



# COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY  
PIEDMONT REGIONAL OFFICE

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Secretary of Natural Resources

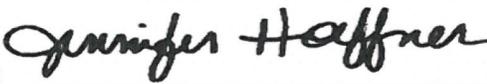
David K. Paylor  
Director

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Regional Director

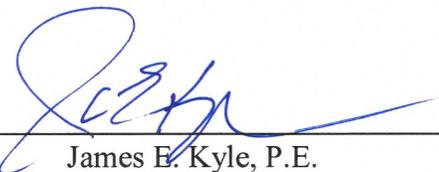
## STATEMENT OF LEGAL AND FACTUAL BASIS

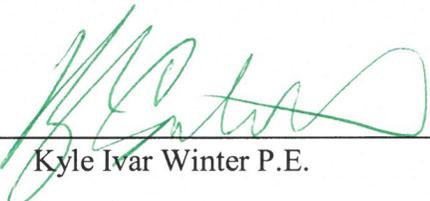
Super Radiator Coils  
451 Southlake Boulevard Richmond, Virginia  
Permit No. PRO50906

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Super Radiator Coils has applied for a renewal Title V Operating Permit for its heat transfer coil manufacturing plant, 451 Southlake Boulevard, Richmond facility. The Department has reviewed the application and has prepared a draft renewal Title V Operating Permit.

Engineer/PermitContact:  Date: 9/29/2016

Jennifer Hoeffner  
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Air Permit Manager:  Date: 9/30/2016  
James E. Kyle, P.E.

Deputy Regional Manager:  Date: 10/03/16  
Kyle Ivar Winter P.E.

## **FACILITY INFORMATION**

### Permittee

Super Radiator Coils  
P.O. Box 73450  
Richmond, VA 23236

### Facility

Super Radiator Coils  
451 Southlake Boulevard  
Richmond, VA 23236

County-Plant Identification Number: 51-041-0110

## **SOURCE DESCRIPTION**

NAICS Codes: 333415 – Machinery Manufacturing and 335311– Power, Distribution, and Specialty Transformer Manufacturing. SIC Codes: 3585 – Refrigeration and Heating Equipment, 3548 – Welding Apparatus, and 2448 – Wood Pallets and Skids.

The facility is a manufacturer of finned tube heat transfer coils. Hairpin benders and punch presses are used, operating independently, to make tubes and fins, respectively. Their outputs are then assembled and put through a hydro expanding process that joins tubing and fins. Then the product is placed in the solvent degreaser for cleaning. Next the product goes through brazing or welding. Depending upon customer requirements, the product may be spray painted. The last operation is to crate the finished finned tube coil for shipment. Most of the facility was originally constructed in 1980, with the paint spray booth being added in 1989 and additional vapor degreasers added in 2004 and 2010. The 2010 vapor degreaser replacement included a closed loop carbon bed adsorption system.

The facility is currently an area source for HAP emissions. However, the facility is subject to the permitting requirements of Title V of the Federal Clean Air Act because it was a major source of HAP emissions at the time of the first compliance date for MACT Subpart T (40 CFR 63.460.d). This source is located in an attainment area for all pollutants. The facility is currently permitted under the minor NSR permit issued on February 25, 2016 and its initial Title V permit originally effective on May 9, 2001 and renewed on June 1, 2006 and June 1, 2011. The current permit action is for the renewal of the Title V Operating Permit (TV permit).

## **COMPLIANCE STATUS**

A full compliance evaluation of the facility, including site visit has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

**EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION**

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
E3	V4	Batch Vapor (Open Top) Solvent Cleaning Machine Baron Blakeslee Installed 2010	8' x 17' 4,000 lbs product/hour	AMCEC Inc, Solvent Recovery System with carbon bed adsorption Installed 2010	2-20-3	Perchloro-ethylene	N/A
E6	V6	Spray Booth	2.4 gal coating/hr	Fabric or Fiberglass Filter High Volume Low-Pressure Spray Gun	2-20-5	PM	February 25, 2016
E2	V7	Punch Press Lubrication	0.8 gal/hr	N/A	N/A	N/A	February 25, 2016

**EMISSIONS INVENTORY**

An emission update was received for the year 2014. The actual annual throughput of HAP (perchloroethylene) from the degreaser was 0.55 tons.

