup>1</sup> 25 ft <sup>2</sup> VP-7 condenser (HX-VP7)	
EU-86	<b>Plant vacuum pumps</b> 200 cfm vacuum pump No. 13 (VP-13)	Chiller/Condenser System <sup>1</sup> 25 ft <sup>2</sup> VP-7 condenser (HX-VP13)	
EU-27	<b>Filter</b> 42 inch filter No. 1 (F-1)	N/A	



## Section II: Emissions Units Information

<b>TABLE II.A: EMISSIONS UNITS DESCRIPTION</b>			
<b>Emissions Unit</b>	<b>Emissions Unit Description</b>	<b>Control Unit Description</b>	<b>Permit or Regulation Number</b>
EU-28	<b>Filter</b> 32 inch filter No. 2 (F-2)	N/A	CP/OP 178-0120  40 CFR Part 63 Subpart VVVVVV
EU-29	<b>Filter</b> 18 inch filter No. 3 (F-3)	N/A	
EU-30	<b>Filter</b> 32 inch filter No. 4 (F-4)	N/A	
EU-31	<b>Filter</b> 23 inch filter No. 5 (F-5)	N/A	
EU-32	<b>Filter</b> 42 inch filter No. 6 (F-6)	N/A	
EU-33	<b>Pressure filter</b> 24 inch pressure filter No. 1 (PF-1)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-34	<b>Pressure filter</b> 36 inch pressure filter No. 2 (PF-2)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-35	<b>Pressure filter</b> 28 inch pressure filter No. 3 (PF-3)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-36	<b>Pressure filter</b> 24 inch pressure filter No. 4 (PF-4)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-37	<b>Centrifuge No. 1</b> 48 inch x 30 inch centrifuge No. 1 (C-1) 300 gallon centrifuge No. 1 receiver tank (C1-LT)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-38	<b>Centrifuge No. 2</b> 48 inch x 30 inch centrifuge No. 2 (C-2) 650 gallon centrifuge No. 2 liquor tank (C2-LT ) 75 gallon centrifuge No. 2 receiver tank (C2-RT)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-39	<b>Centrifuge No. 3</b> 32 inch x 20 inch centrifuge No. 3 (C-3) 260 gallon centrifuge No. 3 receiver (C3-LT)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-40	<b>Centrifuge No. 4</b> 24 inch x 12 inch centrifuge No. 4 (C-4)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	

## Section II: Emissions Units Information

<b>TABLE II.A: EMISSIONS UNITS DESCRIPTION</b>			
<b>Emissions Unit</b>	<b>Emissions Unit Description</b>	<b>Control Unit Description</b>	<b>Permit or Regulation Number</b>
EU-41	<b>Centrifuge No. 5</b> 24 inch x 14 inch centrifuge No. 5 (C-5)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	CP/OP 178-0120  40 CFR Part 63 Subpart VVVVVV
EU-42	<b>Centrifuge No. 6</b> 30 inch x15 inch centrifuge No. 6 (C-6)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-43	<b>Vacuum tray dryer No. 1 and 2</b> 234 ft <sup>2</sup> vacuum tray dryer No. 1 & No. 2 (VTD-1/2) 75 cfm VTD-1 vacuum pump (VP-3)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-44	<b>Laboratory tray dryer No. 1</b> 9 ft <sup>2</sup> laboratory tray dryer (LTD-1)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-45	<b>Laboratory tray dryer No. 2</b> 18 ft <sup>2</sup> laboratory tray dryer (LTD-2)	Chiller/Condenser System <sup>1</sup> Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-46	<b>Air tray dryer</b> 158 ft <sup>2</sup> air tray dryer (ATD-1)	N/A	
EU-47	<b>Vacuum tray dryer No. 3</b> 100 ft <sup>2</sup> vacuum tray dryer No. 3 (VTD-3) 75 cfm VTD-3 vacuum pump (VP-6)	Chiller/Condenser System <sup>1</sup> 25 ft <sup>2</sup> VP-6 pre-condenser (HX-VTD3) 25 ft <sup>2</sup> VP-6 condenser (HX-VP6) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-48	<b>Vacuum tray dryer No. 4</b> 100 ft <sup>2</sup> vacuum tray dryer No. 4 (VTD-4) 75 cfm VTD-4 vacuum pump (VP-11)	Chiller/Condenser System <sup>1</sup> 25 ft <sup>2</sup> VP-11 condenser (HX-VP11) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-49	<b>Vacuum tray dryer No. 5</b> 60 ft <sup>2</sup> vacuum tray dryer No. 5 (VTD-5) 75 cfm VTD-5/6 vacuum pump (VP-12)	Chiller/Condenser System <sup>1</sup> 25 ft <sup>2</sup> VP-12 condenser (HX-VP12) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-50	<b>Vacuum tray dryer No. 6</b> 20 ft <sup>2</sup> vacuum tray dryer No. 6 (VTD-6)	N/A	
EU-51	<b>Vacuum tray dryer No. 7</b> 148 ft <sup>2</sup> vacuum tray dryer No. 7 (VTD-7) 125 cfm VTD-7 vacuum pump (VP-10)	Chiller/Condenser System <sup>1</sup> 25 ft <sup>2</sup> VP-10 condenser (HX-VP10) Scrubber (acid gas and local ventilation) <sup>3</sup>	

