



Bureau of Air Quality Conditional Major Operating Permit

AVX Corporation
2200 AVX Drive
Myrtle Beach, South Carolina 29577
Horry County
(Permit Updated 02/07/2019)

In accordance with the provisions of the Pollution Control Act, Sections 48-1-50(5), 48-1-100(A), and 48-1-110(a), the 1976 Code of Laws of South Carolina, as amended, and South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards, the Bureau of Air Quality authorizes the operation of this facility and the equipment specified herein in accordance with valid construction permits, and the plans, specifications, and other information submitted in the operating permit request received on December 11, 2014, as amended. All official correspondence, plans, permit applications and written statements are an integral part of the permit. Any false information or misrepresentation in the application for a construction or operating permit may be grounds for permit revocation.

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

Permit Number: CM-1340-0002

Issue Date:	August 18, 2015	Effective Date:	October 1, 2015
Expiration Date:	September 30, 2025	Renewal Due Date:	July 2, 2025

A handwritten signature in blue ink that reads 'Steve McCaslin'.

Steve McCaslin, P. E., Director
Air Permitting Division
Bureau of Air Quality

AVX Corporation

CM-1340-0002

Page 2 of 19

(Permit Updated 02/07/2019)

RECORD OF REVISIONS	
Date	Description of Changes
02-13-2017	Corrected the emission point ID for the plating lines in the permit and modeling attachment. Added an additional soldering station that was transferred from the Conway facility.
02-07-2019	The following changes were made to the permit: (1) Removed Unit ID 014 RMM Department; (2) Reduced the number of Unit ID 015 mixing machines and milling machines, Unit ID 017 CMAP buildup machines, Unit ID 18 dry dicing machines, and Unit ID 019 lead plating lines and termination ovens; (3) Corrected the number of Unit ID 021 soldering stations; (4) Added the new SLC JAX non-lead electroplating line (Equipment ID SLCJAXE) under Unit ID 020; (5) Updated the modeling Attachment; and (6) Changed Emission Unit ID 016 from RESERVED to VOID.

AVX Corporation

CM-1340-0002

Page 3 of 19

(Permit Updated 02/07/2019)

A. EMISSION UNIT DESCRIPTION

Emission Unit ID	Emission Unit Description
014	VOID - Raw Materials Manufacturing (RMM) Department (grinding, mixing, and milling of ceramic powder; 30,000,000 lb/yr)
015	Slip Manufacturing (SLIP) Department (milling and mixing of ceramic powders and solvents to form ceramic slip slurry; 13,797,000 lb/yr)
016	VOID - Metals Department
017	CMAP Buildup (CMAP) Department (layering or buildup of slip and electrode ink to form capacitors; 100,000,000 chips/day)
018	CMAP Support (CMAP SUP) Department (cutting capacitors, green chip processing; 100,000,000 chips/day)
019	Metallization (METALLIZ) Department (plating and application/drying of paste to connect internal electrodes to chips; 100,000,000 chips/day)
020	Thin Film Process (TFP) Department (manufacture of integrated passive devices and components; 500 wafers/yr)
021	Miscellaneous Support Department

B. EQUIPMENT AND CONTROL DEVICE(S)

B.1 EQUIPMENT FOR EMISSION UNIT ID 014 - RAW MATERIALS MANUFACTURING DEPARTMENT

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
RMMPG	VOID - Four (4) Machines for Grinding Ceramic Prills	1983-1989	DC-A, DC-B, DC-C	15A-1, 15B-1, 15C-1
RMMPSC	VOID - Six (6) Prep Devices for Adding Dry Material to Slurry	1993-1997/ 2014	DC-A, DC-B, DC-C	15A-1, 15B-1, 15C-1
RMMPRILL	VOID - Eight (8) Machines for Making Ceramic Prills	1983-1989	DC-A, DC-B, DC-C	15A-1, 15B-1, 15C-1

AVX Corporation

CM-1340-0002

Page 4 of 19

(Permit Updated 02/07/2019)

B.2 CONTROL DEVICE(S) FOR EMISSION UNIT ID 014 - RAW MATERIALS MANUFACTURING DEPARTMENT

Control Device ID	Control Device Description	Installation Date/ Modification Date	Pollutant(s) Controlled
DC-A	VOID - Baghouse (6,720 sq. ft.)	1987	PM, PM ₁₀ , PM _{2.5}
DC-B	VOID - Baghouse (6,720 sq. ft.)	1987	PM, PM ₁₀ , PM _{2.5}
DC-C	VOID - Baghouse (4,500 sq. ft.)	1985	PM, PM ₁₀ , PM _{2.5}

B.3 EQUIPMENT FOR EMISSION UNIT ID 015 - SLIP MANUFACTURING DEPARTMENT

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
SMILL	Five (5) Machines (mill ceramic material)	1997/ 2018	None	Fugitive
SMIX	Eight (8) Machines (mix ceramic slurry)	1980-1997/ 2018	None	Fugitive

B.4 EQUIPMENT FOR EMISSION UNIT ID 017 - CMAP BUILDUP DEPARTMENT

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
CMAP	Four (4) CMAP Machines	1998-2001/ 2018	None	MB2-F1, MB2-F2
CMAPCLN	CMAP Cleaning Operations (fugitive)	1998-2001	None	Fugitive

