

AIR PERMIT APPLICATION

**Title V Operating Permit
Renewal Application**

**AVX Corporation
Myrtle Beach, South Carolina**



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RESOLUTE

ENVIRONMENTAL LLC

Table of Contents

- 1. Permit Renewal Application Summary..... 1-1
 - 1.1 Facility Location 1-2
 - 1.2 Facility Historical and Current Operations..... 1-2
 - 1.3 Title V Applicability..... 1-5
 - 1.4 Request for Application Shield..... 1-5
 - 1.5 Request for Permit Shield..... 1-5
 - 1.6 Application Elements..... 1-6
- 2. Process Description..... 2-1
 - 2.1 Raw Materials Manufacturing (Unit ID 14) 2-1
 - 2.2 Slip Manufacturing (Unit ID 15) 2-1
 - 2.3 Metals Department (Unit ID 16) 2-2
 - 2.4 CMAP Buildup (Unit ID 17) 2-3
 - 2.5 CMAP Support Department (Unit ID 18)..... 2-4
 - 2.6 Metallization Department (Unit 19)..... 2-5
 - 2.6.1 Termination 2-5
 - 2.6.1 Plating 2-6
 - 2.7 Supporting Processes (Unit ID 21) 2-6
 - 2.8 Trivial and Insignificant Activities 2-6
- 3. Emission Calculations 3-1
 - 3.1 Material Mass Balance Calculations 3-1
 - 3.2 AP-42 Emission Factors 3-3
 - 3.4 Other Emission Sources..... 3-3
- 4. Regulatory Applicability Analysis 4-1
 - 4.1 Federal Regulatory Applicability..... 4-1
 - 4.1.1 NSPS Subpart A, General Provisions 4-1
 - 4.1.2 NSPS Subpart Dc, Small Industrial Steam Generating Units 4-2
 - 4.1.3 Part 63 NESHAP Applicability (Subparts A & B)..... 4-2
 - 4.1.4 Part 64 Compliance Assurance Monitoring 4-3
 - 4.1.5 Part 82, Subpart F Stratospheric Ozone Protection Regulations..... 4-4
 - 4.2 South Carolina Regulations 4-4
 - 4.2.1 62.5 Standard 1, Emissions From Fuel Burning Operations..... 4-4
 - 4.2.2 62.5 Standard 2, Ambient Air Quality Standards..... 4-5
 - 4.2.3 62.5 Standard 3, Waste Combustion and Reduction..... 4-5
 - 4.2.4 62.5 Standard 4, Emissions From Process Industries 4-5
 - 4.2.5 62.5 Standards 5.1, VOC Emissions Control and LAER 4-6
 - 4.2.5 62.5 Standard 8, Toxic Air Pollutants..... 4-6
 - 4.3 State Operating Permit Conditions..... 4-7

List of Appendices

Appendix A:	Facility Location and Plot Plan
Appendix B:	Process Flow Diagrams
Appendix C:	Equipment Identification
Appendix D:	Application Forms
Appendix E:	Supporting Emission Calculations
Appendix F:	Air Dispersion Modeling Analysis
Appendix G:	Compliance Assurance Monitoring Plan
Appendix H:	Supporting Documentation

1. Permit Renewal Application Summary

AVX Corporation (AVX) owns and operates an electronic capacitor manufacturing facility in Myrtle Beach, South Carolina. In the past, the facility was a major source of volatile organic compounds (VOC) with respect to the Part 70 (Title V) Operating Permit Program because potential emissions exceed the applicable major source threshold of 100 tons per year (tpy). The facility was also a major hazardous air pollutant (HAP) source having emissions greater than 10 and 25 tons per year for a single and aggregate HAP, respectively. More recently, due to raw material changes, reduced production, and regulatory changes, the facility is no longer major based on VOC or HAP emission levels. However, with the USEPA's May 16, 1995 interpretation guidance of the general provisions of 40 CFR 63 and Section 112 of the Clean Air Act, a facility that was once a major source of HAP emissions, will always be considered major and must continue to comply with applicable requirements. This guidance is more commonly referred to as the "once in, always in" policy. On December 21, 2006, the USEPA proposed, in essence, a reversal of this policy, however, this proposal has not been finalized. As a result, AVX remains classified as a major source and is therefore submitting this Title V renewal application to the South Carolina Department of Health and Environmental Control (DHEC).

As detailed in Section 4.3, AVX is hereby formally requesting removal of the 39.5 ton per year VOC emission limit on the new manufacturing building and replacing it with a facility-wide PSD avoidance limit of less than 250 tons per year. This request is based on AVX's position that the facility is a true minor source with respect to Prevention of Significant Deterioration (PSD) applicability. Removal of the limit will provide needed flexibility in the building that will contain the facility's consolidated manufacturing.