**EMISSION UNIT APPLICABLE REQUIREMENTS - EMISSION UNIT E3**

The TV permit has been updated to replace the cleaning machine standards of 40 CFR 63.463 with the alternate standards of 40 CFR 63.464, as requested by the permittee. The cleaning machine does have a solvent recovery system with carbon bed adsorption, though not required. The alternate standards allow the permittee flexibility to install equipment and work practices of their choice, as long as the overall emission limit is met as required. The TV permit has also been updated to remove the open top vapor degreasers E3-existing and E4 because they are no longer at the facility.

The following applicable requirements for the batch vapor solvent cleaning machine are based on 40 CFR 63 MACT Subpart T- National Emission Standards for Halogenated Solvent Cleaning (additional requirements are included in the facility wide section):

- 40 CFR 63.464(a)(1)(i)- requires log of solvent additions and deletions.
- 40 CFR 63.464(a)(1)(ii)- limits perchloroethylene emissions.
- 40 CFR 63.464(b)- demonstrate compliance as required by §63.465(b) and (c).
- 40 CFR 63.464(c)- report emission limit exceedances as required by §63.468(h).
- 40 CFR 63.465(b)- includes solvent requirements for cleaning machines.
- 40 CFR 63.465(c)(1-3)- determine monthly solvent emissions.
- 40 CFR 63.467(c)(1-3)- includes records requirements.
- 40 CFR 63.468(g)(1-4)- requires submittal of annual solvent emission reports.

40 CFR 63.468(h)(1-3))- requires submittal of semiannual exceedance reports.  
40 CFR 63.468(i)(1-3))- includes requirements necessary to reduce reporting frequency.

Condition 2 of the TV permit limits opacity to 20%. (9 VAC 5-40-80)

Conditions 5 and 6.d of the TV permit include visible emission observation and recordkeeping requirements and were included to meet Part 70 periodic monitoring requirements for the opacity standards included in Condition 2 of the TV permit.

### **Compliance Assurance Monitoring (CAM)**

CAM requirements of 40 CFR 64 do not apply to the batch vapor solvent cleaning machine because it does not have the potential to emit any regulated air pollutant above major source thresholds.

### **EMISSION UNIT APPLICABLE REQUIREMENTS - EMISSION UNIT E6**

The applicable requirements for the spray booth are based on the Minor NSR Permit issued on February 25, 2016, BACT, and 9 VAC 5-40-4760.

### **Limitations**

The applicable requirements from the February 25, 2016 NSR permit, conditions 1, 2, 3, 7, 11, 12, 13, and 16, have been incorporated in the TV permit. The condition numbers referenced below refer to the TV permit.

Condition 9 requires particulate emissions be controlled by enclosure and venting and fiberglass filter or fabric filter.

Condition 10 requires particulate emissions be controlled by a high volume low-pressure spray gun and good operating practices.

Condition 11 requires VOCs be controlled by the specified type of coatings.

Condition 12 limits the sprayer to 2.4 gals coating/hr.

Condition 13 limits VOC content of coatings to 3.5 lbs VOC/gal coating.

Condition 14 limits VOC coatings to 240 gal/yr.

Condition 15 limits cleaning solutions to 24 gal/yr.

Condition 16 limits opacity to 5%.

### **Monitoring and Recordkeeping**

The monitoring and recordkeeping requirements in Conditions 8, 9 and 17.a-f, h, and j of the NSR permit have been included in the proposed TV permit. The condition numbers referenced below refer to the TV permit. Additional requirements are included in the facility wide section.

Condition 18 includes the monitoring device requirements for the filter controlling the spray booth.

Condition 19 requires daily observations of the pressure drop.

Condition 20 requires recordkeeping of coatings, hours of operation, throughputs and monitoring data.

Conditions 17 and 20.i of the TV permit include visible emission observation and recordkeeping requirements and were included to meet Part 70 periodic monitoring requirements for the opacity standards included in Condition 16 of the TV permit.

### **Compliance Assurance Monitoring (CAM)**

CAM requirements of 40 CFR 64 do not apply to the spray booth because it does not have the potential to emit any regulated air pollutant above major source thresholds.

## **EMISSION UNIT APPLICABLE REQUIREMENTS - EMISSION UNIT E2**

### **Limitations**

The applicable requirements from the February 25, 2016 NSR permit, conditions 4, 14, and 24 have been incorporated in the TV permit. The condition numbers referenced below refer to the TV permit.

