

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

DRAFT STAFF REPORT

Proposed Amended Rule 1106 - Marine and Pleasure Craft Coatings and Rescission of Rule 1106.1 - Pleasure Craft Coating Operations

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Rule 1106 - Marine Coating Operations and Rule 1106.1 - Pleasure Craft Coating Operations are source specific rules that were adopted to reduce emissions of volatile organic compounds (VOC) from marine coatings. Marine coatings are coatings applied to boats, ships, and vessels, their appurtenances, and structures such as piers, docks, buoys and oil drilling rigs intended for the marine environment, and for pleasure craft.

This proposal is to amend Rule 1106 and rescind Rule 1106.1. Proposed Amended Rule (PAR) 1106 – Marine and Pleasure Craft Coatings will continue to regulate the marine coating industry but will now also apply to pleasure craft marine coatings by incorporating the requirements of Rule 1106.1. The air quality objective of these proposed actions is to combine the requirements for marine and pleasure craft coating operations into one rule, align Volatile Organic Compounds (VOC) content limits with United States Environmental Protection Agency (U.S. EPA) Control Techniques Guidelines (CTGs) and the requirements of other California air districts, and promote consistency with other SCAQMD Regulation XI VOC rules. PAR 1106/1106.1 would reduce the VOC content limits for certain categories of coatings, add VOC content limits for new categories of coatings, and require the use of the most restrictive VOC content limit for a particular use. The proposed amendment would also prohibit the possession and sale of non-compliant coatings and establish requirements for transfer efficiency.

The proposed amendment is administrative in nature, meaning that current requirements in Rule 1106/1106.1 are being clarified, existing requirements of SCAQMD Regulation XI rules, U.S. EPA CTGs and other California air district rules are being incorporated, and the proposed amendments do not impact VOC emissions. Furthermore, staff analysis concludes that the VOC content adjustment to the coating categories noted above will not adversely affect coating manufacturers by way of reformulation or affect current work practices currently used in the industry. Since the VOC content adjustments will be to coating categories that are top side and niche coatings that are already being used or are readily available for purchase at the prescribed lower VOC limits, the proposed amendments are not expected to affect VOC emissions from the application of marine and pleasure craft coatings.

RULE 1106 – MARINE AND PLEASURE CRAFT COATINGS

CHAPTER 1: BACKGROUND ON PROPOSED AMENDED RULE 1106

- o Introduction
- o Regulatory History
- o Affected Facilities
- o Process Description
- o Coating Applications at Marinas

INTRODUCTION

Rule 1106 - Marine Coating Operations and Rule 1106.1 - Pleasure Craft Coating Operations are source specific rules that were adopted to reduce emissions of volatile organic compounds (VOC) from marine coatings. Marine coatings are coatings applied to boats, ships, and vessels, their appurtenances, and structures such as piers, docks, buoys and oil drilling rigs intended for the marine environment, and for pleasure craft. The proposed amendment seeks to revise VOC content limits for marine and pleasure craft coatings to align limits with U.S. EPA Control Techniques Guidelines (CTGs) and other air districts, add new categories for coatings and sealants, and require the most restrictive VOC content limit for a particular use. The proposed amendment would also prohibit possession and sale of non-compliant coatings and establish requirements for transfer efficiency. Finally, the proposed amendment would move the requirements of Rule 1106.1 to Rule 1106 so that there would be a single rule covering both marine and pleasure craft coatings.

REGULATORY HISTORY

Rule 1106 was adopted on November 4, 1988 and has been subsequently amended seven times. The most recent amendment was on January 13, 1995 which incorporated corrective action items in efforts to resolve deficiencies as determined by U.S. EPA. The corrective action items in that amendment included language and an equation for control device equivalency, an applicability statement, test methods that were required to be specified, language regarding multiple test methods with the addition of the most recent test method, an updated definition for aerosol coatings and exempt compounds, and a permanent exemption for aerosol containers.

Rule 1106.1 was adopted on May 1, 1992 and has been subsequently amended three times. The most recent amendment was on February 12, 1999. The May 1, 1992 adoption removed Pleasure Craft Coating Operations from existing Rule 1106 - Marine Coating Operations. Many of the existing coating categories in Rule 1106 at that time were not representative of the pleasure craft coating industry. Consequently, the SCAQMD adopted Rule 1106.1 with the intent of identifying the special categories of coatings applied on pleasure craft.