B.5 EQUIPMENT FOR EMISSION UNIT ID 018 - CMAP SUPPORT DEPARTMENT

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
DD	Two (2) Dry Dicing Machines	2000/ 2018	MB2-BH	NMFS-1

AVX Corporation**CM-1340-0002****Page 5 of 19**

(Permit Updated 02/07/2019)

B.6 CONTROL DEVICE(S) FOR EMISSION UNIT ID 018 - CMAP SUPPORT DEPARTMENT

Control Device ID	Control Device Description	Installation Date/ Modification Date	Pollutant(s) Controlled
MB2-BH	Dust Collector (468 sq. ft.)	1998	PM, PM ₁₀ , PM _{2.5}

B.7 EQUIPMENT FOR EMISSION UNIT ID 019 - METALLIZATION DEPARTMENT

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
PBSBE	One (1) Nickel/Tin/Lead Plating Lines	2007-2008/ 2018	None	PLATING
TOVEN	Four (4) Termination Ovens (cure termination paste)	1993-2000/ 2018	None	Fugitive
TTOOL	Eight (8) Machines (apply termination paste to capacitor chips)	1981-2000/ 2018	None	Fugitive

B.8 EQUIPMENT FOR EMISSION UNIT ID 020 - THIN FILM PROCESS DEPARTMENT

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
TFP	Thin Film Process	2002	TFS	MB2-TFS
SLCJAXE	SLC JAX Non-lead Electroplating Line	2018	None	PLATING

B.9 CONTROL DEVICE(S) FOR EMISSION UNIT ID 020 - THIN FILM PROCESS DEPARTMENT

Control Device ID	Control Device Description	Installation Date/ Modification Date	Pollutant(s) Controlled
TFS	Two (2) Fluidized Bed Scrubbers (3,500 cfm, 55 gpm)	2002	PM, PM ₁₀ , PM _{2.5} , VOC, Lead compounds, HCl, HF, H ₂ SO ₄ , HNO ₃ , H ₃ PO ₄ , 2-Ethanolamine

AVX Corporation

CM-1340-0002

Page 6 of 19

(Permit Updated 02/07/2019)

B.10 EQUIPMENT FOR EMISSION UNIT ID 021 - MISCELLANEOUS SUPPORT DEPARTMENT

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
B201	16.738 MMBtu/hr Natural Gas-Fired Boiler	1999	None	MB2-B1
SS	Six (6) Soldering Stations	2010-2016	None	NMF-S
ST	Groundwater Stripping System	2009	None	ST-1

C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions
C.1	<p>Emission Unit ID: All Equipment ID/Control Device ID: All</p> <p>(S.C. Regulation 61-62.1, Section II.J.1.g) A copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. The owner or operator shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least 5 years from the date the record was generated and shall be made available to a Department representative upon request.</p>
C.2	<p>Emission Unit ID: 018, 020 Equipment ID/Control Device ID: DD/ MB2-BH; TFP/ TFS</p> <p>The owner/operator shall inspect, calibrate, adjust, and maintain continuous monitoring systems, monitoring devices, and gauges in accordance with manufacturer's specifications or good engineering practices. The owner/operator shall maintain on file all measurements including continuous monitoring system or monitoring device performance measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required in a permanent form suitable for inspection by Department personnel.</p>
C.3	<p>Emission Unit ID: 018, 020 Equipment ID/Control Device ID: DD/ MB2-BH; TFP/ TFS</p> <p>All gauges shall be readily accessible and easily read by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Monitoring parameter readings (i.e., pressure drop readings, etc.) and inspection checks shall be maintained in logs (written or electronic), along with any corrective action taken when deviations occur. Each incidence of operation outside</p>

AVX Corporation

CM-1340-0002

Page 7 of 19

(Permit Updated 02/07/2019)

C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions
	<p>the operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site. Exceedance of operational range shall not be considered a violation of an emission limit of this permit, unless the exceedance is also accompanied by other information demonstrating that a violation of an emission limit has taken place. Reports of these incidences shall be submitted semiannually. If no incidences occurred during the reporting period then a letter shall indicate such.</p> <p>Any alternative method for monitoring control device performance must be preapproved by the Department and shall be incorporated into the permit as set forth in S.C. Regulation 61-62.1 Section II.</p>
C.4	<p>Emission Unit ID: 021 Equipment/Control Device ID: B201/ None</p> <p>(S. C. Regulation 61-62.5, Standard No. 5.2) Any existing source where a burner assembly is replaced with another burner assembly after June 25, 2004, regardless of size or age of the burner assembly to be replaced shall be replaced with a low NOX burner assembly or equivalent technology, and shall achieve a 30 percent reduction from uncontrolled NOX emission levels based upon manufacturer's specifications. An exemption from this requirement shall be granted when a single burner assembly is being replaced in an existing source with multiple burners due to non-routine maintenance. The replacement of individual components such as burner heads, nozzles, or windboxes does not trigger this requirement.</p> <p>The owner or operator shall notify and register the burner assembly replacement with the Department, in writing, within 7 days of replacing the existing burner assembly. Notification will be provided on the Department's Low NOx Burner Assembly Replacement Notification Form D-2935. Those affected sources that wish to receive an emission reduction credit for the control device will be required to submit a construction permit application. Those affected sources requesting an alternative control methodology must receive written approval prior to burner replacement.</p> <p>The owner or operator shall perform tune-ups every twenty-four (24) months in accordance with manufacturer's specifications or with good engineering practices. The first tune-up shall be conducted no more than twenty-four (24) months from replacement of a burner assembly for affected existing sources. Each subsequent tune-up shall be conducted no more than twenty-four (24) months after the previous tune-up.</p> <p>All tune-up records are required to be maintained on site and available for inspection by the Department for a period of five (5) years from the date generated.</p> <p>The owner or operator shall develop and retain a tune-up plan on file.</p>

