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BUREAU OF AIR QUALITY

December 28, 2011

Ms. Fatina Ann Washburn-Clark
Bureau of Air Quality
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Re: AVX Corporation Title V Renewal Application Revisions
Myrtle Beach, Horry County, SC
TV-1340-0002

Dear Ms. Clark:

As you are aware, Mr. Greg Quina of your office contacted me on November 23, 2011 regarding his review of the air dispersion modeling analysis associated with the Title V renewal application for the AVX Corporation located in Myrtle Beach, South Carolina. In short, some of the September 8, 2011 revisions to the original air permit application were not captured in the air dispersion modeling. There were also some minor corrections to emission source parameters input into the air dispersion modeling. These revisions and corrections have been made and the necessary re-execution of the modeling completed. There were no changes from the previous modeling results with respect to AVX's modeled concentrations of Standard No. 8 compounds compared to the Maximum Allowable Ambient Concentrations. The following items are attached to this letter to update the modeling analysis:

1. Modeling analysis Table 1. Included xylene emissions from Slip. Corrected emission rates from CMAP (process, fugitive, and gas combustion) and Metallization.
2. Modeling analysis Table 2. Corrected exit velocities from Metallization (plating) and soldering. Corrected exhaust temperatures from the CMAP adsorber/desorber and thermal oxidizer.
3. Modeling analysis Table 3. Corrected vertical dimension for the MFGNEW volume source.
4. Modeling analysis Table 6. Updated modeled concentrations.
5. A compact disk containing the revised electronic modeling files.

Mr. Quina also requested additional background information on AVX's insignificant sources. During the process of preparing the documentation, Resolute Environmental became aware some corrections needed to the insignificant equipment list provided in the original Title V renewal application. Specifically, the 16 calcining kilns (RMM) and three (3) cooling towers 1A, 2A, and 2C have been decommissioned. Added were two (2) non-contact cooling towers used at the MB2 location. Also, the Metals department solvent wash station does not exist at this location and has

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been removed from the equipment list. The following are additional attachments to this letter per Mr. Quina's request and subsequent revisions to AVX's Title V renewal application:

6. A table listing insignificant sources and exemption basis.
7. Revised Tables 2, 4, and 5 from the Title V renewal application supporting documentation.
8. Revised Form G pages 1 and 3 of 3.

If you have any questions regarding the information provided, please contact me at (919) 701-0009 or via electronic mail at gyoder@nc.rr.com.

Best Regards,

RESOLUTE ENVIRONMENTAL, LLC



Gary T. Yoder
Principal
Resolute Environmental, LLC

CC

Larry Blue – AVX Corporation (via email)
Ralph Bryant – AVX Corporation (via email)
Max Justice – Parker Poe (via email)