The rulemaking for PAR 1106/1106.1 began in 2015. During the 2015 rulemaking process, staff held a working group meeting, a public workshop and a Stationary Source Committee meeting to gather public input and comment. PAR 1106 was heard by the Governing Board on October 2, 2015. However, the Governing Board asked that staff reconsider additional recordkeeping requirements in the proposal, and the proposed amendment to Rule 1106/1106.1 was not adopted at that time.

AFFECTED INDUSTRIES

Rule 1106 is applicable to any person who applies a marine coating to boats, ships, and their appurtenances, and to buoys and oil drilling rigs intended for the marine environment. It also applies to any person who solicits or requires any other person to use a marine coating. Rule 1106.1 similarly is applicable to any person who applies a marine coating to pleasure craft. As a

result, entities covered by Rules 1106/1106.1 are shipyards, docks, boatyards, marinas as well as the persons purchasing, selling or supplying marine coatings.

PROCESS DESCRIPTION

Coatings for Ships, Yachts, and Boats:

Water-going vessels, commonly referred to as ships, yachts, and boats, have coatings specifically designed for the two main portions of a boat: topside and bottom side. With the boat at rest, anything above the waterline is considered top side and anything below the waterline is considered bottom side.

Top Side:

The top side of the ship, yacht or boat is the visual portion of the boat from the waterline up. These coatings not only protect the substrate in a marine environment but also have aesthetic purposes. The substrates can include wood of various types, fiberglass and composites, steel, stainless steel, aluminum, brass and bronze. These coatings can be applied by hand, usually with a paint brush or roller, or by atomized spray equipment. There are several top side coating categories which are included in Rules 1106 and 1106.1 such as clear wood finishes, primers, and topcoats.

Bottom Side:

A boat that is docked or moored in both freshwater and seawater is susceptible to marine fouling, which is the growth of biological organisms on water-immersed surfaces. Marine fouling is typically broken down into hard growth such as barnacles, mussels, shipworms and soft growth such as algae and grass. If unabated, this growth would continue and cause excessive drag on the boat during operation. It could also cause severe damage to the hull substrate via corrosion to steel and aluminum hulls and shipworms boring into wooden hulls. Finally, fouling also poses a potential threat to the environment through transporting harmful marine organisms to other waterways. The solution to fouling is an antifoulant coating, which is used to inhibit the growth of foulant and/or prevent foulant from adhering to the bottom of the boat. There are two different categories for antifoulant coatings, a hard bottom paint and an ablative bottom paint.

Hard Bottom Paint:

Hard Bottom Paint is an epoxy type paint formulated with copper, organotin compounds (an organic compound with one or more tin atoms in its molecules) and other biocides and pesticides. The copper is used to deter hard growth such as mussels and barnacles, and biocides and pesticides are used to control soft growth such as algae and other marine organisms like ship worms. Most hard bottom paints control marine growth by releasing substances slowly from the pores of the paint while in water. Other types of hard bottom paint include Teflon® and silicone which make the coating surface too slick for marine growth to adhere to. This type of coating is typically used for boats that spend long periods of time at rest in the water.

Ablative Bottom Paint:

Ablative bottom paint is specially formulated to be a somewhat sacrificial coating designed to be slowly worn away during boat operation. The coating continuously wears off at a slow rate during operation, thus exposing a new layer with fresh antifoulant compounds. An analogy of this would be washing your hands with a bar of soap where the soap continues to erode during each washing operation yet remains effective in subsequent washings.