## Section II: Emissions Units Information

<b>TABLE II.A: EMISSIONS UNITS DESCRIPTION</b>			
<b>Emissions Unit</b>	<b>Emissions Unit Description</b>	<b>Control Unit Description</b>	<b>Permit or Regulation Number</b>
EU-53	<b>Still No. 2</b> 15 gallon still No. 2 (S-2)	Chiller/Condenser System <sup>1</sup> 10 ft <sup>2</sup> S-2 condenser (HX-S2) Scrubber (acid gas and local ventilation) <sup>3</sup>	CP/OP 178-0120  40 CFR Part 63 Subpart VVVVVV
EU-54	<b>Still No. 3</b> 60 gallon still No. 3 (S-3) 325 gallon S-3 weight tank (S3-WT1) 325 gallon S-3 weight tank (S3-WT2) 80 gallon S-3 receiver tank (TS-3)	Chiller/Condenser System <sup>1</sup> 47 ft <sup>2</sup> S-3 condenser (HX-S3) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-55	<b>Still No. 4</b> 100 gallon still No. 4 (S-4) 300 gallon S-4 weight tank (S4-WT) 80 gallon S-4 receiver tank (TS-4)	Chiller/Condenser System <sup>1</sup> 62 ft <sup>2</sup> S-4 condenser (HX-S4) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-56	<b>Still No. 5</b> 100 gallon still No. 5 (S-5) 25 gallon S-5 receiver (TS-5)	Chiller/Condenser System <sup>1</sup> 47 ft <sup>2</sup> S-5 condenser (HX-S5) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-57	<b>Process tank No. 2</b> 750 gallon process tank (T-2)	N/A	
EU-58	<b>Process tank No. 3</b> 500 gallon process tank (T-3)	Chiller/Condenser System <sup>1</sup> 25 ft <sup>2</sup> T-3 condenser (HX-T3) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-59	<b>Process Tank No. 4</b> 200 gallon process tank (T-4)	Chiller/Condenser System <sup>1</sup> 25 ft <sup>2</sup> T-4 condenser (HX-T4) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-60	<b>Process Tank No. 5</b> 200 gallon process tank (T-5)	Chiller/Condenser System <sup>1</sup> 47 ft <sup>2</sup> T-5 condenser (HX-T5) Scrubber (acid gas and local ventilation) <sup>3</sup>	
EU-61	<b>Process Tank Line No. 6</b> 3,000 gallon process tank (T-6)	N/A	
EU-65	<b>Lab hood</b> 2,000 cfm lab hood No. 2 (LH-2)	N/A	
EU-66	<b>Lab hood</b> 2,000 cfm lab hood No. 3 (LH-3)	N/A	
EU-67	<b>Lab hood</b> 2,000 cfm lab hood No. 4 (LH-4)	N/A	
EU-68	<b>Lab hood</b> 2,000 cfm lab hood No. 5 (LH-5)	N/A	
EU-69	<b>Lab Hood</b> 2,000 cfm lab hood No. 6 (LH-6) QA/QC lab	N/A	

## Section II: Emissions Units Information

<b>TABLE II.A: EMISSIONS UNITS DESCRIPTION</b>				
<b>Emissions Unit</b>	<b>Emissions Unit Description</b>	<b>Control Unit Description</b>	<b>Permit or Regulation Number</b>	
EU-70	<b>Lab Hood</b> 2,000 cfm lab hood No. 7 (LH-7) QA/QC lab	N/A	CP/OP 178-0120  40 CFR Part 63 Subpart VVVVVV	
EU-71	<b>Lab Hood</b> 2,000 cfm lab hood No. 8 (LH-8)	N/A		
EU-72	<b>Lab Hood</b> 2,000 cfm lab hood No. 9 (LH-9)	N/A		
EU-85	<b>Rotary dryer No. 1</b> 20 ft <sup>2</sup> rotary vacuum dryer No. 3 (RVD-3) 75 cfm RVD-1 vacuum pump (VP-9)	Chiller/Condenser System <sup>1</sup> 25 ft <sup>2</sup> VP-9 pre condenser (HXP-VP9) 25 ft <sup>2</sup> VP-9 condenser (HX-VP9)		
EU-84	<b>Rotary dryer No. 2</b> 28 ft <sup>2</sup> rotary vacuum dryer No. 2 (RVD-2) 75 cfm RVD-2 vacuum pump (VP-8)	Chiller/Condenser System <sup>1</sup> 25 ft <sup>2</sup> VP-8 pre condenser (HXP-VP8) 25 ft <sup>2</sup> VP-8 condenser (HX-VP8)		
EU-73	<b>Rotary dryer No. 3</b> 25 ft <sup>2</sup> rotary vacuum dryer No. 3 (RVD-3) 75 cfm RVD-3 vacuum pump (VP-5)	Chiller/Condenser System <sup>1</sup> 25 ft <sup>2</sup> VP-5 condenser (HX-VP5)		
EU-74	<b>Pressure Filter dryer No. 1</b> 0.4 m <sup>2</sup> pressure filter dryer No. 1 (PFD-1) 500 gallon PFD-1 receiving tank (TPFD-1)	Chiller/Condenser System <sup>1</sup> 25 ft <sup>2</sup> PFD-1 condenser (HX-PFD1)		
EU-75	<b>Laboratory Reactor</b> 5 gallon autoclave	N/A		
EU-76	<b>Process Tank</b> 30 gallons (T-30)	N/A		
EU-78	<b>Ethylene Glycol Convault Tank</b>	6,000 gallons		
EU-77	<b>Fuel Burning Equipment</b> 100 horse power plant steam boiler	N/A		40 CFR Part 63 Subpart JJJJJ

<sup>1</sup> The Chiller/Condenser System consists of Chiller 1 (EU-79), Chiller 2 (EU-80), Demister Pre-condenser (EU-83) and Demister Column (EU-82)

<sup>2</sup> Condensers operating under reflux conditions, which are required for processing, are not considered control devices.

<sup>3</sup> Packed Tower Caustic Scrubber (SC-2) (EU-81)

## Section II: Emissions Units Information

### B. CONTROL EQUIPMENT DESCRIPTION

<b>TABLE II.B: CONTROL EQUIPMENT DESCRIPTION</b>		
<b>Emissions Unit</b>	<b>Control Unit Description</b>	<b>Permit or Regulation Number</b>
EU-79	89 ton Glycol Chiller 1 (GC-2016A)	CP/OP 178-0120  40 CFR Part 63 Subpart VVVVVV
EU-80	89 ton Glycol Chiller 2 (GC-2016B)	
EU-81	5,000 cfm Packed Tower Caustic Scrubber (SC-2)	
EU-82	10 ft x 16 in. diameter Demister/Condenser Column (HX-Stk3)	
EU-83	256 ft <sup>2</sup> Demister Pre-Condenser (HXP-Stk3)	

### C. GROUPED EMISSIONS UNITS

<b>TABLE II.C: GROUPED EMISSIONS UNITS DESCRIPTION</b>	
<b>Grouped Emissions Units (GEU)</b>	<b>Grouped Emissions Unit Description</b>
GEU-1	EUs: 1-51, 53-61, 65-77, 84-86: reactors, condensers, pilot units, filtration units, dryers, and ancillary equipment, such as vacuum pumps, receiving tanks, chillers and centrifuges.
	EUs: 79 – 83: Chillers 1 and 2, packed tower caustic scrubber, demister/condenser column and demister pre-condenser.