AVX Corporation

CM-1340-0002

Page 8 of 19

(Permit Updated 02/07/2019)

C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions
C.5	<p>Emission Unit ID: 015, 017, 018, 019, 020, 021 Equipment/Control Device ID: SMILL, SMIX/ None; CMAP, CMAPCLN/ None; DD/ MB2-BH; PBSBE, TOVEN, TTOOL/ None; TFP/ TFS; SS/ None; SLCJAXE/ None</p> <p>(S.C. Regulation 61-62.5, Standard No. 4, Section IX) Where construction or modification began after December 31, 1985, emissions from these sources (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.</p>
C.6	<p>Emission Unit ID: 021 Equipment/Control Device ID: B201/ None</p> <p>(S.C. Regulation 61-62.5, Standard No. 1, Section I) The fuel burning source(s) shall not discharge into the ambient air smoke which exceeds opacity of 20%. The opacity standards set forth above do not apply during startup or shutdown. The owner/operator shall, to the extent practicable, maintain and operate any source including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions.</p> <p>This source is permitted to burn only natural gas as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Department.</p>
C.7	<p>Emission Unit ID: 021 Equipment/Control Device ID: B201/ None</p> <p>(S.C. Regulation 61-62.5, Standard No. 1, Section II) The maximum allowable discharge of particulate matter resulting from this source is 0.6 pounds per million BTU input.</p> <p>Compliance has been demonstrated by engineering calculations. The uncontrolled emission rate is less than the maximum allowed.</p>
C.8	<p>Emission Unit ID: 021 Equipment/Control Device ID: B201/ None</p> <p>(S.C. Regulation 61-62.5, Standard No. 1, Section III) The maximum allowable discharge of sulfur dioxide (SO₂) resulting from this source is 2.3 pounds per million BTU input.</p> <p>Compliance has been demonstrated by engineering calculations. The uncontrolled emission rate is less than the maximum allowed.</p>
C.9	<p>Emission Unit ID: 018, 019, 020, 021 Equipment/Control Device ID: DD/ MB2-BH; PBSBE, TOVEN, TTOOL/ None; SS/ None; SLC JAX/ None</p> <p>(S.C. Regulation 61-62.5, Standard No. 4, Section VIII) Particulate matter emissions shall be limited to the rate specified by use of the following equations:</p>

AVX Corporation

CM-1340-0002

Page 9 of 19

(Permit Updated 02/07/2019)

C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions										
	<p>For process weight rates less than or equal to 30 tons per hour $E = (F) 4.10P^{0.67}$ and For process weight rates greater than 30 tons per hour $E = (F) 55.0P^{0.11} - 40$ Where E = the allowable emission rate in pounds per hour P = process weight rate in tons per hour F = effect factor from Table B in S.C. Regulation 61-62.5, Standard No. 4</p> <p>For the purposes of compliance with this condition, the process boundaries are defined as follows:</p> <table border="1" data-bbox="431 800 1370 1022"> <thead> <tr> <th data-bbox="435 804 1052 873">Process/Equipment IDs</th> <th data-bbox="1052 804 1367 873">Max Process Weight Rate (ton/hr)</th> </tr> </thead> <tbody> <tr> <td data-bbox="435 873 1052 909">CMAQ Support/ DD</td> <td data-bbox="1052 873 1367 909">0.011</td> </tr> <tr> <td data-bbox="435 909 1052 945">Metallization/ PBSBE, TOVEN, TTOOL</td> <td data-bbox="1052 909 1367 945">0.62</td> </tr> <tr> <td data-bbox="435 945 1052 980">Miscellaneous Support/ SS</td> <td data-bbox="1052 945 1367 980">0.30</td> </tr> <tr> <td data-bbox="435 980 1052 1016">SLC JAX/ SLCJAXWB, SLCJAXE</td> <td data-bbox="1052 980 1367 1016">0.9</td> </tr> </tbody> </table> <p>The owner/operator shall continue to operate and maintain pressure drop gauge(s) on each module of each baghouse. Pressure drop readings for each baghouse shall be recorded daily during source operation. Operation and maintenance checks shall be made on at least a weekly basis for baghouse cleaning systems, dust collection hoppers and conveying systems for proper operation. Each baghouse shall be in place and operational whenever processes controlled by it are running, except during periods of baghouse malfunction or mechanical failure.</p> <p>Operational ranges for the monitored parameters have been established to ensure proper operation of the pollution control equipment. These operational ranges for the monitored parameters were derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment. The facility shall maintain the established ranges and supporting documentation for these monitored parameters. Operating ranges may be updated following submittal to the Director of Engineering Services.</p> <p>Daily pressure drop readings shall be required for Control Device ID MB2-BH baghouse only when the wet/dry dicing machines are operating in "dry mode." When the wet/dry dicing machines are operating in "wet mode," the requirement for pressure drop readings shall be suspended and a clear notation shall be made in the baghouse log.</p> <p>The owner/operator shall maintain an adequate supply of bags on hand to replace any defective bags in each dust collector or baghouse, and ruptured or inoperative bags will be replaced promptly. Any baghouse with an excess of unserviceable bags will be isolated until the situation is corrected. A log shall be kept of bag maintenance, specifically the time and date bags are replaced.</p>	Process/Equipment IDs	Max Process Weight Rate (ton/hr)	CMAQ Support/ DD	0.011	Metallization/ PBSBE, TOVEN, TTOOL	0.62	Miscellaneous Support/ SS	0.30	SLC JAX/ SLCJAXWB, SLCJAXE	0.9
Process/Equipment IDs	Max Process Weight Rate (ton/hr)										
CMAQ Support/ DD	0.011										
Metallization/ PBSBE, TOVEN, TTOOL	0.62										
Miscellaneous Support/ SS	0.30										
SLC JAX/ SLCJAXWB, SLCJAXE	0.9										

