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AIR PROTECTION BRANCH

Georgia EPD Air Protection Branch
Stationary Source Permitting Program
4244 International Parkway, Suite 120
Atlanta, Georgia 30354

Attention: Mr. Manny Patel
Volatile Organic Compound Permitting Unit Manager

HAND DELIVERED

Subject: **Initial SIP Air Permit Application for New Reinforced Plastic Composite Sink and Vanity Manufacturing Facility**
International Marble, Inc.
189 Etowah Industrial Court, Canton, Cherokee County, Georgia 30114

Dear Mr. Patel:

On behalf of International Marble, Inc. (IMI), Resolve Environmental Engineering, Inc. (Resolve) is pleased to submit the enclosed SIP Air Permit Application for a new reinforced plastic composite sink and vanity manufacturing facility to be located at 189 Etowah Industrial Court in Canton, Cherokee County, Georgia, within the Canton Cherokee Industrial Park.

Manufacturing operations will be located in an existing building at the site that was previously occupied by Aerosol Packaging LLC, which operated under Air Quality Permit No. 2899-057-0061-S-01-0. Aerosol Packaging has completely vacated the building and is a completely unrelated business entity.

IMI is interested in beginning operations at this new facility as soon as practical in order to meet immediate significant business demand for gel coat vanities.

Emission Sources

Nine (9) spray booths will be installed. Two booths (SB1 & SB2) are planned for acrylic sink manufacturing. Two booths (SB3 & SB4) are planned for gel coat sink manufacturing. Four booths (SB5 – SB8) are planned for gel coat vanity manufacturing, and one booth (SB9) is planned for mold construction. All spray booths will be equipped with filter media for the control of particulate emissions. SB1 – SB8 will vent to a Trinity 55,000 acfm regenerative thermal oxidizer (RTO) that will be operated to

reduce actual emissions below the Nonattainment New Source Review (NNSR) major source threshold of 25 tons per year (tpy) of volatile organic compounds (VOCs).

Facility location and layout drawings and process flow diagrams for the various products are provided in Attachment A to the SIP Application that accompanies this letter. Material throughput rates are presented in Table 1.

After spray booth and molding operations, pieces are cut and ground, with particulate emissions from cutting and grinding operations being captured by a vacuum system and filtered though a cartridge baghouse (CF1). Resins and gel coats will be stored in three 6,000 gallon steel storage tanks (TK1 – TK3) with submerged fill pipes.

Emission Rates

Styrene is the only air pollutant that will be emitted in quantities exceeding SIP exemption thresholds. Styrene emission factors from Table 1 of 40 CFR 63 Subpart WWWW have been used to estimate maximum potential and actual emissions based upon typical materials that will be used in non-atomized mechanical spray and hand-lay operations. Emission factors from AP-42 Table 4.4-2 have been used to estimate maximum emissions from closed mold gel coat injection operations. Resin and gel coat storage tank potential emissions were calculated using the EPA TANKS 4.0.9d model. Model input and output files are presented in Attachment C. Actual emission rates are presented Table 2 in Attachment B. Details of calculation methods are provided in the footnotes to the table.

Because the facility will be subject to Subpart WWWW, it will also be subject to Title V permitting requirements. The facility is requesting a practically-enforceable facility-wide permit limit of 24.9 tpy VOCs in order to avoid NNSR major source permitting. Compliance with the VOC limit will be demonstrated through the Subpart WWWW compliance demonstration requirements of 40 CFR 63.5810, taking into account the destruction efficiency of the RTO controlling emissions from spray booths SB1 – SB8.

Toxic Impact Assessment

Georgia Air Quality Control Rule 391-3-1-.02(2)(a)3(ii) requires that HAP sources be prevented from endangering the public health, safety or welfare of the people of the State of Georgia. A Toxic Air Pollutant Ambient Impact Assessment (TAP AIA) was completed to evaluate the potential impacts upon public health, safety or welfare caused by styrene emissions from the facility. The June 21, 1998 revision of the Georgia EPD Guideline for Ambient Impact Assessment of Toxic Air Pollutant Emissions (hereinafter referred to as "guidance document") was used to complete this assessment.

Acceptable ambient concentrations (AACs) for styrene were determined in accordance with the guidance, as presented in Table 3 in Attachment B to the SIP Application that accompanies this letter. Maximum ground level concentrations (MGLCs) were determined for receptors at and beyond the facility property. A 25 meter receptor grid was used to a distance of 1,000 meters beyond the facility, and a receptor grid of 100 meter spacing was used to a distance of 2,500 meters. Receptor elevations were calculated based upon 10 meter digital elevation maps. Five years of meteorological data (1974 - 1978 Atlanta, Georgia Meteorological Station No. 13874 surface data and 1974 - 1978 Athens, Georgia Meteorological Station No. 13873 upper air data) was utilized.

In accordance with the refined modeling procedures of Part II.1.B of the guidance document, dispersion modeling was conducted using the most recent version of the U. S. Environmental Protection Agency (USEPA) Industrial Source Complex – Short Term Version 3 (ISCST3) model (Version 02035, released February 27, 2002). Resolve utilized BEE-Line Software BEEST Version 9.92, which is a Windows interface for the 02035 ISCST3 release. Regulatory default assumptions were used for all model runs. A disk with input and output data files is included in Attachment D to this permit application.

Maximum hourly emission rates were used to determine worst-case acute (15 minute average) styrene groundlevel concentrations. Average hourly emission rates based upon the 24.9 tpy limit were used to determine worst-case chronic (annual average) groundlevel concentrations. The dispersion model verified that maximum ground level concentrations will be well below AACs, with the worst-case result being for the acute AAC during 1977 meteorological year. The MGCL for this worst-case scenario was less than 5% of the AAC. An MGCL contour map for this scenario is presented on Figure 4 in Attachment A. Model summary tables are included as Tables 3 through 5 in Attachment B.