Transfer Efficiency Requirements:

Spray Coating:

Transfer efficiency is the ratio of the amount of paint that is actually applied to a substrate to the total amount of paint that was used. In the case of spray coating, the transfer efficiency is the ratio of the amount of paint that was actually applied to the substrate to the total amount of paint that was sprayed from the spray gun. Transfer efficiency is especially important in spray coating applications because the excess spray from the paint that is atomized by the spray gun that does not adhere to the intended substrate are the paint particulate emissions that enter the atmosphere. Several SCAQMD Regulation XI coating rules such as SCAQMD Rule 1151 - Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations incorporate transfer efficiency requirements. Staff proposes to include the definition for HVLP in this rulemaking to be consistent with other SCAQMD Regulation XI rules. The HVLP definition will state the operating parameters HVLP spray equipment will be operated by and be defined as “spray application equipment designed to atomize 100 percent by air pressure only and is operated between 0.1 and 10 pounds per square inch gauge (psig), air atomizing pressure measured dynamically at the center of the air cap and at the air horns”. HVLP spray guns have a transfer efficiency of 65%, meaning 65% of the paint that is spray will adhere to the intended substrate. Standard non-HVLP spray guns are typically high pressure and due to the excessive spraying pressure result in paint bounce-back, a condition where the paint hits the target and a small percent of it bounces back off the target and into the atmosphere. These types of spray guns can have a transfer efficiency as low as 25%.

Other Application Methods:

Brush and roller coatings are applied directly from the paint brush bristles or the roller to the substrate and have a very high coating-to-substrate transfer efficiency. Dip coatings are simply a container filled with paint where an object is dipped into the coating and provides a very high coating-to-substrate transfer efficiency. Brush, roller and dip coating processes can have transfer efficiencies of up to 100%, not allowing for spillage. Brush, roller and dip coatings are proposed to be included as optional compliant transfer efficiency processes.

COATING APPLICATIONS AT MARINAS

Staff visited numerous facilities such as shipyards, dockyards, boatyards and marinas (hereinafter all to be collectively referred to as marinas) to gather information on what type of work the facilities were doing and what type of coatings they were using. Table 1-1 below shows the marinas that were visited by SCAQMD staff and Table 1-2 shows the large scale ships that were visited. The majority of the operators in the marine coating and pleasure craft coating industry are

non-permitted facilities and are not typically inspected by SCAQMD inspectors. Staff visited several facilities and found many cases of non-compliance with both Rules 1106 and 1106.1 VOC limit standards. Staff also found that the most common maintenance operation at the marinas was the application of antifoulant coatings.

TABLE 1-1: MARINAS VISITED BY SCAQMD STAFF

MARINA	CITY	COUNTY
Al Larson Boat Shop	Terminal Island	Los Angeles
Cabrillo Boat Shop (O/B)	Long Beach	Los Angeles
Colonial Yacht Anchorage (O/B)	Wilmington	Los Angeles
Gambol Industries	Long Beach	Los Angeles
King Harbor Marine Center	Redondo Beach	Los Angeles
Marina Shipyard	Long Beach	Los Angeles
Seamark Marine	Marina del Rey	Los Angeles
The Boatyard	Marina del Rey	Los Angeles
Wilmington Marine Service Boatyard (O/B)	Wilmington	Los Angeles
Windward Yacht & Repair Center	Marina del Rey	Los Angeles
Balboa Boat Yard of California	Newport Beach	Orange
Basin Marine	Newport Beach	Orange
Newport Harbor Shipyard	Newport Beach	Orange
Dana Point Shipyard	Dana Point	Orange
Larson's Shipyard	Newport Beach	Orange
South Coast Shipyard	Newport Beach	Orange
Sunset Aquatic Shipyard	Huntington Beach	Orange