Condition 21 requires VOC emissions be controlled by good operating practices.

Condition 22 limits operating hours.

Condition 23 limits VOC emissions from the process.

### **Recordkeeping**

Condition 24 of the proposed TV permit requires records of operating hours and is based on Condition 17.g of the NSR permit. The language, “(when emitting VOCs)” was added to the condition to clarify the requirement.

### **Compliance Assurance Monitoring (CAM)**

CAM requirements of 40 CFR 64 do not apply to the punch press lubrication process because it does not have the potential to emit above major source thresholds.

## **FACILITY WIDE APPLICABLE REQUIREMENTS**

### **Limitations**

The applicable requirements from the February 25, 2016 NSR permit, conditions 5, 6, and 21, have been incorporated in the TV permit. The condition numbers referenced below refer to the TV permit.

Condition 25 requires VOC emissions from cleaning or purging operations to be minimized.

Condition 26 requires VOC emissions to be minimized through operating practices.

Condition 27 limits perchloroethylene emissions. (40 CFR 63.471(b)(2))

Condition 28 requires emissions to be minimized through good air pollution control practices.

### **Recordkeeping**

Condition 29 of the proposed TV permit requires records of coatings, maintenance, and operator training and is based on Condition 17.i and k of the NSR permit, 40 CFR 63.471(c)(4) and 40 CFR 63.471(e)(3).

### **Testing**

Condition 30 requires the permittee to determine potential to emit (PTE) from all solvent cleaning operations. (40 CFR 63.465(e)(1))

The testing requirement Condition 10 of the NSR permit has been incorporated as Condition 31 of the proposed TV permit.

Condition 32 requires appropriate test methods be utilized and was included in the proposed TV permit to meet Part 70 periodic monitoring requirements.

### **Reporting**

Condition 33 requires submittal of annual solvent emission reports. (40 CFR 63.471(h)(2 & 3))

## **STREAMLINED/OBSOLETE REQUIREMENTS**

Condition VIII of the June 1, 2011 TV permit has been removed since there haven't been any odor complaints and the state toxics rule is not applicable.

40 CFR 63.471(b)(1) has not been incorporated because the facility only has one cleaning machine and it is fulfilling this requirement by 40 CFR 63.464(a)(1)(i) therefore, it would be redundant.

40 CFR 63.471(e)(1&2) has not been incorporated because the facility only has one cleaning machine and it is fulfilling this requirement by 40 CFR 63.467(c) and 40 CFR 63.465(c)(2), respectively therefore, it would be redundant.

40 CFR 63.471(h)(1) has not been incorporated because the facility only has one cleaning machine and it is fulfilling this requirement by 40 CFR 63.468(g)(2) therefore, it would be redundant.

The initial reporting requirement (40 CFR 63.468(d)) for the cleaning machine, as permitted in the previous June 1, 2011 TV permit, has not been incorporated since the required timeline has passed. The startup of cleaning machine was March 9, 2011.

Certain conditions of the 2016 NSR permit for the source are obsolete, no longer serve any meaningful purpose, have been fulfilled or are unnecessary for Title V considerations.

Condition 18 required initial notifications. The condition was not included because the notifications have been submitted to the Department.

Condition 19 has not been included because the condition defines the causes for modification or revocation of an NSR permit which is considered extraneous to the Title V permit. The assumption underlying this determination is that if an NSR permit is revoked or modified through unsolicited action by DEQ, the TV permit will be changed in a separate and independent action from the NSR change.

Condition 20 has not been included because the entry requirements are included in General Condition 60 of the proposed TV permit therefore, it would be redundant.

Conditions 22 and 23 have not been included because the malfunction requirements are included in General Condition 48 of the proposed TV permit therefore, it would be redundant.

Condition 24 is not being included as an applicable requirement in the TV permit because the condition does not specifically require the permittee to do anything and it is extraneous to the TV permit since the regulation cited in the condition, 9 VAC 5-2-180 I, applies whether it is included as a permit condition or not.

Condition 25 has not been included because the ownership requirements are included in General Conditions 63-65 of the proposed TV permit therefore, it would be redundant.

Condition 26 has not been included because the condition requires permit copy of the NSR permit which is considered extraneous to the TV permit.