Rule Applicability

Resolve performed a review of state air rule applicability for the planned facility. Results are presented in Table 6 in Attachment B. Regulations that are applicable to the facility are listed below, with a brief description of the applicability or how the facility will meet regulatory requirements provided in brackets:

- 391-3-1-.02(2)(b), Visible Emissions (general applicability)

- 391-3-1-.02(2)(e), Particulate Emission from Manufacturing Processes (particulate matter emissions from cutting and grinding operations are controlled by CF1; each spray booth has filter media to control particulate matter emissions)

- 391-3-1-.02(2)(n), Fugitive Dust (general applicability)
- 391-3-1-.02(2)(vv), Volatile Organic Liquid Handling and Storage (Tanks TK1, TK2 and TK3 have submerged fill pipes)
- 391-3-1-.02(2)(ccc), VOC Emissions from Bulk Mixing Tanks (general applicability to mixing operations)
- 391-3-1-.02(9)(b)111 / 40 CFR Part 63, Subpart WWWW, NESHAPs for Reinforced Plastic Composites Production (applicable to resin and gel coat material usage)

Closure

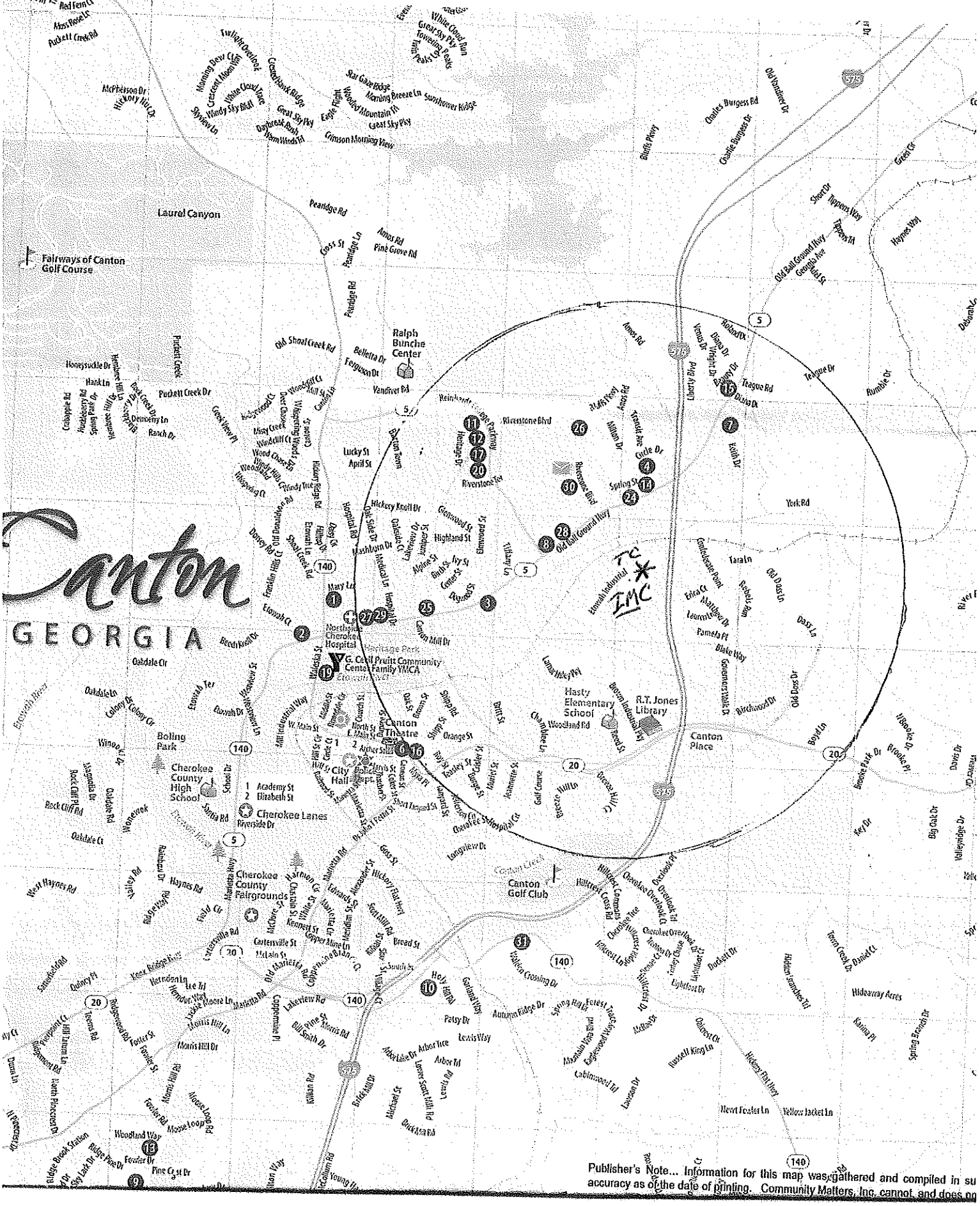
If you have any questions or require additional documentation for this permit application, please feel free to contact the undersigned at 770-650-9990.

Sincerely,
Resolve Environmental Engineering, Inc.

Ian Lundberg, PE
Principal Engineer

Enclosure: SIP Air Permit Application (2 signed copies)

cc: Mark Anderson, International Marble, Inc.
Mack McGuffey, Troutman Sanders



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