### D. OPERATING SCENARIO IDENTIFICATION

The Permittee shall be allowed to operate under the following Standard Operating Scenarios (SOS) without notifying the commissioner, provided that such operations are explicitly provided for and described in this section.

Reactors, condensers, pilot units, filtration units, dryers, and ancillary equipment, such as vacuum pumps, receiving tanks, chillers and centrifuges (GEU-1): the standard use of this equipment is the custom manufacturer of electronic and dental chemical additives, specialty monomers, photoinitiators, and others specialty organic chemicals.

Boiler (EU-77): the standard operation of this boiler is to provide process steam to the facility.

### Section III: Applicable Requirements and Compliance Demonstration

The following contains summaries of applicable regulations and compliance demonstration for each identified Emissions Unit and Operating Scenario, regulated by this Title V permit.

#### A. GROUPED EMISSIONS UNIT 1 (GEU-1)

##### 1. VOC, HAPs, Methylene Chloride and Acetone

###### a. Limitation or Restriction

###### i. VOC Emissions [CP/OP 178-0120]

- (A) All equipment listed in this Title V permit shall not emit VOC, highly photochemically reactive solvents as defined in RCSA Section 22a-174-20(f), in excess of 8.0 pounds per hour or 40.0 pounds per day from each piece of equipment.
- (B) All equipment listed in this Title V permit shall not emit VOC, non-highly photochemically reactive solvents as defined in RCSA Section 22a-174-20(f), in excess of 160.0 pounds per hour or 800.0 pounds per day from each piece of equipment.
- (C) The total VOC emissions for all equipment listed in this Title V permit shall not exceed 24.9 TPY of VOC.
- (D) Hourly and daily equipment emissions are calculated using the following assumptions:
  - (1) The total process emissions for each compound from a process is assumed to be emitted by each piece of equipment.
  - (2) The emissions per piece of equipment are assumed to be emitted during a specific operating time. This period of time is shorter than the production time of the entire process line.

Note: The conservative approach for calculating the hourly and daily emissions provides higher than actual emission to be compared to RCSA Section 22a-174-20(f) thresholds.

###### ii. Hazardous Air Pollutants (HAP) Emissions [CP/OP 178-0120]

- (A) The Permittee shall not cause or allow emissions of Acetone for the premises to equal or exceed 25 tons in any consecutive 12 months.
- (B) The Permittee shall not cause or allow emissions of Methylene Chloride for the premises to equal or exceed 10 tons in any consecutive 12 months.
- (C) The Permittee shall not cause or allow emissions of HAPs for the premises, subject to Section 112(b) of the Clean Air Act, to equal or exceed 10 tons per year for any individual HAP and 25 tons per year for any combination of HAPs.

- iii. The Permittee shall demonstrate compliance with VOC, HAPs and Acetone emission limits by calculating the emission rates using emission factors from the following source:  
[CP/OP 178-0120]

### **Section III: Applicable Requirements and Compliance Demonstration**

Emission factors shall be used to calculate VOC, HAPs and Acetone emission from all HRI processes. Emission factors are based on the mass balance of material/solvents used and produced in each process.

- iv. The commissioner may require other means (e.g. stack testing) to demonstrate compliance with the emission limits in Section III.A.1.a of this Title V permit, as allowed by state or federal statute, law or regulation. [CP/OP 178-0120]
- v. This equipment shall not cause an exceedance of the Maximum Allowable Stack Concentration (MASC) for any hazardous air pollutant (HAP) emitted and listed in RCSA Section 22a-174-29. [STATE ONLY REQUIREMENT]
- vi. The emissions from any new compounds, for production or trial runs, shall be counted towards any applicable emission limit in this Title V permit. [CP/OP 178-0120]

#### *b. Monitoring Requirements*

Record keeping specified in Section III.A.1.c of this Title V permit shall be sufficient to meet other Monitoring Requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(1)(K)(ii)]

#### *c. Record Keeping Requirements*

- i. The Permittee shall make and keep records of the monthly and 12 consecutive months VOC and Acetone emissions for all equipment listed in this Title V permit. The VOC and Acetone emissions shall be based on any consecutive 12 month time period and shall be determined by adding the current month's VOC and Acetone emissions to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month. [CP/OP 178-0120]
- ii. The Permittee shall make and keep records of the hourly and daily emissions of highly photochemically reactive VOC's and non-highly chemically reactive VOC's and State of Connecticut HAP's for each piece of equipment listed in this permit. Calculations will be based on the emission factors calculated as detailed in Appendix B of this permit – Emission Factor Determination and Record Keeping Procedures. [CP/OP 178-0120]
- iii. The Permittee shall make and keep records showing compliance with RCSA Section 22a-174-29. [CP/OP 178-0120]
- iv. The Permittee shall make and keep records of monthly and 12 consecutive months emissions of each single and combined HAPs for the premises. The single and combined HAPs emissions shall be based on any consecutive 12 month time period and shall be determined by adding the current month's single and combined HAPs emissions to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month. [CP/OP 178-0120]
- v. The Permittee shall maintain records of the composition of all products manufactured at the premises in one confidential file. [CP/OP 178-0120]
- vi. The Permittee shall make and keep daily records of production. Such records shall contain the following information: [CP/OP 178-0120]
  - (A) date and time production was initiated;
  - (B) equipment used to produce the product;

### **Section III: Applicable Requirements and Compliance Demonstration**

- (C) description of product, including name;
  - (D) quantity of product produced;
  - (E) date and time batch was completed;
  - (F) number of batches per day; and
  - (G) quantity of raw material usage, process waste, recovered solvents, and final product yields for each batch.
- vii. The Permittee shall keep records of all compounds used, Safety Data Sheets, technical data sheets, purchase orders, invoices, and other documents necessary to verify information and calculations for all materials which contain VOCs and/or HAPs which are used or stored at the premises. [CP/OP 178-0120]
- viii. The Permittee shall keep accurate annual records of all quantity and type of waste manifested as waste material. [CP/OP 178-0120]
- ix. The Permittee shall maintain a list of equipment in the Synthesis Facility and will include new and existing equipment added into the Synthesis Facility *or* its emission control equipment after the permit is issued. Such additional equipment shall not result in an increase of the emissions limits contained in this Title V permit. Frequency of notification regarding the addition of such additional equipment and the information contained in these notifications shall be as follows:
- (A) For equipment installed which falls within the specifications listed in Appendix A, New Equipment Specifications, the Permittee shall maintain a record of the equipment added to the premises. Information included in the record shall be as follows:
    - (1) the reactor emission unit (EU) number, Equipment Identification number where the reactor will be placed,
    - (2) the reactor type, capacity, and all specification details as it relates to Appendix A of CP/OP 178-0120, and
    - (3) the date the reactor is placed into service. Notification shall be made to the Connecticut DEEP within 90 days of placing equipment into service.
  - (B) For equipment which does not fall within the specifications detailed in Appendix A, but subject to the emission limits of the permit, notification shall be made to the Connecticut DEEP 30 days prior of placing equipment into service. Information included in the notification shall be as follows:
    - (1) the equipment emission unit (EU) number and Group Emission Unit (GEU) number where the equipment will be placed,
    - (2) the type of unit and its capacity,
    - (3) a demonstration of compliance with RCSA, including, but not limited to, RCSA Section 22a-174-29, and