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Table 1

AVX Corporation
Myrtle Beach, South Carolina

Standards No. 8 and No. 2 Modeled Emission Rates

| Department | Emission Unit ID | Model ID | Constituent | CAS | Material/Process | Potential Emissions ^A (lb/yr) | (lb/hr) | Modeling Exemption Levels (lb/hr) | Modeling Required? | Model Input (g/s) |
|---|--------------------------|-------------------|------------------------------|-----------------|---|---|----------|---|-----------------------|-------------------------|
| R&M | 14 | R&M | PM/PM-10/PM-2.5 | N/A | Grinding, mixing, milling, drilling | 0.08 | 8.9E-08 | 1.0 | No | N/A |
| Slip Mfg. | 15 | SLIP | Methanol | 67-56-1 | Denatured alcohol - Cleaning | 15.40 | 1.76E-03 | | | 2.22E-04 |
| | 15 | SLIP | MIBK | 108-10-1 | Denatured alcohol - Cleaning | 8.12 | 9.27E-04 | | | 1.17E-04 |
| | 15 | SLIP | Bis (2-ethylhexyl) phthalate | 117-81-7 | DiOctylPhthalate process solvent | 260.0 | 0.03 | | | 3.74E-03 |
| | 15 | SLIP | Xylene | 1330-20-7 | Slip Solvent | 46.2 | 0.01 | | | 6.65E-04 |
| Metals Mfg. | 16 | MD(1, 2 & 3)C-1 | PM | N/A | Mixing and milling | 2340.00 | 0.27 | 1.0 | No | N/A |
| | 16 | MD(1, 2 & 3)C-1 | PM-10/PM-2.5 | N/A | Mixing and milling | 1540.00 | 0.18 | 1.0 | No | N/A |
| | 16 | MD(1, 2 & 3)C-1 | Xylene | 1330-20-7 | Electrode Ink Solvent | 100.00 | 0.01 | | | 1.44E-03 |
| | 16 | MD(1, 2 & 3)C-1 | Toluene | 106-88-3 | Mineral Spirits Type 66 | 1.15 | 1.32E-04 | | | 1.66E-05 |
| | 16 | MD(1, 2 & 3)C-1 | Bis (2-ethylhexyl) phthalate | 117-81-7 | DiOctylPhthalate process solvent | 9.76 | 1.11E-03 | | | 1.40E-04 |
| | 16 | MD(1, 2 & 3)C-1 | Ethylbenzene | 100-41-4 | Mineral Spirits Type 66 | 0.56 | 6.59E-05 | | | 8.28E-06 |
| | 16 | MD(1, 2 & 3)C-1 | Methanol | 67-56-1 | Denatured alcohol - Cleaning | 2.84 | 3.24E-04 | | | 4.09E-05 |
| | 16 | MD(1, 2 & 3)C-1 | MIBK | 108-10-1 | Denatured alcohol - Cleaning | 1.50 | 1.71E-04 | | | 2.15E-05 |
| Manufacturing (CMAP, CMAP Cleaning & Metalization) | 17 | NMFS-F1 & NMFS-F2 | Methanol | 67-56-1 | Slip/Ink Solvent | 123.6 | 0.02 | | | 2.67E-03 |
| | 17 | NMFS-F1 & NMFS-F2 | MIBK | 108-10-1 | Slip/Ink Solvent | 66.2 | 0.01 | | | 1.41E-03 |
| | 17 | NMFS-F1 & NMFS-F2 | Bis (2-ethylhexyl) phthalate | 117-81-7 | DiOctylPhthalate process solvent | 17.2 | 2.94E-03 | | | 3.70E-04 |
| | 17 | NMFS-F1 & NMFS-F2 | Ethylbenzene | 100-41-4 | Mineral Spirits Type 66 | 17.2 | 2.94E-03 | | | 3.70E-04 |
| | 17 | NMFS-F1 & NMFS-F2 | Toluene | 106-88-3 | Mineral Spirits Type 66 | 17.2 | 2.94E-03 | | | 3.70E-04 |
| | 17 | NMFS-F1 & NMFS-F2 | Xylene | 1330-20-7 | Mineral Spirits Type 66 Solvent | 17.2 | 2.94E-03 | | | 3.70E-04 |
| | 17 | CMAPFLUG | Methanol | 67-56-1 | Slip/Ink Solvent - Fugitive | 344.4 | 0.05 | | | 5.82E-03 |
| | 17 | CMAPFLUG | MIBK | 108-10-1 | Slip/Ink Solvent - Fugitive | 177.0 | 0.02 | | | 3.02E-03 |
| | 17 | CMAPFLUG | Bis (2-ethylhexyl) phthalate | 117-81-7 | DiOctylPhthalate process solvent - Fugitive | 17.4 | 2.98E-03 | | | 3.78E-04 |
| | 17 | CMAPFLUG | Ethylbenzene | 100-41-4 | Mineral Spirits Type 66 - Fugitive | 17.4 | 2.98E-03 | | | 3.78E-04 |
| | 17 | CMAPFLUG | Toluene | 106-88-3 | Mineral Spirits Type 66 - Fugitive | 17.4 | 2.98E-03 | | | 3.78E-04 |
| | 17 | CMAPFLUG | Xylene | 1330-20-7 | Mineral Spirits Type 66 Solvent - Fugitive | 17.4 | 2.98E-03 | | | 3.78E-04 |
| | 17 | NMFS-F1 | PM/PM-10/PM-2.5 | N/A | Terminal Oxidizer Gas Combustion | 60.0 | 0.01 | 1.0 | No | N/A |
| | 17 | NMFS-F1 | SO ₂ | N/A | Terminal Oxidizer Gas Combustion | 5.3 | 6.02E-04 | 1.0 | No | N/A |
| | 17 | NMFS-F1 | NO _x | N/A | Terminal Oxidizer Gas Combustion | 660.0 | 0.10 | 1.0 | No | N/A |
| | 17 | NMFS-F1 | CO | N/A | Terminal Oxidizer Gas Combustion | 736.2 | 0.08 | 10.0 | No | N/A |
| | 19 | MFGMB1 & MFGNEW | Methanol | 67-56-1 | Denatured alcohol | 147.8 | 0.02 | | | 2.13E-03 |
| | 19 | MFGMB1 & MFGNEW | MIBK | 108-10-1 | Denatured alcohol | 78.0 | 0.01 | | | 1.12E-03 |
| | CMAP Support | 18 | NMFS-B1 | PM/PM-10/PM-2.5 | N/A | Dry drying | 380 | 0.04 | 1.0 | No |
| Metalization | 19 | 7C-2A & 7C-2B | PM/PM-10/PM-2.5 | N/A | Electroplating - Au/Ink & SBE | 11,138 | 1.27E-03 | 1.0 | No | N/A |
| | 19 | 7C-2A & 7C-2B | Lead | N/A | Electroplating - Au/Ink & SBE | 0.19 | 2.21E-06 | | See below | N/A |
| | 19 | 7C-2A & 7C-2B | Nickel | N/A | Electroplating - Au/Ink & SBE | 27.77 | 3.17E-03 | | | 3.98E-04 |
| Thin Film Process | 20 | NMFS-TFS | PM/PM-10/PM-2.5 | N/A | Process | 60.00 | 0.01 | 1.0 | No | N/A |
| | 20 | NMFS-TFS | Lead | N/A | Process | 0.56 | 6.67E-05 | | See below | N/A |
| | 20 | NMFS-TFS | Sulfuric acid | 7864-93-9 | Process | 6.32 | 7.21E-04 | | | 9.09E-05 |
| | 20 | NMFS-TFS | Nitric acid | 7697-37-2 | Process | 34.00 | 3.89E-03 | | | 4.89E-04 |
| | 20 | NMFS-TFS | 2-ethanolamine | 141-43-5 | Process | 454.00 | 0.05 | | | 6.53E-03 |
| | 20 | NMFS-TFS | Hydrochloric acid | 7647-01-0 | Process | 8.04 | 9.18E-04 | | | 1.19E-04 |
| | 20 | NMFS-TFS | Phosphoric acid | 7664-38-2 | Process | 14.0 | 1.59E-03 | | | 2.01E-04 |
| Miscellaneous Support | 21 | SOLDER1 | PM/PM-10/PM-2.5 | N/A | Soldering | 20 | 2.39E-03 | 1.0 | No | N/A |
| | 21 | NMFS-B1 | PM/PM-10/PM-2.5 | N/A | Boiler | 1092.4 | 0.12 | 1.0 | No | N/A |
| | 21 | NMFS-B1 | SO ₂ | N/A | Boiler | 80 | 0.01 | 1.0 | No | N/A |
| | 21 | NMFS-B1 | NO _x | N/A | Boiler | 14380 | 1.84 | 1.0 | No | N/A |
| | 21 | NMFS-B1 | CO | N/A | Boiler | 12080 | 1.38 | 10.0 | No | N/A |
| | 21 | NMFS-B1 | Lead | N/A | Boiler | 7.1E-02 | 8.20E-06 | | See below | N/A |
| | 21 | SOLDER1 | Lead | N/A | Soldering | 0.1864 | 2.13E-05 | | See below | N/A |
| | 21 | TOWER | 1,1,1-trichloroethane | 71-66-6 | Stripping tower | 2631.6 | 0.30 | | | 3.78E-02 |
| | 21 | TOWER | 1,1-dichloroethane | 75-34-3 | Stripping tower | 963.6 | 0.11 | | | 1.36E-02 |
| | 21 | NMFS-B1 | Benzene | 71-43-2 | Boiler | 0.3 | 3.45E-05 | | | 4.34E-06 |
| | 21 | SOLDER1 | Chromium (assumed +6) | N/A | Soldering | 1.5E-02 | 1.71E-06 | | | 2.15E-07 |
| | 21 | NMFS-B1 | Formaldehyde | 50-00-0 | Boiler | 10.8 | 1.23E-03 | | | 1.55E-04 |
| | 21 | NMFS-B1 | Hexane | 110-54-3 | Boiler | 258.0 | 0.03 | | | 3.71E-03 |
| | 21 | SOLDER1 | Manganese | N/A | Soldering | 0.97 | 1.11E-04 | | | 1.40E-05 |
| | 21 | NMFS-B1 | Naphthalene | 91-20-3 | Boiler | 0.1 | 1.00E-05 | | | 1.28E-06 |
| | 21 | NMFS-B1 | Toluene | 106-88-3 | Boiler | 0.5 | 5.57E-06 | | | 7.02E-06 |
| | 21 | TOWER | Vinyl chloride | 75-01-4 | Stripping tower | 789.5 | 0.09 | | | 1.14E-02 |
| | Facility-Wide Lead Total | | | | | | | 1.18E-04 | 0.114 | No |