AVX Corporation

CM-1340-0002

Page 10 of 19

(Permit Updated 02/07/2019)

C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions						
	All records shall be maintained on site and made available to a Department representative upon request.						
C.10	<p>Emission Unit ID: 020 Equipment/Control Device ID: TFP/ TFS</p> <p>(S.C. Regulation 61-62.5, Standard No. 4, Section VIII) Particulate matter emissions shall be limited to the rate specified by use of the following equations:</p> <p align="center">For process weight rates less than or equal to 30 tons per hour $E = (F) 4.10P^{0.67}$ and For process weight rates greater than 30 tons per hour $E = (F) 55.0P^{0.11} - 40$</p> <p align="center">Where E = the allowable emission rate in pounds per hour P = process weight rate in tons per hour F = effect factor from Table B in S.C. Regulation 61-62.5, Standard No. 4</p> <p>For the purposes of compliance with this condition, the process boundaries are defined as follows:</p> <table border="1" data-bbox="431 1125 1370 1236"> <thead> <tr> <th>Process/Equipment IDs</th> <th>Emission Limit (lb/hr)</th> <th>Max Process Weight Rate (ton/hr)</th> </tr> </thead> <tbody> <tr> <td>Thin Film Process/ TFP</td> <td align="center">0.318</td> <td align="center">0.022</td> </tr> </tbody> </table> <p>The owner/operator shall continue to operate and maintain pressure drop indicators and liquid pH meters (pH is needed for caustic/acid scrubbing media and removal of acid/caustic vapor) on each scrubber module. Each monitored parameter shall be recorded daily during source operation. Operation and maintenance checks shall be made on at least a weekly basis. Each scrubber shall be in place and operational whenever processes controlled by the scrubbers are running, except during periods of scrubber malfunction or mechanical failure. Records shall be maintained on site.</p> <p>Operational ranges for the monitored parameters have been established to ensure proper operation of the pollution control equipment. These operational ranges for the monitored parameters were derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment. The facility shall maintain the established ranges and supporting documentation for these monitored parameters. Operating ranges may be updated following submittal to the Director of Engineering Services.</p> <p>The facility shall conduct and log the weekly maintenance inspections of all scrubbers to ensure proper operation in accordance with the Preventative Maintenance Plan for these units. The log shall include, but not be limited to, the following:</p>	Process/Equipment IDs	Emission Limit (lb/hr)	Max Process Weight Rate (ton/hr)	Thin Film Process/ TFP	0.318	0.022
Process/Equipment IDs	Emission Limit (lb/hr)	Max Process Weight Rate (ton/hr)					
Thin Film Process/ TFP	0.318	0.022					

AVX Corporation

CM-1340-0002

Page 11 of 19

(Permit Updated 02/07/2019)

C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions
	<p>a. The date, time, and duration of each scrubber malfunction/failure or for any other reason such as the performance of planned maintenance on the scrubber;</p> <p>b. The nature of such malfunction/failure (i.e. leaks in pipes/manifolds/pumps/valves, clogged nozzles, corrosion, etc.); and,</p> <p>c. Records of calibration of all gauges or meters.</p> <p>All records shall be maintained on site and made available to a Department representative upon request.</p>
C.11	<p>Emission Unit ID: 020 Equipment/Control Device ID: TFP/ TFS</p> <p>(S.C. Regulation 61-62.5, Standard No. 4, Section XII) Periodic testing to demonstrate compliance with the max allowable PM emission limit shall be performed commencing with the date of last source test and every 5 years thereafter.</p> <p>For any source test required under an applicable standard or permit condition, the owner, operator, or representative shall comply with S.C. Regulation 61-62.1, Section IV.</p> <p>Unless approved otherwise by the Department, the owner, operator, or representative shall ensure that source tests are conducted while the source is operating at the maximum expected production rate or other production rate or operating parameter which would result in the highest emissions for the pollutants being tested. Some sources may have to spike fuels or raw materials to avoid being subjected to a more restrictive feed or process rate. Any source test performed at a production rate less than the rated capacity may result in permit limits on emission rates, including limits on production if necessary.</p> <p>The owner or operator shall comply with any limits that result from conducting a source test at less than rated capacity. A copy of the most recent Department issued source test summary letter, whether it imposes a limit or not, shall be maintained with the operating permit, for each source that is required to conduct a source test.</p> <p>Site-specific test plans and amendments, notifications, and source test reports shall be submitted to the Manager of the Source Evaluation Section, Bureau of Air Quality.</p>
C.12	<p>Emission Unit ID: 021 Equipment/Control Device ID: B201/ None</p> <p>This Boiler is subject to New Source Performance Standards (NSPS), 40 CFR 60 Subpart A, General Conditions and Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units and S.C. Regulation 61-62.60, Subparts A and Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, as applicable. Compliance with the regulation shall</p>