(O/B) Out of Business

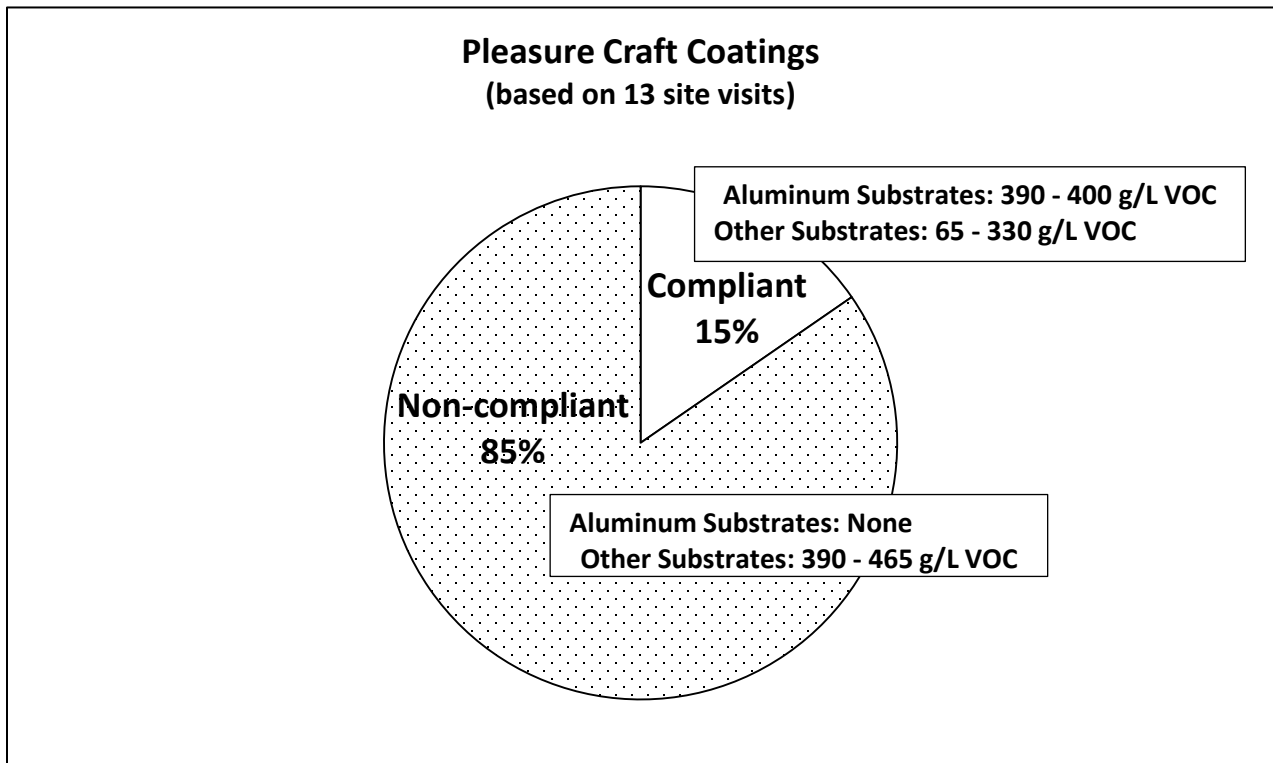
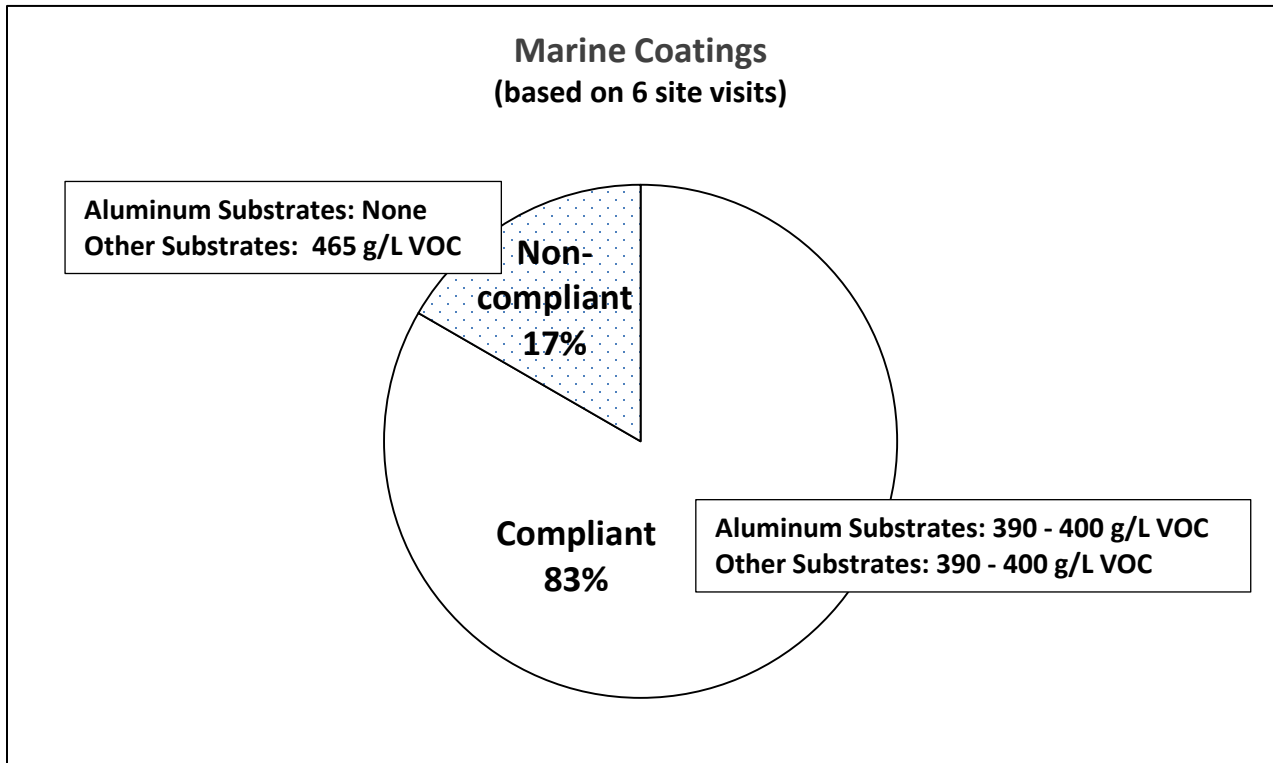
TABLE 1-2: LARGE SCALE SHIPS VISITED BY SCAQMD STAFF