Notes

A. Refer to the May 2011 Title V renewal application for emission rate calculations.

Rev 12/09/11: Corrected emission rates for Slip (xylene), Controlled CMAP Process (MIBK), CMAP fugitive (methanol, bis (2-ethylhexyl) phthalate, ethyl benzene, toluene, xylene), CMAP gas combustion (SO₂ and CO), Metalization (lead and nickel).

Table 2

AVX Corporation
Myrtle Beach, South Carolina

Summary of Stack Parameters - Point Sources

| Source | Description | Stack ID | UTM Easting (m) ^A | UTM Northing (m) ^A | Base Elevation (ft) | Stack Height (ft) | Temperature (F) | Velocity (fps) | Diameter (ft) |
|--------------------|-----------------------|----------------------|------------------------------|-------------------------------|---------------------|-------------------|-----------------|-----------------|---------------|
| Metals Mfg. | Metals Mill & Mixing | MD1C-1 | 693700 | 3728106 | 23 | 37 | 70 | 57.0 | 1.67 |
| | Metals Mill | MD2C-1 | 693716 | 3728101 | 23 | 22 | 70 | NA ^B | 0.67 |
| | Metals Mill | MD3C-1 | 693720 | 3728101 | 23 | 25 | 70 | 26.5 | 1.00 |
| CMAP | Chip Mfg - T.O. | MB2-F1 | 693341 | 3727899 | 23 | 30 | 1030 | 64 | 2.5 |
| | Chip Mfg - Adsorber | MB2-F2 | 693344 | 3727899 | 23 | 28 | 90 | 6.6 | 2 |
| Metalization | Autoline Plater & SBE | 7C-2A | 693773 | 3728208 | 23 | 32 | 70 | 3.40 | 3.43 |
| | Autoline Plater & SBE | 7C-2B | 693773 | 3728206 | 23 | 32 | 70 | 3.40 | 3.43 |
| Thin Film Process | Thin Film Process | MB2-TFS | 693300 | 3727880 | 23 | 35 | 70 | 54.0 | 2.50 |
| Miscellaneous Sup. | Soldering | Solder1 ^C | 693305 | 3727844 | 23 | 15 | 70 | 0.003 | 0.25 |
| | Boiler | MB2-B1 | 693322 | 3727939 | 23 | 35.5 | 600 | 15.3 | 0.83 |
| | Stripping Tower | TOWER | 693890 | 3728065 | 23 | 20 | 70 | NA ^B | 2.25 |

Notes:

A. UTM, Zone 17, NAD27.

B. MD2C-1 and the Stripping Tower have rain caps, so the velocity was set at 0.001 m/s, per the SC DHEC Air Quality Modeling Guidelines.