AVX Corporation

CM-1340-0002

Page 12 of 19

(Permit Updated 02/07/2019)

C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions
	<p>be demonstrated by burning only natural gas for fuel. The use of other fuels will subject this source to additional emission limitations and is prohibited without prior written approval from the Department.</p> <p>The owner/operator shall record and maintain records of the amounts and types of each fuel combusted by this source. The amount and type of fuel combusted shall be recorded monthly. As an alternative, the owner/operator may record and maintain records of the total amount of each source's fuel delivered to the facility during each calendar month. These records shall be maintained on site for a period of 2 years following the date of such record.</p>
C.13	<p>Emission Unit ID: 017 Equipment/Control Device ID: CMAP/ None</p> <p>(S.C. Regulation 61-62.1, Section II.G) This facility has established federally enforceable operating limitations to limit its potential to emit to less than 100.0 tons per year for volatile organic compound (VOC) emissions to avoid Title V.</p> <p>The CMAP Buildup machines are limited to operating a maximum of 94,482 hours per any consecutive 12-month period. The owner/operator must record the total actual operating machine-hours monthly. Reports of the recorded hours of operation and the 12-month rolling sum, calculated for each month in the reporting period, shall be submitted annually.</p>
C.14	<p>Emission Unit ID: All Equipment/Control Device ID: All</p> <p>(S.C. Regulation 61-62.1, Section II.G) This facility has established federally enforceable operating limitations to limit its potential to emit to less than 100.0 tons per year for VOC emissions to avoid Title V.</p> <p>The owner/operator shall maintain records of all VOC. These records shall include the total amount of each material used, the VOC content in percent by weight of each material and any other records necessary to determine VOC emissions. Total VOC emissions shall be calculated on a monthly basis and a 12-month rolling sum shall be calculated for total VOC emissions. Emissions from malfunctions are required to be quantified and included in the calculations. The 12-month rolling sum shall be less than 100.0 tons. Reports of the calculated values and the 12-month rolling sum, calculated for each month in the reporting period, shall be submitted annually.</p> <p>An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall only be included in the initial report. Subsequent submittals of the algorithm are required within 30 days of the change if the algorithm or basis for emissions is modified or the Department requests additional information.</p>

AVX Corporation

CM-1340-0002

Page 13 of 19

(Permit Updated 02/07/2019)

D. NESHAP PERIODIC REPORTING SCHEDULE SUMMARY

NESHAP Part	NESHAP Subpart	Compliance Monitoring Report Submittal Frequency	Reporting Period	Report Due Date
63	ZZZZ (Emergency Engines, see notes 3 and 4)	N/A	N/A	N/A
63	WWWWWW	Annual (See notes 5 and 6.)	January 1 through Dec 31	January 31

1. This table summarizes only the periodic compliance reporting schedule. Additional reports may be required. See specific NESHAP Subpart for additional reporting requirements and associated schedule.
2. This reporting schedule does not supersede any other reporting requirements including but not limited to 40 CFR Part 60, 40 CFR Part 61, 40 CFR Part 63, and/or Title V. The MACT reporting schedule may be adjusted to coincide with the Title V reporting schedule with prior approval from the Department in accordance with 40 CFR 63.10(a)(5). This request may be made 1 year after the compliance date for the associated MACT standard.
3. Facilities with emergency engines are not required to submit reports. Only facilities with non-emergency engines are required to submit semiannual reports.
4. Facilities with emergency engines shall comply with the operations limits specified in 40 CFR 63.6640(f).
5. Each annual compliance report must be prepared no later than January 31 of the year immediately following the reporting period and kept in a readily-accessible location for inspector review. If a deviation has occurred during the year, each annual compliance report must be submitted along with the deviation report, and postmarked or delivered no later than January 31 of the year immediately following the reporting period.
6. These reports do not need to be submitted unless a deviation from the requirements of this subpart has occurred during the reporting period.