### **Section III: Applicable Requirements and Compliance Demonstration**

- (4) a demonstration of compliance with all emission limitations included in this permit.
- x. At a minimum, every five years from May 4, 2016, the Permittee shall submit a modification to update the list of equipment and control equipment in Part I of Permit No. 178-0120. [CP/OP 178-0120]
- xi. The Permittee shall make and keep all required records on the premises to determine compliance with the terms and conditions of this Title V permit in accordance with RCSA Section 22a-174-4. Such records shall be made available upon request by the commissioner and kept for the duration of the permit or for the previous five years, whichever is less. [CP/OP 178-0120]

#### *d. Reporting Requirements*

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

## **2. Control Equipment: Surface Condenser and Scrubber**

#### *a. Limitation or Restriction*

- i. Surface condenser: The control efficiency attained by the surface condenser is a function of the condenser inlet temperature. The maximum exit temperature of the ethylene glycol from the chillers shall be 40 °F. [CP/OP 178-0120]
- ii. Scrubber: The scrubber shall be operated during processes where an acid is used as a solvent or where acid gasses are generated by chemical process. Minimum flow rate of caustic solution through scrubber: 50 gallons/minute. [CP/OP 178-0120]

#### *b. Monitoring Requirements*

- i. The Permittee shall monitor the temperature at the discharge of the chiller system on a continuous basis. The Permittee shall include an alarm set at 40 °F that will indicate a temperature exceedance. [CP/OP 178-0120]
- ii. The Permittee shall monitor the daily flow rate of caustic solution through the scrubber using a flow meter. [CP/OP 178-0120]

#### *c. Record Keeping Requirements*

- i. The Permittee shall make and keep records of the temperature at the discharge of the chiller system on a continuous basis. [CP/OP 178-0120]
- ii. The Permittee shall record each chiller system alarm occurrence and document the duration, emissions, and resolution of each temperature exceedance. [CP/OP 178-0120]
- iii. The Permittee shall make and keep records of the daily flow rate of caustic solution through the scrubber. The scrubber operation shall be recorded in a scrubber log. [CP/OP 178-0120]

### Section III: Applicable Requirements and Compliance Demonstration

#### d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

### 3. 40 CFR Part 63 Subpart VVVVVV – National Emission Standards for Hazardous Air Pollutants for Chemical manufacturing Area Sources

#### a. Limitation or Restriction

##### i. Management Practices: [40 CFR §63.11495(a)(1) – (4)]

- (A) The Permittee shall ensure that each process vessel must be equipped with a cover or lid that must be closed at all times when it is in organic HAP service or metal HAP service, except for manual operations that require access, such as material addition and removal, inspection, sampling and cleaning.
- (B) The Permittee must use any of the methods listed in paragraphs (a)(2)(i) through (iv) of 40 CFR §§63.11495(a)(2)(i) through (iv) to control total organic HAP emissions from transfer of liquids containing Table 1 organic HAP to tank trucks or railcars.
- (C) The Permittee must conduct inspections of process vessels and equipment for each CMPU in organic HAP service or metal HAP service, as specified in 40 CFR §§63.11495(a)(3)(i) through (v), to demonstrate compliance with 40 CFR §63.11495(a)(1) and to determine that the process vessels and equipment are sound and free of leaks.
- (D) The Permittee must repair any leak within 15 calendar days after detection of the leak, or document the reason for any delay of repair. For the purposes of paragraph 40 CFR §63.11495(a)(4), a leak will be considered "repaired" if a condition specified in paragraph 40 CFR §63.11495(a)(4)(i), (ii) or (iii) is met.

##### ii. Organic HAP emissions from batch process vents: [40 CFR §63.11496(a)]

The Permittee must comply with the requirements in paragraph 40 CFR §§63.11496(a)(1) through (4) for organic HAP emissions from your batch process vents for each CMPU using Table 1 organic HAP. If **uncontrolled organic HAP** emissions from all batch process vents from a CMPU subject to 40 CFR Part 63 Subpart VVVVVV are **equal to or greater than 10,000 pounds per year (lb/yr)**, the Permittee must also comply with the emission limits and other requirements in **Table 2** to 40 CFR Part 63 Subpart VVVVVV.

#### b. Monitoring Requirements

Record keeping specified in Section III.A.3.c of this Title V permit shall be sufficient to meet other Monitoring Requirements pursuant to RCSA §22a-174-33.  
[RCSA §22a-174-33(j)(1)(K)(ii)]

#### c. Record Keeping Requirements

- i. The Permittee shall keep records of the dates and results of each inspection event, the dates of equipment repairs, and, if applicable, the reasons for any delay in repair. [40 CFR §63.11495(a)(5)]

### **Section III: Applicable Requirements and Compliance Demonstration**

- ii. The Permittee must keep the records specified in paragraphs 40 CFR §§63.11501(c)(1) through (8) for each CMPU subject to 40 CFR Part 63 Subpart VVVVVV as follows: [40 CFR §§63.11501(c)]
  - (A) Records of management practice inspections, repairs, and reasons for any delay of repair, as specified in 40 CFR §63.11495(a)(5).
  - (B) Records of small heat exchange system inspections, demonstrations of indications of leaks that do not constitute leaks, repairs, and reasons for any delay in repair as specified in 40 CFR §63.11495(b).
  - (C) If batch process vent emissions are less than 10,000 lb/yr for a CMPU, records of batch process vent emission calculations, as specified in 40 CFR §63.11496(a)(1), the number of batches operated each month, as specified in 40 CFR §63.11496(a)(3), and any updated emissions calculations, as specified in 40 CFR §63.11496(a)(3). Alternatively, keep records of the worst-case processes or organic HAP usage, as specified in 40 CFR §§63.11496(a)(2) and (4), respectively.
  - (D) Records identifying wastewater streams and the type of treatment they receive, as specified in Table 6 to 40 CFR Part 63 Subpart VVVVVV.
  - (E) Records of the date, time, and duration of each malfunction of operation of process equipment, control devices, recovery devices, or continuous monitoring systems used to comply with this subpart that causes a failure to meet a standard. The record must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate the emissions.
  - (F) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.11495(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
- iii. The Permittee must maintain files of all information required by 40 CFR Part 63 Subpart VVVVVV for at least five years following the date each occurrence according to the requirements in 40 CFR §63.10(b)(1) – General Record Keeping Requirements. [40 CFR §§63.11501(c) and 63.10(b)(1)]