C. The new soldering stack IDs and locations have yet to be determined. For conservatism, a stack was located at the nearest point to property boundary on building with a 15 foot height with no exit velocity assumed.

Rev 12/9/11: Corrected 7C-2A, 7C-2B, and soldering exit velocities. Corrected TO & AD temperatures

Table 3

*AVX Corporation
Myrtle Beach, South Carolina*

Summary of Stack Parameters - Volume Sources

| Source | Description | Stack ID | UTM Easting (m)^A | UTM Northing (m)^A | Base Elevation (ft) | Release Height (ft) | Horizontal Dimension (ft) | Vertical Dimension (ft) |
|--------------------|----------------------------------|-----------------|------------------------------------|-------------------------------------|----------------------------|----------------------------|----------------------------------|--------------------------------|
| Slip Manufacturing | Ceramic Slip | SLIP | 693869 | 3728057 | 23 | 15.0 | 38.1 | 14.7 |
| Manufacturing | Department cleaning ^B | MFGNEW | 693344 | 3727899 | 23 | 12.0 | 53.5 | 11.3 |
| | | MFGMB1 | 693796 | 3728250 | 23 | 8.0 | 46.6 | 7.5 |
| | | CMAPFUG | 693341 | 3727893.2 | 23 | 12.0 | 53.5 | 11.3 |

Notes:

A. UTM, Zone 17, NAD27.

B. Cleaning emissions occur at only one location. For future permitting flexibility in the event of equipment relocation, the emissions are modeled at the existing (MFGMB1) and potential future (MFGNEW) locations.

Rev 12/09/11: Corrected vertical dimension of MFGNEW

Table 6

*AVX Corporation
Myrtle Beach, South Carolina*

Summary of AERMOD Modeling Results - Standard No. 8

| Contaminant | CAS Number | Predicted Maximum Ambient Concentration^a (ug/m³) | MAAC^A (ug/m³) | Percent of MAAC (%) |
|-------------------------------|-------------------|---|--|----------------------------|
| 1,1,1-Trichloroethane | 71-55-6 | 88.8 | 9550 | <1 |
| 2-Ethanolamine | 141-43-5 | 0.46 | 200 | <1 |
| Benzene | 71-43-2 | 0.0005 | 150 | <1 |
| Bis (2-ethylehexyl) phthalate | 117-81-7 | 6.41 | 25 | 26 |
| Chromium (assumed +6) | Chrome | 0.00006 | 2.5 | <1 |
| Ethyl Benzene | 100-41-4 | 0.249 | 4,350 | <1 |
| Formaldehyde | 50-00-0 | 0.019 | 15 | <1 |
| Hexane | 110-54-3 | 0.46 | 900 | <1 |
| Hydrochloric acid | 7647-01-0 | 0.008 | 175 | <1 |
| Manganese | Mang | 0.004 | 25 | <1 |
| Methanol | 67-56-1 | 4.844 | 1,310 | <1 |
| Methyl Isobutyl Ketone | 108-10-1 | 2.49 | 2,050 | <1 |
| Naphthalene | 91-20-3 | 0.0002 | 1,250 | <1 |
| Nickel | 7440-02-0 | 0.258 | 0.500 | 52 |
| Nitric Acid | 7697-37-2 | 0.034 | 125 | <1 |
| Phosphoric Acid | 7664-38-2 | 0.014 | 25 | <1 |
| Sulfuric Acid | 7664-93-9 | 0.006 | 10 | <1 |
| Toluene | 108-88-3 | 0.250 | 2,000 | <1 |
| Vinylidene Chloride | 75-01-4 | 26.72 | 99.0 | 27 |
| Xylene | 1330-20-7 | 1.62 | 4,350 | <1 |

Notes:

A. Based on a 24-hour averaging period.

Insignificant Activity (Form G) Documentation
 AVX Corporation
 Myrtle Beach, SC

| DEPARTMENT | COUNT | DESCRIPTION | ADDITIONAL SOURCE NOTES | EXEMPTION INFORMATION |
|-------------------------|-------|---|--|--|
| RMM (UNIT 14) | 11 | 11 Ovens to remove detergent/dispersant from material | Drying ovens | Detergent/dispersant added to ceramic for part size dist. in water. Ovens used to remove detergent/dispersant. Ovens are not vented to atmosphere during heating. They are opened to atmosphere during cool down. No quantifiable emissions (<5 tpy criteria pollutant) |
| | 3 | 3 Rapid temperature furnaces in T&D | Rapid Temperature Furnaces | Small (~2x2) bench ovens in Testing & Development. Used infrequently. (61-62.70.9 Section A.12) |
| | 2 | 2 Tape shredders | Tape shredders | Binder/ceramic tape shredders to shred tape before rotary kilns. Not exhausted and no quantifiable emissions known (<5 tpy criteria pollutant). |
| | 9 | 9 Ovens for moisture remove in T&D | Blue M | Small (~2x2) bench ovens in Testing & Development. Used infrequently (61-62.70.9 Section A.12). |
| | 1 | Testing and development priller | Small prillers | Small scale priller for testing & development. Negligible PM emissions. (61-62.70.9 Section A.12) |
| | 4 | 4 Small rotary kilns | Rotary kilns | The small rotary kilns burn off binder from the binder/ceramic tape shredded pieces to reclaim/recycle the ceramic. The binder is the same cellulose-carbon material used in the ceramic to manufacture chips (removed during burn out). The kilns each have a 1 MMBtu/hr natural gas burner. No induced air flow. A maximum of 2 ton of tape is processed per kiln per month. Maximum binder content is 12%. All ceramic is reclaimed. Therefore a maximum loss of organic material is 480 lb/mo or 2.9 ton/yr (<5 tpy criteria pollutant). |
| | 3 | 3 Mixers in testing and development | Spex mixers | Small mixers in testing & development. Wet process. Not vented. 61-62.70.9 Section A.12 |
| | 16 | 16 Calcining kilns | | DECOMMISSIONED |
| | 1 | Transguard | Transguard | Small barium/titanium ceramic process. See Table 2. |
| SLIP (UNIT 15) | 1 | Bioact cleaning system | Bioact ultrasonic cleaner & distiller | Non-HAP/TAP enclosed, seal pot cleaning system. The largest monthly usage since January 2001 is 1,189 lb. AVX reports 1% loss in this process, which equates to 11.9 lb VOC/mo or maximum 0.07 ton VOC/yr (<5 tpy criteria pollutant). |
| | 1 | Fume hood | Fume hood | Insignificant per 61-62.70.9 Section A.12 |
| | 1 | Lab oven and fume hood | Lab oven fume hood | Insignificant per 61-62.70.9 Section A.12 |
| METALS (UNIT 16) | 2 | 2 Filter presses | Filter presses | Used to filter ethyl cellulose/terpineol mixture to remove impurities and reduce viscosity. A detailed chemical engineering calculation for VOC emissions from a filter press is in the February 2001 Title V application prepared by Trinity Consultants. The calculations show a potential emission rate of 0.2 ton VOC/yr (<5 tpy criteria pollutant). |
| | 1 | 1 Pot storage room exhaust | Pot room exhaust | Storage room for seal pots. Containers are tightly sealed. Negligible VOC emissions (<5 tpy criteria pollutant). |
| | 2 | 2 Lab fume hoods | Lab fume hoods | Insignificant per 61-62.70.9 Section A.12 |
| | 1 | 1 Lab oven | Lab oven | Insignificant per 61-62.70.9 Section A.12 |
| | 2 | 2 Solvent wash sinks | | SOURCE DOES NOT EXIST IN THIS DEPARTMENT |
| CMAP BUILDUP (UNIT 17) | 1 | Screen Room | | Acetone only |
| | 3 | 3-Sink Screen Wash station w/ acetone | 1 sink w/ acetone | 1 sink uses acetone only. For the other two sinks, a maximum of 15 gallons each of IPA and BC/PM (both VOC only) enter wash sink area on a two-week basis. BC/PM: 15 gal/2 wk x 2 2wk/mo x 7.57 lb/gal = 227.1 lb/mo IPA: 15 gal/2 wk x 2 2wk/mo x 6.23 lb/gal = 186.9 lb/mo. Total Solvent = 414 lb/mo or 2.5 ton/yr (<5 tpy criteria pollutant). This conservatively assumes all material emitted. Actually greater than 80% of the used material is collected as waste and reclaim. |
| CMAP SUPPORT (UNIT 18) | 36 | 36 Ovens for chip binder burnout | (30) Gruenberg, (2) Sierra Thern, (1) Nitrogen | Source test June 25, 2009. Small amount of organic emissions (<5 tpy criteria pollutant) |
| | 24 | Firing Kilns | (9) Cladan, (6) Harper, (9) Tokai | Follows burn-out step. AVX contends no regulated compounds present. |
| | 16 | 16 Low temperature moisture removal ovens | Gruenberg (Blue M) and pre-dice | Low temp (~200 F) moisture removal. No quantifiable emissions. |
| | 1 | Blade cleaning station | Cleaning station | Acetone only |
| | 2 | 2 Machines for adding paper to plates | (1) Nitto, (1) Bilco | Applies paper to plates prior to chip buildup. No quantifiable VOC emissions |
| | 2 | 2 Chip dryers | (1) green corner rounding, (1) post fire | Low temp (~200 F) moisture removal for burnout prep. No quantifiable emissions. |
| | 1 | 1 Thermal release ovens | Microtech | Low temperature heating to remove paper following chip buildup. No quantifiable emissions. |
| METALLIZATION (UNIT 19) | 4 | 4 SBE Plating lines | 3 SBE Plating (Ni/Sn and Au) | See application calculations. <5 tpy PM, <1,000 lb/yr Ni. |
| | 2 | 2 BCB plating lines | BCB Plating | 9/25/05 DHBC granted exemption. <5 tpy criteria pollutant. |
| | 1 | 1 Copper Plating System | Hulik Plating System | Exempt per June 2011 AVX request (and DHBC approval). 0.0012 lb formaldehyde/hr (<1,000 lb/yr formaldehyde) |
| | 1 | 1 Manual gold plating line | Gold plating | See application calculations. <5 tpy PM. |
| | 11 | 11 Plating dryers for moisture removal | Drying ovens | Small (low temp) ovens for moisture removal. No quantifiable emissions. |
| | 1 | 1 plate drying oven for moisture removal | Oven for drying cleaned build up plates | Small (low temp) ovens for moisture removal. No quantifiable emissions. |
| | 1 | 1 Copper coupon oven | Oven for drying quality control coupon paste | Quality control for termination. Periodic test of termination paste. Minimal VOC (non HAP/TAP) emissions (61-62.70.9 Section A.12). |
| | 5 | 5 Labeling lasers | Labeling lasers | Laser used to label parts. No quantifiable emissions |
| | 2 | 1 Solvent wash station (two sinks) | 1 Solvent wash station | Maximum of 6 gal denatured alcohol enter wash sink area/wk. 6 gal/wk x 6.76 lb/gal x 4 wk/mo = 162 lb VOC/mo or 0.9 ton VOC/yr. (<5 tpy criteria pollutant). This conservatively assumes all material emitted. Actually greater than 80% of the used material is collected as waste and reclaim. |
| MISC. SUPPORT (UNIT 21) | 1 | 100 kW (134.1 HP) EG (Kiln Room) | | Insignificant per 61-62.70.9 Section B.2.b |
| | 1 | 260 kW (348.7 HP) EG (MIS) | | Insignificant per 61-62.70.9 Section B.2.b |
| | 1 | 600 kW (804.6 HP) EG (RMM) | | Insignificant per 61-62.70.9 Section B.2.b |
| | 1 | 565 kW (757.7 HP) EG (Sol Gel) | | Insignificant per 61-62.70.9 Section B.2.b |
| | 1 | Diesel Fire Pump | | Insignificant per 61-62.70.9 Section B.2.b |
| | 1 | 0.392 MMBtu/hr Plating boiler | | Insignificant per 61-62.70.9 Section B.1.b |
| | 1 | 0.392 MMBtu/hr Plating boiler | | Insignificant per 61-62.70.9 Section B.1.b |
| | 1 | 0.776 MMBtu/hr Plating boiler | | Insignificant per 61-62.70.9 Section B.1.b |
| | 1 | Cooling Tower 1 | | DECOMMISSIONED |
| | 1 | Cooling Tower 2A | | DECOMMISSIONED |
| | 1 | Cooling Tower 2C | | DECOMMISSIONED |
| | 1 | Cooling Tower MB2A | | Non-contact cooling tower (91-62.70.9 Section A.20) |
| | 1 | Cooling Tower MB2B | | Non-contact cooling tower (91-62.70.9 Section A.20) |
| | 1 | Lot quality DFA hood | | Insignificant per 61-62.70.9 Section A.12 |
| | 5 | Lot quality drying ovens | (5) Blue M ovens | Insignificant per 61-62.70.9 Section A.12 |