E. NESHAP - CONDITIONS

Condition Number	Conditions
E.1	All NESHAP notifications and reports shall be sent to the Manager of the Air Toxics Section, South Carolina Department of Health and Environmental Control - Bureau of Air Quality.
E.2	All NESHAP notifications and the cover letter to periodic reports shall be sent to the United States Environmental Protection Agency (US EPA) at the following address or electronically as required by the specific subpart: US EPA, Region 4 Air, Pesticides and Toxics Management Division 61 Forsyth Street SW Atlanta, GA 30303

AVX Corporation

CM-1340-0002

Page 14 of 19

(Permit Updated 02/07/2019)

E. NESHAP – CONDITIONS

Condition Number	Conditions
E.3	<p>Emergency engines less than or equal to 150 kilowatt (kW) rated capacity, emergency engines greater than 150 kW rated capacity designated for emergency use only and operated a total of 500 hours per year or less for testing and maintenance and have a method to record the actual hours of use, such as an hour meter, and diesel engine driven emergency fire pumps that are operated a total of 500 hours per year or less for testing and maintenance and have a method to record the actual hours of use, such as an hour meter, have been determined to be exempt from construction permitting requirements in accordance with South Carolina Regulation 61-62.1.</p> <p>If present, these sources shall still comply with the requirements of all applicable regulations, including but not limited to the following:</p> <p>New Source Performance Standards (NSPS) 40 CFR 60 Subpart A (General Provisions); NSPS 40 CFR 60 Subpart IIII (Stationary Compression Ignition Internal Combustion Engines); NSPS 40 CFR 60 Subpart JJJJ (Stationary Spark Ignition Internal Combustion Engines); National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subpart A (General Provisions); and NESHAP 40 CFR 63 Subpart ZZZZ (Stationary Reciprocating Internal Combustion Engines).</p>
E.4	<p>Affected sources: All Stationary IC Engines: This facility is subject to the provisions of 40 CFR Part 63, Subpart A General Provisions and Subpart ZZZZ National Emission Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines. Existing affected sources shall comply with the applicable provisions by the compliance date specified in Subpart ZZZZ. Any new affected sources shall comply with the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII for compression ignition engines or 40 CFR 60, Subpart JJJJ for spark ignition engines upon initial start-up, unless otherwise noted.</p>
E.5	<p>This facility has processes subject to the provisions of S.C. Regulation 61-62.63 and 40 CFR Part 63, Subpart A General Provisions and Subpart WWWW National Emission Standards for Hazardous Air Pollutants: Area Source Standards For Plating and Polishing Operations. Existing affected sources shall be in compliance with the requirements of these Subparts on the compliance date, unless otherwise noted. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up, unless otherwise noted.</p>

F. PERMIT FLEXIBILITY

Condition Number	Conditions
F.1	<p>The facility may install exempt sources as allowed in S.C. Regulation 61-62.1, Section II.B, without revising or reopening the operating permit. The addition of these sources is allowed without a construction permit except when the activity triggers a new operating permit status (i.e. does not potentially subject the facility to the Title V operating permit program) and/or any activity triggers</p>

AVX Corporation

CM-1340-0002

Page 15 of 19

(Permit Updated 02/07/2019)

F. PERMIT FLEXIBILITY

Condition Number	Conditions
	major source or synthetic minor permitting requirements. A list of exempt sources must be maintained on site, along with any necessary documentation to support the determination that the source is exempt, and shall be made available to a Department representative upon request. The list and necessary documentation shall be submitted with the next renewal application. Emissions from these sources shall be reflected in the facility-wide emissions tabulation in any subsequent construction permit application.

G. AMBIENT AIR STANDARDS REQUIREMENTS

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

AVX Corporation

CM-1340-0002

Page 16 of 19

(Permit Updated 02/07/2019)

H. PERIODIC REPORTING SCHEDULE

Compliance Monitoring Report Submittal Frequency	Reporting Period (Begins on the startup date of the source)	Report Due Date
Quarterly	January-March April-June July-September October-December	April 30 July 30 October 30 January 30
Semiannual	January-June April-September July-December October-March	July 30 October 30 January 30 April 30
Annual	January-December April-March July-June October-September	January 30 April 30 July 30 October 30

Note: This reporting schedule does not supersede any federal reporting requirements including but not limited to 40 CFR Part 60, 40 CFR Part 61, and 40 CFR Part 63. All federal reports must meet the reporting time frames specified in the federal standard unless the Department or EPA approves a change.

I. REPORTING CONDITIONS

Condition Number	Conditions
I.1	Reporting required in this permit, shall be submitted in a timely manner as directed in the Periodic Reporting Schedule of this permit.
I.2	All reports and notifications required under this permit shall be submitted to the person indicated in the specific condition at the following address: 2600 Bull Street Columbia, SC 29201 The contact information for the local EQC Regional office can be found at: http://www.scdhec.gov
I.3	Unless elsewhere specified within this permit, all reports required under this permit shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality.
I.4	(S.C. Regulation 61-62.1, Section II.J) For sources not required to have continuous emission monitors, any malfunction of air pollution control equipment or system, process upset, or other equipment failure which results in discharges of air contaminants lasting for one (1) hour or more and which are greater than those discharges described for normal operation in the permit application, shall be reported to the Department within twenty-four (24) hours after the beginning of the occurrence and a written report shall be submitted to the Department within thirty (30) days. The written report shall include, at a minimum, the following:

AVX Corporation

CM-1340-0002

Page 17 of 19

(Permit Updated 02/07/2019)