SHIP	CITY	COUNTY
Queen Mary	Long Beach	Los Angeles
U.S.S. Iowa	San Pedro	Los Angeles
S.S. Lane Victory	San Pedro	Los Angeles

During the visits to the marinas, staff observed that both mechanical repair and refinishing services were offered. The mechanical repair services typically included engine work, drive unit work and any other type of work that did not include the application of coatings. The refinishing services included preparation of substrates to be coated and the application of coatings to marine and pleasure craft vessels. The coatings that are applied by the marinas are formulated for application to both top side and bottom side of marine and pleasure craft vessels. Staff found that only a small number of marinas offer top side coating services. The marinas that do not offer top side coating services contract this type of work to contractors who perform the coating services at the site. The majority of the marinas do offer bottom side coating services, which is the application or reapplication of antifoulant coatings. The average recoat operation for antifoulant coatings is typically every two years, and it takes two coats of antifoulant, rolled on, plus a third coat applied

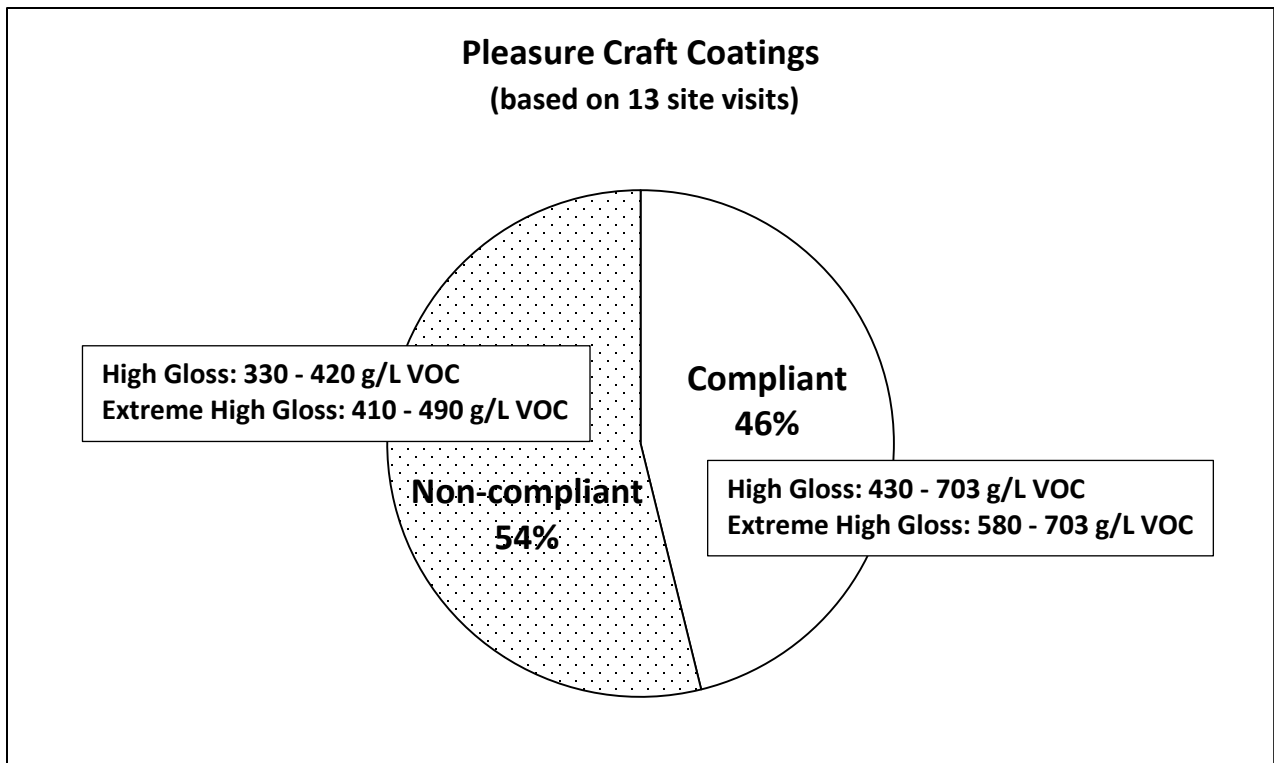
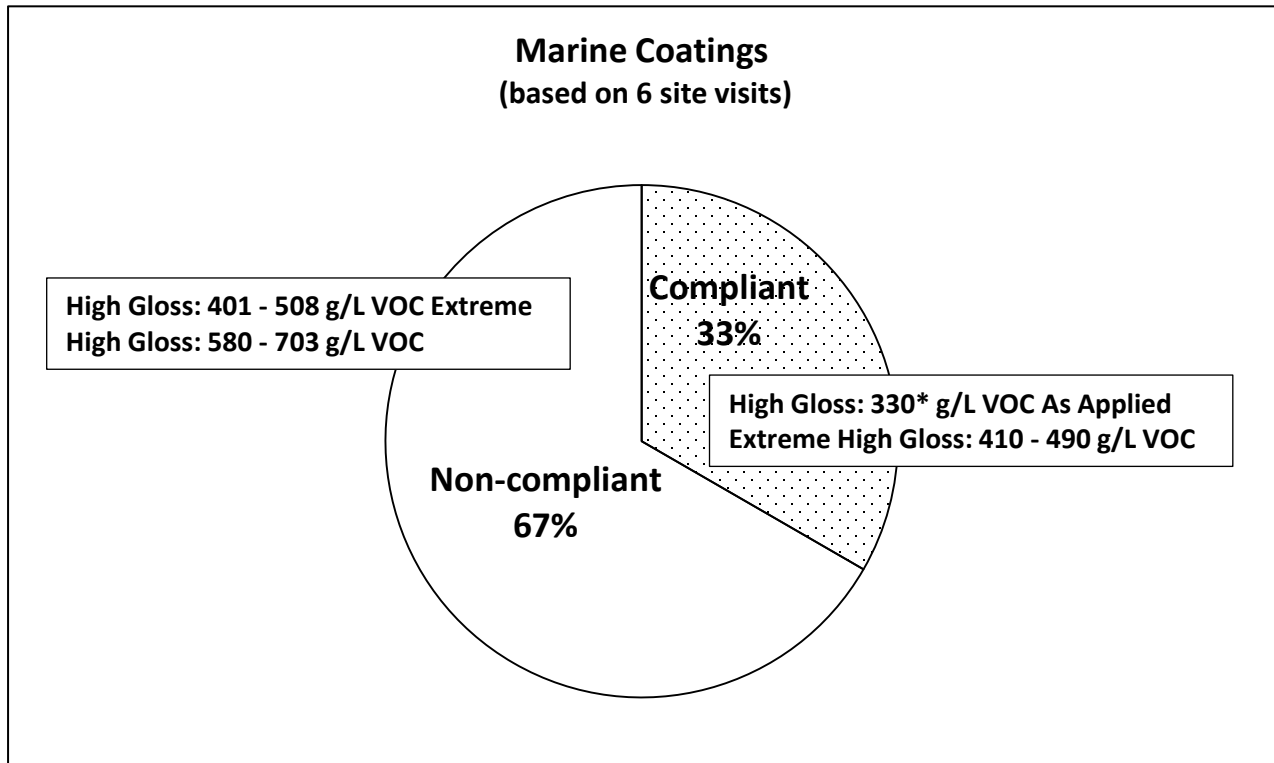
at just the waterline level. SCAQMD staff found the application of antifoulant coatings to be the main operation for many of the marinas. As shown in Figures 1-1, 1-2 and 1-3, many marinas that SCAQMD staff visited were using antifoulant coatings and a lesser number were using top side and other categories of coatings (e.g. primers) in excess of the VOC limit standards and were not aware they were exceeding rule VOC limits due to their unfamiliarity with the rule requirements. At several of these facilities, staff also observed that high VOC content reducers and thinners were being added to compliant antifoulant and top side coatings, which would result in these coatings to be applied in excess of the VOC limit standards. Finally, staff also found that several suppliers to the marinas and to consumers were selling non-compliant coating products.