TABLE 3
Equipment Cross Reference - Slip
AVX Corporation, Myrtle Beach, SC

| EQUIPMENT LISTED BY REPORT | | | | | | |
|----------------------------|-------------------------------|-------------------------|-----------------------|--------------------|---|--------------|
| Unit No. | Unit Desc. | ID | Equip. Desc. | Additional Info. | No. Units | Notes |
| 4 | Slip Mfg. | KMS1 - KMS3 | Kady Zolvers #1 - #3 | PSD 600 kg/day ea | 3 | Removed |
| | | MCD1 - MCD5 | MC Dispensers #1 - #5 | PSD 800 kg/day ea | 5 | 2 Removed |
| | | NM1 | Netsch Mill #1 | PSD 2400 kg/day | 1 | In Operation |
| | | NM2 | Netsch Mill #2 | PSD 2400 kg/day | 1 | Removed |
| | | NM3 | Netsch Mill #3 | PSD 2400 kg/day | 1 | Removed |
| | | SG1 | Sieve Mill #1 | PSD 800 kg/day ea | 2 | In Operation |
| | | SG2 | Sieve Mill #2 | PSD 800 kg/day ea | 2 | In Operation |
| | | SG3 | Sieve Mill #3 | PSD 800 kg/day ea | 2 | In Operation |
| | | SG4 | Sieve Mill #4 | PSD 800 kg/day ea | 2 | In Operation |
| | | SG5 | Sieve Mill #5 | PSD 800 kg/day ea | 2 | In Operation |
| | | SGT - BGH | Sieve Mill #6 - #7 | PSD 800 kg/day ea | 11 | In Operation |
| | | KM1 | Kady Mill #1 | Blend 2,400 kg/day | 1 | Removed |
| | | KM2 | Kady Mill #2 | Blending 2,400 | 1 | Removed |
| | | KM3 | Kady Mill #3 | Blending 2,400 | 1 | Removed |
| | | INSIGNIFICANT EQUIPMENT | | | | |
| BA1 | Bioact 113 ultrasonic cleaner | | | 1 | In Operation | |
| DUI | Distillation Unit: Bioact | | | 1 | In Operation | |
| FG-3 | Fume hood | testing and dev | | 1 | In Operation | |
| FG-1 | Small fume hood | testing and dev | | 1 | In Operation | |
| SM5 | Support maintenance cleaning | | | 1 | In Operation. Emissions captured in dept. | |