This revision to the initial renewal application includes an updated equipment inventory, unit identification streamlining, an emissions inventory using current materials and throughputs, regulatory analysis, and revised permit application forms.

1.1 Facility Location

The Myrtle Beach facility is located in Horry County in northeastern South Carolina. The facility is located approximately two kilometers inland of the Atlantic Ocean at U.S. Highway 17 and 17th Avenue South. This site is bordered by the South Carolina National Guard and the Myrtle Beach Jetport. Appendix B, Figure 1 shows the location of the plant. Figure 2 in Appendix B is a facility plot plan showing the location of the facility on the property.

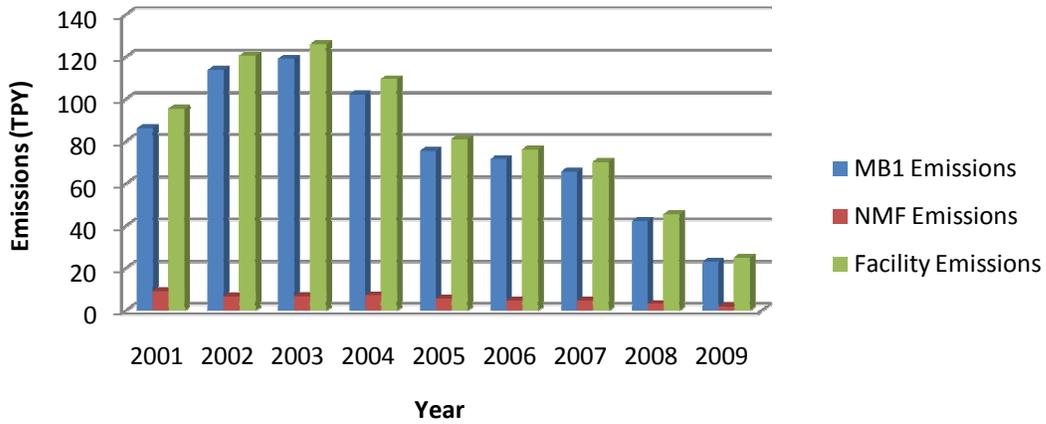
1.2 Facility Historical and Current Operations

The AVX facility produces electronic capacitors used in aerospace, data processing, telecommunications, and military applications. There have been two manufacturing areas at the facility: a main production building (MB1) on the northeast portion of the property and a newer manufacturing building (MB2 or NMF) on the southwest portion of the property. MB1 was originally constructed in 1949 and the main facility, as it exists today, commenced construction in 1985. Construction for MB2 commenced in 1998. The following timeline presents the history of AVX, including the Myrtle Beach, SC facility:

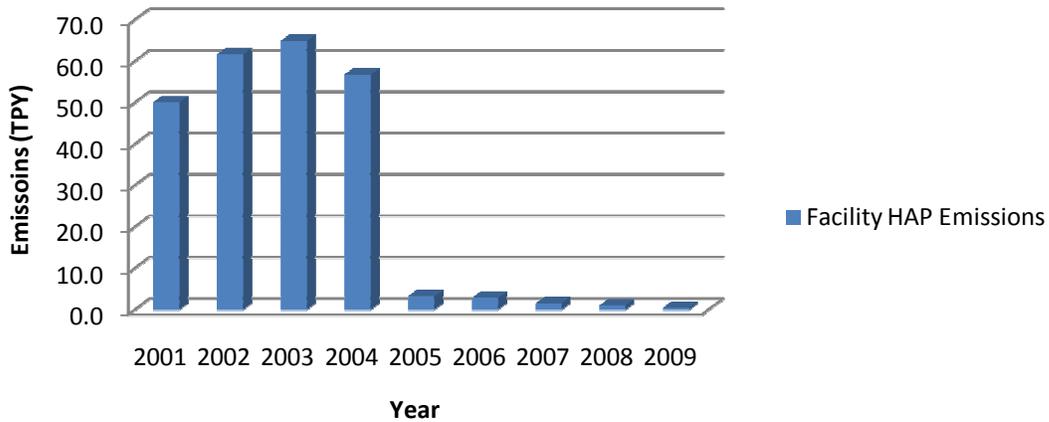
- 1948 - Electrical Reactance Corporation started capacitor operation in Myrtle Beach, SC
- 1952 - Electrical Reactance becomes the "Hi-Q" Division of Aerovox in Myrtle Beach, SC
- 1961 - Aerovox established multilayer ceramic capacitor manufacturing
- 1972 - Aerovox separates into two separate corporations, Aerovox Corp. and AVX Corp.
- 1975 - AVX becomes the world's leading capacitor manufacturer
- 1990 - AVX merged with Kyocera Corp. And became a wholly owned separate operating subsidiary of Kyocera
- 2000 - AVX is currently owned 70% by Kyocera, and 30% general public

Since 2003, emissions from AVX processes have trended downward. Bar graphs 1 and 2 below show actual VOC and organic HAP emissions, respectively.