#### *d. Reporting Requirements*

- i. The Permittee must submit semiannual compliance reports that contained the information specified in 40 CFR §§63.11501(d)(1) through (7), as applicable. Reports are required only for semiannual periods during which you experienced any of the events described in 40 CFR §§63.11501(d)(1) through (8). [40 CFR §63.11501(d)]
- ii. The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

#### **B. EMISSIONS UNIT -77 (EU-77):**

##### **Classification:**

- **100 hp plant steam boiler;**
- **Burning No. 2 fuel oil;**
- **Not subject to RCSA §22a-174-3a; and**
- **Subject to 40 CFR Part 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air**

### Section III: Applicable Requirements and Compliance Demonstration

#### Pollutants for Industrial, Commercial and Institutional Boilers Area Source

- **Compliance Date: March 21, 2014**

#### 1. 40 CFR Part 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers Area Source

##### a. *Limitation or Restriction*

- i. The Permittee shall conduct an initial tune-up as specified in 40 CFR §63.11214. [40 CFR Part 63 Subpart JJJJJJ, Table 2 - Option 12]
- ii. The Permittee shall conduct a tune-up of the boiler every five years as specified in 40 CFR §63.11223. [40 CFR Part 63 Subpart JJJJJJ, Table 2 - Option 12]

##### b. *Monitoring Requirements*

Record keeping specified in Section III.B.1.c of this Title V permit shall be sufficient to meet other Monitoring Requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(1)(K)(ii)]

##### c. *Record Keeping Requirements*

- i. The Permittee must maintain the following records:
  - (A) Copy of each notification and report submitted to comply with 40 CFR Part 63 Subpart JJJJJJ and all documentation in supporting any initial notification or notification of compliance status. [40 CFR §63.11225(c)(1)]
  - (B) Keep records to document conformance with the work practices, emission reduction measures and management practices required by 40 CFR §§63.11214 and 63.11223 as specified in paragraphs (c)(2)(i) through (vi) of 40 CFR §63.11225(c). [40 CFR §63.11225(c)(2)]
  - (C) Records of the occurrence and duration of each malfunction of the boiler. [40 CFR §63.11225(c)(4)]
  - (D) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR §63.11205(a), including corrective actions to restore the malfunctioning boiler to its normal or usual manner of operation. [40 CFR §63.11225(c)(5)]
  - (E) Records of all inspection and monitoring data required by 40 CFR §§ 63.11221 and 63.11222, and the information identified in paragraphs (c)(6)(i) through (vi) of 40 CFR §63.11225(c) for each required inspection or monitoring. [40 CFR §63.11225(c)(6)]
  - (F) Records of all inspection and monitoring data required by 40 CFR §§ 63.11221 and 63.11222, and the information identified in paragraphs (c)(6)(i) through (vi) of 40 CFR §63.11225(c) for each required inspection or monitoring. [40 CFR §63.11225(c)(6)]
  - (G) If a bag leak detection system is used, the Permittee must keep records specified in 40 CFR §63.11225(c)(7). [40 CFR §63.11225(c)(7)]

### **Section III: Applicable Requirements and Compliance Demonstration**

#### *d. Reporting Requirements*

- i. The Permittee must submit applicable notifications in accordance with 40 CFR §63.11225(a). [40 CFR §63.11225(a)]
- ii. The Permittee must prepare, by March 1 of each year, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year in accordance with 40 CFR §63.11225(b). [40 CFR §63.11225(b)]
- iii. The Permittee must provide notice if there is a change in the fuel type or made a physical change to the boiler in accordance with 40 CFR §63.11225(g). [40 CFR §63.11225(g)]

### Section III: Applicable Requirements and Compliance Demonstration

#### C. PREMISES-WIDE GENERAL REQUIREMENTS

1. **Annual Emission Statements:** The Permittee shall submit annual emission statements requested by the commissioner as set forth in RCSA §22a-174-4(d)(1).
2. **Emission Testing:** The Permittee shall comply with the procedures for sampling, emission testing, sample analysis, and reporting as set forth in RCSA §22a-174-5.
3. **Emergency Episode Procedures:** The Permittee shall comply with the procedures for emergency episodes as set forth in RCSA §22a-174-6.
4. **Reporting of Malfunctioning Control Equipment:** The Permittee shall comply with the reporting requirements of malfunctioning control equipment as set forth in RCSA §22a-174-7.
5. **Prohibition of Air Pollution:** The Permittee shall comply with the requirement to prevent air pollution as set forth in RCSA §22a-174-9.
6. **Public Availability of Information:** The public availability of information shall apply, as set forth in RCSA §22a-174-10.
7. **Prohibition Against Concealment/Circumvention:** The Permittee shall comply with the prohibition against concealment or circumvention as set forth in RCSA §22a-174-11.
8. **Violations and Enforcement:** The Permittee shall not violate or cause the violation of any applicable regulation as set forth in RCSA §22a-174-12.
9. **Variances:** The Permittee may apply to the commissioner for a variance from one or more of the provisions of these regulations as set forth in RCSA §22a-174-13.
10. **No Defense to Nuisance Claim:** The Permittee shall comply with the regulations as set forth in RCSA §22a-174-14.
11. **Severability:** The Permittee shall comply with the severability requirements as set forth in RCSA §22a-174-15.
12. **Responsibility to Comply:** The Permittee shall be responsible to comply with the applicable regulations as set forth in RCSA §22a-174-16.
13. **Particulate Emissions:** The Permittee shall comply with the standards for control of particulate matter and visible emissions as set forth in RCSA §22a-174-18.
14. **Fuel Sulfur Content:** The Permittee shall not use No. 2 heating oil that exceeds fifteen parts per million of sulfur by weight as set forth in CGS §16a-21a(a)(2)(B) .
15. **Sulfur Compound Emissions:** The Permittee shall comply with the requirements for control of sulfur compound emissions as set forth in RCSA §§22a-174-19, 22a-174-19a and 22a-174-19b, as applicable.
16. **Organic Compound Emissions:** The Permittee shall comply with the requirements for control of organic compound emissions as set forth in RCSA §22a-174-20.