I. REPORTING CONDITIONS

Condition Number	Conditions
	<ol style="list-style-type: none">1. The identity of the stack and/or emission point where the excess emissions occurred;2. The magnitude of excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the excess emissions;3. The time and duration of excess emissions;4. The identity of the equipment causing the excess emissions;5. The nature and cause of such excess emissions;6. The steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction;7. The steps taken to limit the excess emissions; and,8. Documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated, to the maximum extent practicable, in a manner consistent with good practice for minimizing emissions. <p>The initial twenty-four (24) hour notification should be made to the Department's local Environmental Affairs Regional office.</p> <p>The written report should be sent to the Manager of the Technical Management Section, Bureau of Air Quality and the local Environmental Affairs Regional office.</p>

J. GENERAL CONDITIONS

Condition Number	Conditions
J.1	The owner or operator shall comply with S.C. Regulation 61-62.2 "Prohibition of Open Burning."
J.2	The owner or operator shall comply with S.C. Regulation 61-62.3 "Air Pollution Episodes."
J.3	The owner or operator shall comply with S.C. Regulation 61-62.4 "Hazardous Air Pollution Conditions."
J.4	This permit only covers emission units and control equipment while physically present at the indicated facility. Unless the permit specifically provides for the equipment relocation, this permit is void for an item of equipment on the day it is removed from the permitted facility, notwithstanding the expiration date specified on the permit.
J.5	The permittee shall pay permit fees to the Department in accordance with the requirements of S.C. Regulation 61-30, Environmental Protection Fees.
J.6	In the event of an emergency, as defined in S.C. Regulation 61-62.1, Section II.L, the owner or operator may document an emergency situation through properly signed, contemporaneous operating logs, and other relevant evidence that verify: <ol style="list-style-type: none">1. An emergency occurred, and the owner or operator can identify the cause(s) of the emergency;2. The permitted source was at the time the emergency occurred being properly operated;

AVX Corporation

CM-1340-0002

Page 18 of 19

(Permit Updated 02/07/2019)

J. GENERAL CONDITIONS

Condition Number	Conditions
	<p>3. During the period of the emergency, the owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and</p> <p>4. The owner or operator gave a verbal notification of the emergency to the Department within 24 hours of the time when emission limitations were exceeded, followed by a written report within 30 days. The written report shall include, at a minimum, the information required by S.C. Regulation 61-62.1, Section II.J.1.c.i through viii. The written report shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.</p> <p>This provision is in addition to any emergency or upset provision contained in any applicable requirement.</p>
J.7	<p>(S.C. Regulation 61-62.1, Section II.O) Upon presentation of credentials and other documents as may be required by law, the owner or operator shall allow the Department or an authorized representative to perform the following:</p> <ol style="list-style-type: none">1. Enter the facility where emissions-related activity is conducted, or where records must be kept under the conditions of the permit.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.3. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.4. As authorized by the Federal Clean Air Act and/or the S.C. Pollution Control Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

K. PERMIT RENEWAL, MODIFICATION, EXPIRATION AND TRANSFER OF OWNERSHIP

Condition Number	Conditions
K.1	This permit may be reopened by the Department for cause or to include any new standard or regulation which becomes applicable to a source during the life of the permit.
K.2	This permit may be modified by the Department for cause, to include any applicable requirement or to add or alter a permit's expiration date.
K.3	<p>(S.C. Regulation 61-62.1, Section II.M) Within 30 days of the transfer of ownership/operation of a facility, the current permit holder and prospective new owner or operator shall submit to the Director of Air Permitting a written request for transfer of the source operating or construction permits. The written request for transfer of the source operating or construction permit shall include any changes pertaining to the facility name and mailing address; the name, mailing address, and telephone number of the owner or operator for the facility; and any proposed changes to the permitted activities of the source. Transfer of the operating or construction permits will be effective upon</p>

AVX Corporation

CM-1340-0002

Page 19 of 19

(Permit Updated 02/07/2019)

K. PERMIT RENEWAL, MODIFICATION, EXPIRATION AND TRANSFER OF OWNERSHIP

Condition Number	Conditions
	written approval by the Department.
K.4	(S.C. Regulation 61-62.1, Section II.H) The owner or operator shall submit an operating permit renewal request to the Department within 90 days prior to the operating permit expiration date. The operating permit renewal requests shall include a description of any changes at the facility that have occurred since issuance of the last operating permit that may affect the operating permit or operating permit review. In general, the description shall include any addition, alteration or removal of sources, including sources exempt from construction permit requirements; addition, alteration or removal of emission limitations; any changes to monitoring, recordkeeping, or reporting requirements; and any changes or additions to special permit conditions.
K.5	Submission of a request for renewal meeting the requirements in S.C. Regulation 61-62.1, Section II.H, shall allow the owner or operator to continue operating pursuant to the most recent operating permit, until such time as the Department has taken final action on the request for renewal.