Graph 1. AVX Actual VOC Emission History



Graph 2. AVX Actual HAP Emission History



A few factors can be attributed to this trend in emission rates.

1. Since the mid-1990s, AVX has been developing more efficient manufacturing processes as a result of facing stiffer competition. Increased efficiency results in less raw material usage and therefore lower emissions.
2. AVX has taken steps to eliminate hazardous materials previously used in their manufacturing. Materials containing hazardous compounds such as trichloroethylene, methylene chloride and xylene, once used in large quantities, have been either phased

out completely or used in much smaller quantities. Also, the U.S. EPA's decision to remove ethylene glycol monobutyl ether (2-butoxyethanol; 111-76-2) from the federal HAP list (Federal Register, November 29, 2004) significantly reduced reportable HAP emissions from the facility (See Graph 2). 2-Butoxyethanol is one of the main components in electrode ink and ceramic slip.

3. Due to some losses to competition, some production tools have been shipped offsite. For comparison, the 2004 Title V operating permit contains 806 listed equipment items (permitted and insignificant). This Title V renewal application contains 341 equipment items (permitted and insignificant). It should be noted however, the original AVX Title V application included production and support equipment that was never installed. The application included equipment needed to meet future production levels. However, these production levels were never realized. Potential VOC emissions based on the original Title V equipment inventory was 283 tons per year. In 2006, revised calculations indicated a facility-wide VOC potential emission rate of 94 tons per year. This Title V renewal application shows a 60 ton per year VOC emission rate potential.

AVX is currently in the process of relocating MB1 chip manufacturing and finishing to MB2 to continue improving efficiency and reducing environmental impacts. Once the relocation is completed, MB1 will be decommissioned. Decommissioning does not include the RMM, Metals, and Slip departments located next to MB1.

This renewal application serves to revise the AVX permit to reflect new manufacturing arrangement as well as update raw material usages and emission rates. The delineation between MB1 and MB2 will no longer be used, as there will no longer be process description redundancy. Therefore, what was MB2 will be referred to as CMAP Build Up, Thin Film, CMAP Support, and Metallization. What was MB1 will be referred to by the separate RMM, Slip, and Metals departments.

1.3 Title V Applicability

As stated previously, although AVX Myrtle Beach does not currently emit regulated compounds above major source thresholds, the facility is classified as a major stationary source per USEPA's "once in, always in" guidance for sources subject to 40 CFR Part 63. At one time, the facility's potential emissions exceeded the major source thresholds of 10 and 25 tons per year for emissions of individual and the aggregate total hazardous air pollutants (HAP), respectively. Therefore AVX is required to operate under a major source operating permit.

1.4 Request for Application Shield

Section 503(d) of the CAAA provides that once a timely and complete application for an operating permit has been filed, the applicant is shielded from enforcement action for operating without a permit until the permit has been issued or other action has been taken on the application. S.C. Regulation 62.70.7 (b) incorporates into state law the concept of an application shield for sources required to obtain a major source-operating permit.

The Myrtle Beach facility submitted the original Title V operating permit application in April 1998 and renewal application in April 2004. It is AVX's understanding that an application shield is in place as a result of the complete and timely application submitted in 2004. Therefore, the Myrtle Beach facility cannot be subject to enforcement action for operating without a permit during the period of time that the permit application has been under review by DHEC. This current submittal constitutes a revision to the original application, and AVX requests the continuation of the existing application shield.

1.5 Request for Permit Shield

Section 504(f) of the CAA defines the permit shield provision whereby the permitting authority is empowered to provide that compliance with a Part 70 permit shall be considered compliance with all other applicable provisions of the Act. S.C. Regulation 62.70.6 (f) incorporates into state law the concept of a permit shield. A provision stating that compliance with the conditions of

the Part 70 permit shall be deemed as compliant with any applicable requirements (as of the date of permit issuance) provided that the following S.C. Regulation 62.70.6 conditions are met:

- Such applicable requirements are identified and included in the permit; or
- DHEC determines that other requirements are not applicable to the source, and the permit includes the determination or listed provisions.

AVX requests inclusion of the permit shield recognizing any requirements with which the facility must comply, as well as any provisions not applicable to AVX.

1.6 Application Elements

This application for a Title V operating permit application contains the following elements:

- Section 2 contains the facility process description
- Section 3 discusses emission calculations
- Section 4 details the regulatory applicability analysis
- Appendix A includes site location and facility plot plan figures
- Appendix B contains the process flow diagrams
- Appendix C includes revised Emission Unit ID and equipment description descriptions
- Appendix D contains DHEC Title V operating permit application forms
- Appendix E details the emission estimates
- Appendix F includes a facility-wide air pollutant dispersion modeling analysis
- Appendix G presents the Compliance Assurance Monitoring Plan
- Appendix H provides supporting documentation