### **Section III: Applicable Requirements and Compliance Demonstration**

- 17. Nitrogen Oxide Emissions:** The Permittee shall comply with the requirements for control of nitrogen oxide emissions as set forth in RCSA §22a-174-22f.
- 18. Ambient Air Quality:** The Permittee shall not cause or contribute to a violation of an ambient air quality standard as set forth in RCSA §22a-174-24(b).
- 19. Open Burning:** The Permittee is prohibited from conducting open burning, except as may be allowed by CGS §22a-174(f).
- 20. Asbestos:** Should the premises, as defined in 40 CFR §61.145, become subject to the national emission standard for asbestos regulations in 40 CFR Part 61 Subpart M when conducting any renovation or demolition at this premises, then the Permittee shall submit proper notification as described in 40 CFR §61.145(b) and shall comply with all other applicable requirements of 40 CFR Part 61 Subpart M.
- 21. Emission Fees:** The Permittee shall pay an emission fee as set forth in RCSA §22a-174-26(d).

**Section IV: Compliance Schedule**

<b>TABLE IV: COMPLIANCE SCHEDULE</b>				
<b>Emissions Unit</b>	<b>Applicable Regulations</b>	<b>Steps Required for Achieving Compliance (Milestones)</b>	<b>Date by which Each Step is to be Completed</b>	<b>Dates for Monitoring, Record Keeping, and Reporting</b>
		No Steps are required for achieving compliance at this time		



## Section V: State Enforceable Terms and Conditions

Only the Commissioner of the Department of Energy and Environmental Protection has the authority to enforce the terms, conditions and limitations contained in this section.

### SECTION V: STATE ENFORCEABLE TERMS AND CONDITIONS

- A. This Title V permit does not relieve the Permittee of the responsibility to conduct, maintain and operate the emissions units in compliance with all applicable requirements of any other Bureau of the Department of Energy and Environmental Protection or any federal, local or other state agency. Nothing in this Title V permit shall relieve the Permittee of other obligations under applicable federal, state and local law.
- B. Nothing in this Title V permit shall affect the commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, investigate air pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the Permittee by the commissioner.
- C. Additional Emissions Units
  - 1. The Permittee shall make and submit a written record, at the commissioner's request, within 30 days of receipt of notice from the commissioner, or by such other date specified by the commissioner, of each additional emissions unit or group of similar or identical emissions units at the premises.
  - 2. Such record of additional emissions units shall include each emissions unit, or group of emissions units, at the premises which is not listed in Section II.A of this Title V permit, unless the emissions unit, or group of emissions units, is:
    - a. an insignificant emissions unit as defined in RCSA §22a-174-33; or
    - b. an emissions unit or activity listed in *White Paper for Streamlined Development of Part 70 Permit Applications, Attachment A* (EPA guidance memorandum dated July 10, 1995).
  - 3. For each emissions unit, or group of emissions units, on such record, the record shall include, as available:
    - a. Description, including make and model;
    - b. Year of construction/installation or if a group, range of years of construction/installation;
    - c. Maximum throughput or capacity; and
    - d. Fuel type, if applicable.
- D. Odors: The Permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor that constitutes a nuisance beyond the property boundary of the premises as set forth in RCSA §22a-174-23.
- E. Noise: The Permittee shall operate in compliance with the regulations for the control of noise as set forth in RCSA §§22a-69-1 through 22a-69-7.4, inclusive.

## **Section V: State Enforceable Terms and Conditions**

- F.** Hazardous Air Pollutants (HAPs): The Permittee shall operate in compliance with the regulations for the control of HAPs as set forth in RCSA §22a-174-29.
- G.** The Permittee shall comply with the requirements for Control of Carbon Dioxide Emissions as set forth in RCSA §22a-174-31.

## **Section VI: Title V Requirements**

The Administrator of the United States Environmental Protection Agency and the Commissioner of the Department of Energy and Environmental Protection have the authority to enforce the terms and conditions contained in this section.

### **SECTION VI: TITLE V REQUIREMENTS**

#### **A. SUBMITTALS TO THE COMMISSIONER & ADMINISTRATOR**

The date of submission to the commissioner of any document required by this Title V permit shall be the date such document is received by the commissioner. The date of any notice by the commissioner under this Title V permit, including, but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is delivered or the date three days after it is mailed by the commissioner, whichever is earlier. Except as otherwise specified in this Title V permit, the word "day" means calendar day. Any document or action which is required by this Title V permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.

Any document required to be submitted to the commissioner under this Title V permit shall, unless otherwise specified in writing by the commissioner, be directed to: Office of the Director; Engineering & Enforcement Division; Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.

Any submittal to the Administrator of the Environmental Protection Agency shall be in a computer-readable format and addressed to: U.S. EPA New England, 5 Post Office Square, Suite 100 (OES04-2), Boston, Massachusetts 02109, Attn: Air Clerk.

#### **B. CERTIFICATIONS [RCSA §22a-174-33(b)]**

In accordance with RCSA §22a-174-33(b), any report or other document required by this Title V permit and any other information submitted to the commissioner or Administrator shall be signed by an individual described in RCSA §22a-174-2a(a), or by a duly authorized representative of such individual. Any individual signing any document pursuant to RCSA §22a-174-33(b) shall examine and be familiar with the information submitted in the document and all attachments thereto, and shall make inquiry of those individuals responsible for obtaining the information to determine that the information is true, accurate, and complete, and shall also sign the following certification as provided in RCSA §22a-174-2a(a)(4):

“I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any applicable statute.”