ATTACHMENT - Emission Rates for Ambient Air Standards

AVX Corporation

CM-1340-0002

Page 1 of 3

(Permit Updated 02/07/2019)

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

AMBIENT AIR QUALITY STANDARDS - STANDARD NO. 2						
Emission Point ID	Emission Rates (lbs/hr)					
	PM₁₀	PM_{2.5}	SO₂	NO_x	CO	Lead
NMFS_B1	--	--	--	1.64	--	--
15A-1, 15B-1, 15C-1	0.0000339	0.0000339	--	--	--	--
Dipguard - Deflash	0.0132	0.0132	--	--	--	1.17E-07
EP-NMFS-F1	0.02	0.02	--	--	--	--
MB2_TFS (EP-TFS)	0.03	0.03	--	--	--	1.27E-04
MB2F1, MB2F2	0.01	0.01	0.001	0.10	0.09	--
NMFS-B1	0.1247	0.1247	0.010	--	1.38	8.2E-06
NMFS-BH	0.05	0.05	--	--	--	--
PLATING	0.0360	0.0360	--	--	--	3.83E-04
Pluritec and AVX Drills	0.58	0.58	--	--	--	--
Router	0.16	0.16	--	--	--	--
SOLDER1 (KEF-1)	0.00229	0.00229	--	--	--	3.19E-05

TOXIC AIR POLLUTANTS - STANDARD NO. 8				
Emission Point ID	Emission Rates (lbs/hr)			
	Benzene	Bis (2-ethylhexyl) phthalate	Chromium Compounds	Ethanolamine
	71-43-2	117-81-7	N/A	141-43-5
CMAPFUG	--	0.00298	--	--
MB2_TFS (EP-TFS)	--	--	--	0.0518
MB2F1	--	0.00147	--	--
MB2F2	--	0.00147	--	--
NMFS_B1	0.0000344	--	--	--
SLIP	--	0.0300	--	--
SOLDER1	--	--	0.00000171	--

ATTACHMENT - Emission Rates for Ambient Air Standards

AVX Corporation

CM-1340-0002

Page 2 of 3

(Permit Updated 02/07/2019)

TOXIC AIR POLLUTANTS - STANDARD NO. 8				
Emission Point ID	Emission Rates (lbs/hr)			
	Ethyl Benzene	Ethylidene Dichloride	Formaldehyde	Hexane
	100-41-4	75-34-3	50-00-0	110-54-3
CMAPFUG	0.00298	--	--	--
MB2F1	0.00147	--	--	--
MB2F2	0.00147	--	--	--
NMFS_B1	--	--	0.00123	0.0294
TOWER	--	0.110	--	--

TOXIC AIR POLLUTANTS - STANDARD NO. 8				
Emission Point ID	Emission Rates (lbs/hr)			
	Hydrochloric Acid	Manganese Compounds	Methyl Chloroform	Methyl Isobutyl Ketone
	7647-01-0	+	71-55-6	108-10-1
CMAPFUG	--	--	--	0.0240
MB2F1	--	--	--	0.00558
MB2F2	--	--	--	0.00558
MB2_TFS (EP-TFS)	0.000921	--	--	--
SLIP	--	--	--	0.000929
SOLDER1	--	0.000111	--	--
TERMFUG	--	--	--	0.00889
TOWER	--	--	0.300	--

TOXIC AIR POLLUTANTS - STANDARD NO. 8				
Emission Point ID	Emission Rates (lbs/hr)			
	Naphthalene	Nickel	Phosphoric Acid	--
	91-20-3	--	7664-38-2	--
PLATING	--	0.0356	--	--
MB2_TFS (EP-TFS)	--	--	0.00160	--
NMFS_B1	0.0000100	--	--	--

ATTACHMENT - Emission Rates for Ambient Air Standards

AVX Corporation

CM-1340-0002

Page 3 of 3

(Permit Updated 02/07/2019)

TOXIC AIR POLLUTANTS - STANDARD NO. 8				
Emission Point ID	Emission Rates (lbs/hr)			
	Toluene	Vinyl Chloride	Xylene	Sulfuric Acid
	108-88-3	75-01-4	1330-20-7	7664-93-9
CMAPFUG	0.00298	--	0.00298	--
EP-NMFS-F1	--	--	--	0.00385
MB2F1	0.00147	--	0.00147	--
MB2F2	0.00147	--	0.00147	--
MB2_TFS (EP-TFS)	--	--	--	0.000724
NMFS_B1	0.0000557	--	--	--
PLATING	--	--	--	0.00386
TOWER	--	0.0900	--	--
SLIP	--	--	0.00528	--

TOXIC AIR POLLUTANTS - STANDARD NO. 8				
Emission Point ID	Emission Rates (lbs/hr)			
	Cresols	Hydrogen Fluoride	Methanol	Nitric Acid
	1319-77-3	7664-39-3	67-56-1	7697-37-2
CMAPFUG	--	--	0.0470	--
EP-NMFS-F1	0.00111	--	--	0.000288
EP-PMC	0.000258	--	0.0621	--
MB2_TFS (EP-TFS)	--	0.000175	--	0.00388
MB2F1	--	--	0.0106	--
MB2F2	--	--	0.0106	--
SLIP	--	--	0.00176	--
TERMFUG	--	--	0.0169	--

TOXIC AIR POLLUTANTS - STANDARD NO. 8				
Emission Point ID	Emission Rates (lbs/hr)			
	Sodium Hydroxide			
	1310-73-2			
EP-NMFS-F1	0.000101	--	--	--