## **GENERAL TERMS AND CONDITIONS**

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

### **Comments on General Conditions**

#### **37-42. Permit Expiration**

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia*, and the “Department of Environmental Quality Agency Policy Statement No. 2-09”.

This general condition cites the Articles that follow:

Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:

9 VAC 5-80-80. Application

9 VAC 5-80-140. Permit Shield

9 VAC 5-80-150. Action on Permit Applications

#### **48. Failure/Malfunction Reporting**

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

This general condition cites the sections that follow:

9 VAC 5-40-50. Notification, Records and Reporting

9 VAC 5-50-50. Notification, Records and Reporting

#### **52. Permit Modification**

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources  
9 VAC 5-80-190. Changes to Permits.  
9 VAC 5-80-260. Enforcement.  
9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources  
9 VAC 5-80-1605. Applicability, Permits For Major Stationary Sources and Modifications  
Located in Prevention of Significant Deterioration Areas  
9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications  
Locating in Nonattainment Areas

### **66-69. Malfunction as an Affirmative Defense**

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction  
9 VAC 5-80-110. Permit Content

### **73. Asbestos Requirements**

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follows:  
40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.

40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.

40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

This general condition cites the regulatory sections that follow:

9 VAC 5-60-70. Designated Emissions Standards  
9 VAC 5-80-110. Permit Content

### **STATE ONLY APPLICABLE REQUIREMENTS**

No state only applicable requirements apply to this facility.

**FUTURE APPLICABLE REQUIREMENTS**

No future applicable requirements have been identified for this facility.

**INAPPLICABLE REQUIREMENTS**

Citation	Title of Citation	Description of Applicability
9 VAC 5-40-4760 (Rule 4-34)	Emission Standards for Miscellaneous Metal Parts/Products Coating Application Systems	This standard does not apply to the punch press lubrication process because lubricants are not included in coatings.
9 VAC 5-40-3260 (Rule 4-24)	Emission Standard for Solvent Metal Cleaning Operations using Non-Halogenated Solvents	This standard does not apply to the solvent cleaning machine because it is subject to MACT Subpart T, which has more stringent requirements.
40 CFR 63, Subpart JJJJJ	National Emission Standards for Hazardous Air Pollutants Standards for Industrial, Commercial, & Institutional Boilers at Area Sources	This Subpart is not applicable to the boiler because it is a gas-fired boiler (40 CFR 63.11195(e)) as defined by the Subpart.
40 CFR 63, Subpart XXXXXX	National Emission Standards for Hazardous Air Pollutants Area Standards for 9 Metal Fabrication & Finishing Source Categories	This Subpart is not applicable because it is not one of the 9 source categories.
40 CFR 63, Subpart HHHHHH	National Emission Standards for Hazardous Air Pollutants for Paint Stripping & Miscellaneous Surface Coating Operations at Area Sources	This Subpart is not applicable because the coatings used do not contain any of the target HAPs.
40 CFR 63, Subpart MMMM	National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products.	This Subpart is not applicable because the facility is not a major source.

**INSIGNIFICANT EMISSION UNITS**

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110. Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation (9 VAC )	Pollutant Emitted (5-80-720 B)	Rated Capacity (5-80-720 C)
B3	Parker Natural Gas Fired Boiler	5-80-720 C.2.	PM, PM-10, CO, NO <sub>x</sub> , SO <sub>2</sub> , and VOC	3.0 MMBtu/hr
E1	Hairpin Bender Lubrication	5-80-720 B.2.	VOC	N/A
E4	Brazing	5-80-720 B.1.	PM-10	N/A
E5	Welding	5-80-720 B.1.	PM-10/HAP	N/A
E7	Crafting Saws	5-80-720 B.1.	PM-10	N/A

<sup>1</sup>The citation criteria for insignificant activities are as follows:

- 9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
- 9 VAC 5-80-720 B - Insignificant due to emission levels
- 9 VAC 5-80-720 C - Insignificant due to size or production rate

### **CONFIDENTIAL INFORMATION**

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

### **PUBLIC PARTICIPATION**

The proposed permit was placed on public notice in the Style Weekly from August 3, 2016 to September 2, 2016. The permit was concurrently reviewed by EPA. The comment received from EPA on September 12, 2016, was addressed. No additional comments were received during the Public Comment period.