#### **C. SIGNATORY RESPONSIBILITY [RCSA §22a-174-2a(a)]**

For purposes of signing any Title V-related application, document, report or certification required by RCSA §22a-174-33, any corporation's duly authorized representative may be either a named individual or any individual occupying a named position. Such named individual or individual occupying a named position is a duly authorized representative if such individual is responsible for the overall operation of one or more manufacturing, production or operating facilities subject to RCSA §22a-174-33 and either:

## **Section VI: Title V Requirements**

1. The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding 25 million dollars in second quarter 1980 dollars; or
2. The delegation of authority to the duly authorized representative has been given in writing by an officer of the corporation in accordance with corporate procedures and the following:
  - i. Such written authorization specifically authorizes a named individual, or a named position, having responsibility for the overall operation of the Title V premises or activity,
  - ii. Such written authorization is submitted to the commissioner and has been approved by the commissioner in advance of such delegation. Such approval does not constitute approval of corporate procedures, and
  - iii. If a duly authorized representative is a named individual in an authorization submitted under subclause ii. of this subparagraph and a different individual is assigned or has assumed the responsibilities of the duly authorized representative, or, if a duly authorized representative is a named position in an authorization submitted under subclause ii. of this subparagraph and a different named position is assigned or has assumed the duties of the duly authorized representative, a new written authorization shall be submitted to the commissioner prior to or together with the submission of any application, document, report or certification signed by such representative.

### **D. ADDITIONAL INFORMATION [RCSA §22a-174-33(j)(1)(X), RCSA §22a-174-33(h)(2)]**

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier, including information to determine whether cause exists for modifying, revoking, reopening, reissuing, or suspending this Title V permit or to determine compliance with this Title V permit.

In addition, the Permittee shall submit information to address any requirements that become applicable to the subject source and shall submit correct, complete, and sufficient information within 15 days of the applicant's becoming aware of any incorrect, incomplete, or insufficient submittal, during the pendency of the application, or any time thereafter, with an explanation for such deficiency and a certification pursuant to RCSA §22a-174-2a(a)(5).

### **E. MONITORING REPORTS [RCSA §22a-174-33(o)(1)]**

A Permittee, required to perform monitoring pursuant to this Title V permit, shall submit to the commissioner, on forms prescribed by the commissioner, written monitoring reports on March 1 and September 1 of each year or on a more frequent schedule if specified in such permit. Such monitoring reports shall include the date and description of each deviation from a permit requirement including, but not limited to:

1. Each deviation caused by upset or control equipment deficiencies; and
2. Each deviation of a permit requirement that has been monitored by the monitoring systems required under this Title V permit, which has occurred since the date of the last monitoring report; and
3. Each deviation caused by a failure of the monitoring system to provide reliable data.

## **Section VI: Title V Requirements**

### **F. PREMISES RECORDS [RCSA §22a-174-33(o)(2)]**

Unless otherwise required by this Title V permit, the Permittee shall make and keep records of all required monitoring data and supporting information for at least five years from the date such data and information were obtained. The Permittee shall make such records available for inspection at the site of the subject source, and shall submit such records to the commissioner upon request. The following information, in addition to required monitoring data, shall be recorded for each permitted source:

1. The type of monitoring or records used to obtain such data, including record keeping;
2. The date, place, and time of sampling or measurement;
3. The name of the individual who performed the sampling or the measurement and the name of such individual's employer;
4. The date(s) on which analyses of such samples or measurements were performed;
5. The name and address of the entity that performed the analyses;
6. The analytical techniques or methods used for such analyses;
7. The results of such analyses;
8. The operating conditions at the subject source at the time of such sampling or measurement; and
9. All calibration and maintenance records relating to the instrumentation used in such sampling or measurements, all original strip-chart recordings or computer printouts generated by continuous monitoring instrumentation, and copies of all reports required by the subject permit.

### **G. PROGRESS REPORTS [RCSA §22a-174-33(q)(1)]**

The Permittee shall, on March 1 and September 1 of each year, or on a more frequent schedule if specified in this Title V permit, submit to the commissioner a progress report on forms prescribed by the commissioner, and certified in accordance with RCSA §22a-174-2a(a)(5). Such report shall describe the Permittee's progress in achieving compliance under the compliance plan schedule contained in this Title V permit. Such progress report shall:

1. Identify those obligations under the compliance plan schedule in this Title V permit which the Permittee has met, and the dates on which they were met; and
2. Identify those obligations under the compliance plan schedule in this Title V permit which the Permittee has not timely met, explain why they were not timely met, describe all measures taken or to be taken to meet them and identify the date by which the Permittee expects to meet them.

Any progress report prepared and submitted pursuant to RCSA §22a-174-33(q)(1) shall be simultaneously submitted by the Permittee to the Administrator.

## Section VI: Title V Requirements

### H. COMPLIANCE CERTIFICATIONS [RCSA §22a-174-33(q)(2)]

The Permittee shall, on March 1 of each year, or on a more frequent schedule if specified in this Title V permit, submit to the commissioner a written compliance certification certified in accordance with RCSA §22a-174-2a(a)(5) and which includes the information identified in 40 CFR §§70.6(c)(5)(iii)(A) to (C), inclusive.

Any compliance certification prepared and submitted pursuant to RCSA §22a-174-33(q)(2) shall be simultaneously submitted by the Permittee to the Administrator.

### I. PERMIT DEVIATION NOTIFICATIONS [RCSA §22a-174-33(p)]

Notwithstanding Section VI.E. of this Title V permit, the Permittee shall notify the commissioner in writing, on forms prescribed by the commissioner, of any deviation from an emissions limitation, and shall identify the cause or likely cause of such deviation, all corrective actions and preventive measures taken with respect thereto, and the dates of such actions and measures as follows:

1. For any hazardous air pollutant, no later than 24 hours after such deviation commenced; and
2. For any other regulated air pollutant, no later than ten days after such deviation commenced.

### J. PERMIT RENEWAL [RCSA §22a-174-33(j)(1)(B)]

All of the terms and conditions of this Title V permit shall remain in effect until the renewal permit is issued or denied provided that a timely renewal application is filed in accordance with RCSA §§22a-174-33(g), -33(h), and -33(i).

### K. OPERATE IN COMPLIANCE [RCSA §22a-174-33(j)(1)(C)]

The Permittee shall operate the source in compliance with the terms of all applicable regulations, the terms of this Title V permit, and any other applicable provisions of law. In addition, any noncompliance constitutes a violation of the Clean Air Act and Chapter 446c of the Connecticut General Statutes and is grounds for federal and/or state enforcement action, permit termination, revocation and reissuance, or modification, and denial of a permit renewal application.