| EQUIPMENT LISTED BY REPORT | | | | | |
|----------------------------|------------|-----------|-----------|------------------------|---------------------------------------|
| Unit No. | Unit Desc. | Equip. ID | No. Units | Equip. Desc. | Includes/Notes |
| 15 | Slip Mfg. | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| INSIGNIFICANT EQUIPMENT | | | | | |
| | | BIOACT | 1 | Bioact cleaning system | Bioact ultrasonic cleaner & distiller |
| | | FFH | 1 | Fume hood | Fume hood |
| | | SO | 1 | Lab oven and fume hood | Lab oven fume hood |

TABLE 5
Equipment Cross Reference - CMAP
 AVX Corporation, Myrtle Beach, SC

| CURRENT TITLE V PERMIT | | | | | | | | |
|--------------------------------|-------------------|--------------------------------|---------------|---------------------|--------------------------------|---------------------|---|-------------------------------|
| Unit No. | Unit Desc. | ID | Equip. Desc. | Additional Info. | No. Units | Notes | | |
| 7 | Slip Mfg. MB1 | C0 - C4 | CMAP machine | 1.8 million pcs/day | 5 | Linear SSBU & JH | | |
| | | C5 | CMAP machine | 1.8 million pcs/day | 1 | | | |
| | | C6 | CMAP machine | 1.8 million pcs/day | 1 | | | |
| | | C7 | CMAP machine | 1.8 million pcs/day | 1 | | | |
| | | C8 | CMAP machine | 1.8 million pcs/day | 1 | | | |
| | | C9 | CMAP machine | 1.8 million pcs/day | 1 | | | |
| | | C10 | CMAP machine | 1.8 million pcs/day | 1 | | | |
| | | C11 | CMAP machine | 1.8 million pcs/day | 1 | | | |
| | | C12 - C18 | CMAP machine | 1.8 million pcs/day | 7 | | | |
| | | C19 - C27 | CMAP machine | 1.8 million pcs/day | 9 | | | |
| | | C28 - C32 | CMAP machine | 1.8 million pcs/day | 5 | | | |
| | | C33 - C36 | CMAP machine | 1.8 million pcs/day | 4 | | | |
| | | C37 | CMAP machine | 1.8 million pcs/day | 1 | | | |
| | | C38 - C40 | CMAP machine | 1.8 million pcs/day | 3 | | | |
| | | C41 - C53 | CMAP machine | 1.8 million pcs/day | 13 | | | |
| | | C54 | CMAP machine | 1.8 million pcs/day | 1 | | | |
| | | INSIGNIFICANT EQUIPMENT | | | | | | |
| | | | | SRK1 - SRK4 | Screen Room Tables | | 4 | In Operation |
| | | | | SRW1 | Screen Wash station w/ acetone | | 1 | In Operation. Remove: acetone |
| | | 10 | Slip Mfg. MB2 | C200 - C201 | CMAP Machine | 1.8 million pcs/day | 2 | |
| C202 - C203 | CMAP Machine | | | 1.8 million pcs/day | 2 | | | |
| C204 - C205 | CMAP Machine | | | 1.8 million pcs/day | 2 | | | |
| C224 - C231 | CMAP Machine | | | 1.8 million pcs/day | 8 | | | |
| C232 - C239 | VOID CMAP Machine | | | | 8 | Remove | | |
| C240 - C247 | VOID CMAP Machine | | | | 8 | Remove | | |
| INSIGNIFICANT EQUIPMENT | | | | | | | | |
| | | | | JHC1 | JH CMAP for chip fab | | 1 | Remove |
| | | | | SC1 | SC CMAP for chip fab. | | 1 | Remove |

| REVISED TITLE V PERMIT | | | | | | |
|------------------------|--------------|--------------------------------|-----------|---------------------------------------|---------------------------|--|
| Unit No. | Unit Desc. | Equip. ID | No. Units | Equip. Desc. | Includes/Notes | |
| 17 | CMAP Buildup | CMAP | 24 | 24 Machines to manufacture CMAP chips | (24) CMAP machines | |
| | | CMAP | 2 | 2 Temporary CMAP machines | (2) CMAP machines | |
| | | INSIGNIFICANT EQUIPMENT | | | | |
| | | CSR | 1 | Screen Room | | |
| | | CSWS | 3 | (3) Screen Wash station w/ acetone | 1 w/ acetone, two solvent | |

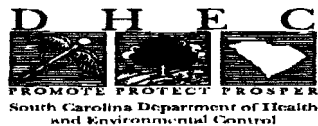
REVISED 12/06/11: Clarification in Note that one sink is acetone, two are solvent.