### L. COMPLIANCE WITH PERMIT [RCSA §22a-174-33(j)(1)(G)]

This Title V permit shall not be deemed to:

1. Preclude the creation or use of emission reduction credits or allowances or the trading thereof in accordance with RCSA §§22a-174-33(j)(1)(I) and -33(j)(1)(P), provided that the commissioner's prior written approval of the creation, use, or trading is obtained;
2. Authorize emissions of an air pollutant so as to exceed levels prohibited pursuant to 40 CFR Part 72;
3. Authorize the use of allowances pursuant to 40 CFR Parts 72 through 78, inclusive, as a defense to noncompliance with any other applicable requirement; or
4. Impose limits on emissions from items or activities specified in RCSA §§22a-174-33(g)(3)(A) and -33(g)(3)(B) unless imposition of such limits is required by an applicable requirement.

## Section VI: Title V Requirements

### **M. INSPECTION TO DETERMINE COMPLIANCE [RCSA §22a-174-33(j)(1)(M)]**

The commissioner may, for the purpose of determining compliance with this Title V permit and other applicable requirements, enter the premises at reasonable times to inspect any facilities, equipment, practices, or operations regulated or required under such permit; to sample or otherwise monitor substances or parameters; and to review and copy relevant records lawfully required to be maintained at such premises in accordance with this Title V permit. It shall be grounds for permit revocation should entry, inspection, sampling, or monitoring be denied or effectively denied, or if access to and the copying of relevant records is denied or effectively denied.

### **N. PERMIT AVAILABILITY**

The Permittee shall have available at the facility at all times a copy of this Title V permit.

### **O. SEVERABILITY CLAUSE [RCSA §22a-174-33(j)(1)(R)]**

The provisions of this Title V permit are severable. If any provision of this Title V permit or the application of any provision of this Title V permit to any circumstance is held invalid, the remainder of this Title V permit and the application of such provision to other circumstances shall not be affected.

### **P. NEED TO HALT OR REDUCE ACTIVITY [RCSA §22a-174-33(j)(1)(T)]**

It shall not be a defense for the Permittee 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 Title V permit.

### **Q. PERMIT REQUIREMENTS [RCSA §22a-174-33(j)(1)(V)]**

The filing of an application or of a notification of planned changes or anticipated noncompliance does not stay the Permittee's obligation to comply with this Title V permit.

### **R. PROPERTY RIGHTS [RCSA §22a-174-33(j)(1)(W)]**

This Title V permit does not convey any property rights or any exclusive privileges. This Title V permit is subject to, and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby, including CGS §4-181a(b) and RCSA §22a-3a-5(b). This Title V permit shall neither create nor affect any rights of persons who are not parties to this Title V permit.

### **S. ALTERNATIVE OPERATING SCENARIO RECORDS [RCSA §22a-174-33(o)(3)]**

The Permittee shall, contemporaneously with making a change authorized by this Title V permit from one alternative operating scenario to another, maintain a record at the premises indicating when changes are made from one operating scenario to another and shall maintain a record of the current alternative operating scenario.

## **Section VI: Title V Requirements**

### **T. OPERATIONAL FLEXIBILITY AND OFF-PERMIT CHANGES [RCSA §22a-174-33(r)(2)]**

The Permittee may engage in any action allowed by the Administrator in accordance with 40 CFR §§70.4(b)(12)(i) to (iii)(B), inclusive, and 40 CFR §§70.4(b)(14)(i) to (iv), inclusive, without a Title V non-minor permit modification, minor permit modification or revision and without requesting a Title V non-minor permit modification, minor permit modification or revision provided such action does not:

1. Constitute a modification under 40 CFR Part 60, 61 or 63;
2. Exceed emissions allowable under the subject permit;
3. Constitute an action which would subject the Permittee to any standard or other requirement pursuant to 40 CFR Parts 72 to 78, inclusive; or
4. Constitute a non-minor permit modification pursuant to RCSA §22a-174-2a(d)(4).

At least seven days before initiating an action specified in RCSA §22a-174-33(r)(2)(A), the Permittee shall notify the Administrator and the commissioner in writing of such intended action.

### **U. INFORMATION FOR NOTIFICATION [RCSA §22a-174-33(r)(2)(A)]**

Written notification required under RCSA §22a-174-33(r)(2)(A) shall include a description of each change to be made, the date on which such change will occur, any change in emissions that may occur as a result of such change, any Title V permit terms and conditions that may be affected by such change, and any applicable requirement that would apply as a result of such change. The Permittee shall thereafter maintain a copy of such notice with the Title V permit. The commissioner and the Permittee shall each attach a copy of such notice to their copy of the Title V permit.

### **V. TRANSFERS [RCSA §22a-174-2a(g)]**

No person other than the Permittee shall act or refrain from acting under the authority of this Title V permit unless such permit has been transferred to another person in accordance with RCSA §22a-174-2a(g).

The proposed transferor and transferee of a permit shall submit to the commissioner a request for a permit transfer on a form provided by the commissioner. A request for a permit transfer shall be accompanied by any fees required by any applicable provision of the general statutes or regulations adopted thereunder. The commissioner may also require the proposed transferee to submit with any such request, the information identified in CGS §22a-6o.

### **W. REVOCATION [RCSA §22a-174-2a(h)]**

The commissioner may revoke this Title V permit on his own initiative or on the request of the Permittee or any other person, in accordance with CGS §4-182(c), RCSA §22a-3a-5(d), and any other applicable law. Any such request shall be in writing and contain facts and reasons supporting the request. The Permittee requesting revocation of this Title V permit shall state the requested date of revocation and provide evidence satisfactory to the commissioner that the subject source is no longer a Title V source.

Pursuant to the Clean Air Act, the Administrator has the power to revoke this Title V permit. Pursuant to the Clean Air Act, the Administrator also has the power to reissue this Title V permit if the Administrator has determined that the commissioner failed to act in a timely manner on a permit renewal application.



## **Section VI: Title V Requirements**

This Title V permit may be modified, revoked, reopened, reissued, or suspended by the commissioner, or the Administrator in accordance with RCSA §22a-174-33(r), CGS §22a-174c, or RCSA §22a-3a-5(d).

### **X. REOPENING FOR CAUSE [RCSA §22a-174-33(s)]**

This Title V permit may be reopened by the commissioner, or the Administrator in accordance with RCSA §22a-174-33(s).

### **Y. CREDIBLE EVIDENCE**

Notwithstanding any other provision of this Title V permit, for the purpose of determining compliance or establishing whether a Permittee has violated or is in violation of any permit condition, nothing in this Title V permit shall preclude the use, including the exclusive use, of any credible evidence or information.