**Title V Permit Application
Insignificant Activity Equipment– Form G
Bureau of Air Quality
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Please Refer to Instruction / Definitions Pages Before Completing This Form

| 1. Insignificant Activity (IA) Unit ID: | 2. Insignificant Activity Unit ID Description | 3. Construction Permit ID or Approval Date (if applicable): | 4. On SC Insignificant Activity List (Yes or No) | 5. Pollutant(s) | 6. Emission Rate (Uncontrolled) | 7. Deminimis Rate |
|---|---|---|--|--------------------|---------------------------------------|-----------------------------|
| RMMDO | 11 drying ovens to remove moisture and detergent/dispersant (Unit 14) | | No | PM/PM10/PM2.5 | Less than 5 tpy | < 5 tpy criteria pollutants |
| RMMTS | 2 tape shredders (Unit 14) | | No | PM/PM10/PM2.5 | Less than 5 tpy | < 5 tpy criteria pollutants |
| RMMOV | 9 Ovens for moisture removal in test & dev. (Unit 14) | | Yes | N/A | N/A | Sec. A, 13 |
| RMMRTF | 3 rapid temperature furnaces in T&D | | No | N/A | N/A | Sec. A, 13 |
| RMMTDP | Testing & dev. Priller (Unit 14) | | Yes | N/A | N/A | Sec. A, 13 |
| RMMKILN | 4 Small rotary kilns (Unit 14) | | No | PM/PM10/PM2.5 | Less than 5 tpy | < 5 tpy criteria pollutants |
| RMMSPEX | 3 Mixers in test & dev. (Unit 14) | | No | N/A | N/A | Sec. A, 13 |
| RMMVK | 16 Vertical calcining kilns | Rev 12/9/11: Kilns decommissioned | | | | |
| RMMTG | Transguard process (Unit 14) | 2007 | No | PM/PM10/PM2.5 | Less than 5 tpy | < 5 tpy criteria pollutants |
| BOACT | Bioact cleaning system (Unit 15) | | No | VOC | Less than 5 tpy | < 5 tpy criteria pollutants |
| SFH | Fume Hood (laboratory hoods) (Unit 15) | | Yes | N/A | N/A | Sec. A, 13 |
| SO | QC lab oven (Unit 15) | | Yes | N/A | N/A | Sec. A, 13 |
| MFP | 2 Filter Presses (Unit 16) | | No | VOC | Less than 5 tpy | < 5 tpy criteria pollutants |
| MPS | Pot storage room exhaust (Unit 16) | | No | VOC | Less than 5 tpy | < 5 tpy criteria pollutants |
| MFH | 2 Fume Hoods (laboratory hoods) (Unit 16) | | Yes | N/A | N/A | Sec. A, 13 |
| MSW | 2 Solvent wash sinks (Unit 16) | Rev 12/09/11: Removed since solvent wash sinks are not in this department | | | | |
| MO | Lab oven (Unit 16) | | Yes | N/A | N/A | Sec. A, 13 |
| CSR | Screen Room (Unit 17) | | No | VOC | Less than 5 tpy | < 5 tpy criteria pollutants |
| CSWS | 3 Solvent wash stations (Unit 17) | | No | VOC | Less than 5 tpy | < 5 tpy criteria pollutants |
| BO | 33 Ovens for chip binder burnout | | No | VOC | Less than 5 tpy | < 5 tpy criteria pollutants |



Title V Permit Application
Insignificant Activity Equipment- Form G
Bureau of Air Quality
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| 1. Insignificant Activity (IA) Unit ID: | 2. Insignificant Activity Unit ID Description | 3. Construction Permit ID or Approval Date (if applicable): | 4. On SC Insignificant Activity List (Yes or No) | 5. Pollutant(s) | 6. Emission Rate (Uncontrolled) | 7. Demimis Rate |
|---|--|--|--|--------------------|---------------------------------------|--------------------|
| B1 | 0.392 MMBtu/hr Plating Bath Boiler (Unit 21) | | Yes | N/A | NA | Sec. B, 1.b |
| B2 | 0.392 MMBtu/hr Plating Bath Boiler (Unit 21) | | Yes | N/A | NA | Sec. B, 1.b |
| B3 | 0.779 MMBtu/hr Plating Bath Boiler (Unit 21) | | Yes | N/A | NA | Sec. B, 1.b |
| CT1 | Cooling tower 1 | Rev 12/9/11: Cooling tower decommissioned | | | | |
| CTA | Cooling tower 2A | Rev 12/9/11: Cooling tower decommissioned | | | | |
| CTC | Cooling tower 2C | Rev 12/9/11: Cooling tower decommissioned | | | | |
| MB2A | Cooling tower MB2A (Rev 12/9/11 addition) | | Yes | N/A | NA | Sec. A, 20 |
| MB2B | Cooling tower MB2B (Rev 12/9/11 addition) | | Yes | N/A | NA | Sec. A, 20 |
| DPA | Lot quality DPA hood | | Yes | N/A | N/A | Sec. A, 13 |
| LQO | Lot quality drying ovens | | Yes | N/A | N/A | Sec. A, 13 |