FIGURE 1-1: ANTIFOULANT COATINGS* SUBJECT TO EXISTING RULES 1106 AND 1106.1 VOC LIMITS USED AT MARINAS



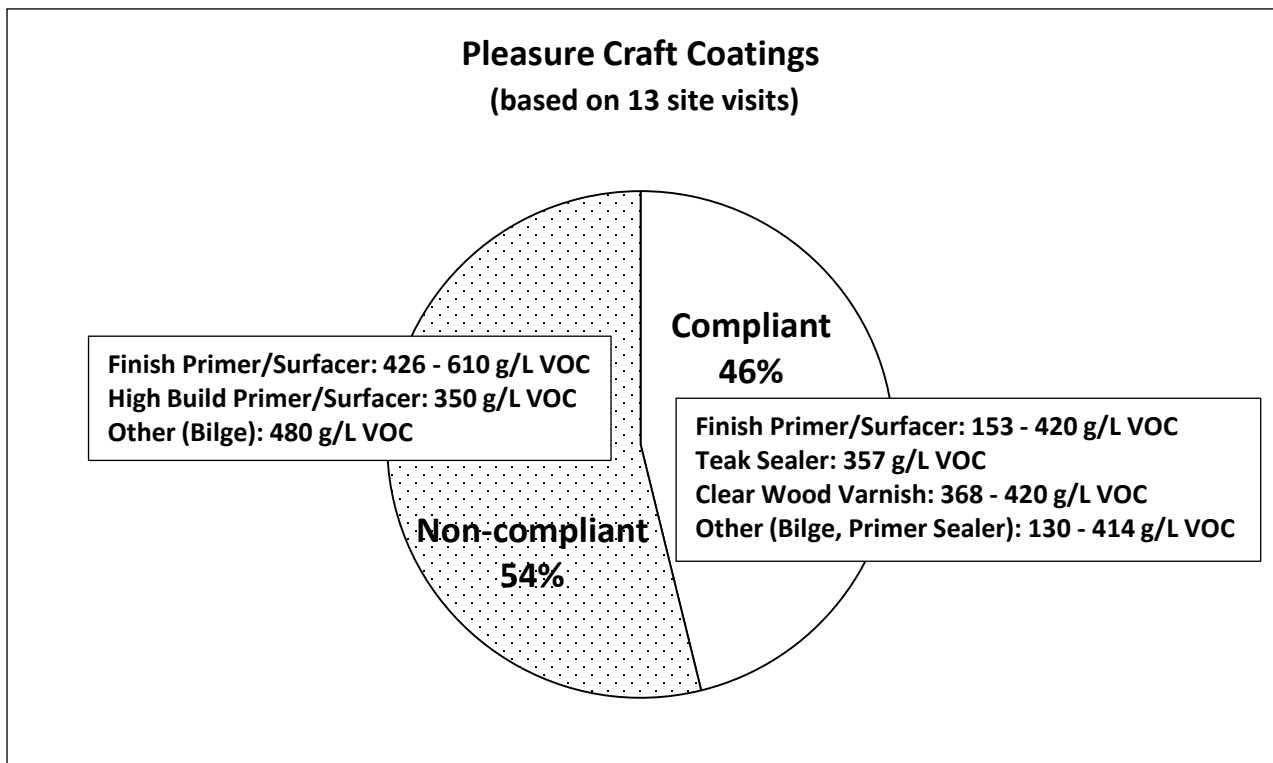
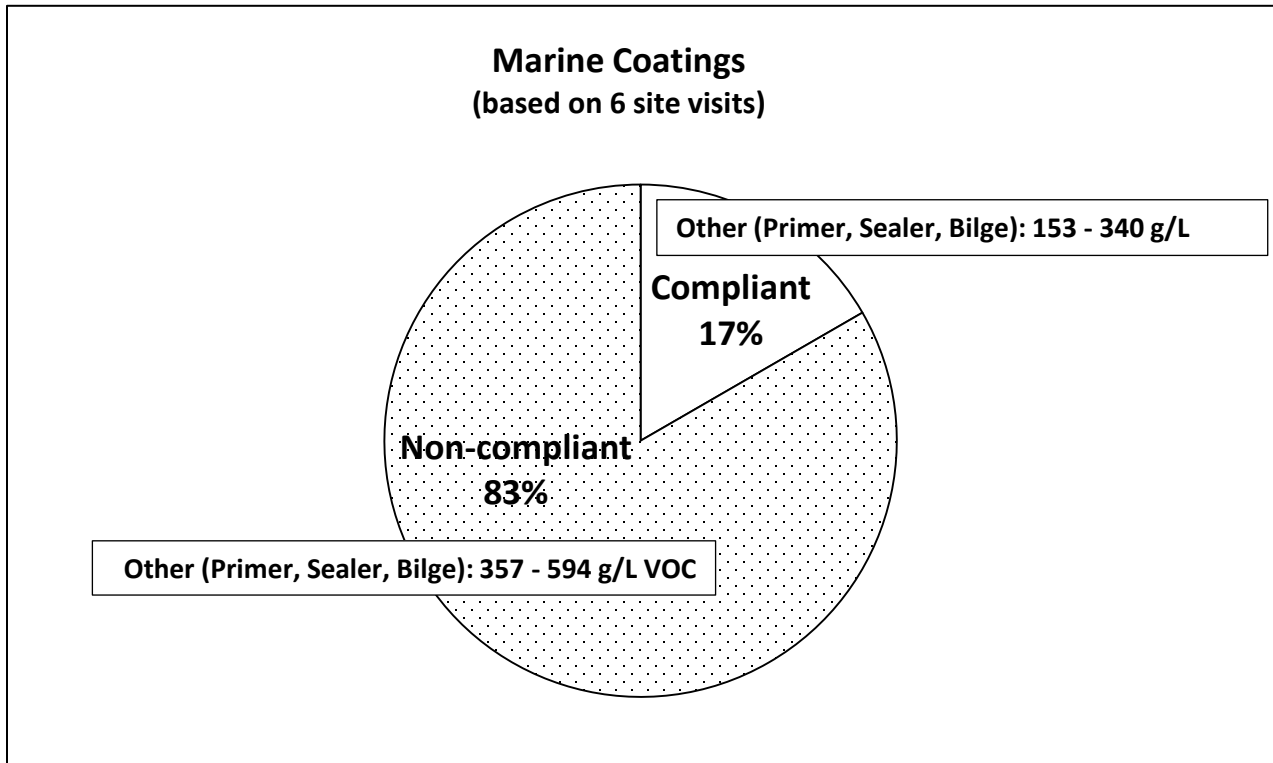
* VOC contents in Figure 1-1 are as applied.

FIGURE 1-2: TOP SIDE COATINGS* SUBJECT TO EXISTING RULES 1106 AND 1106.1 VOC LIMITS USED AT MARINAS



* VOC contents in Figure 1-2 are as applied.

**FIGURE 1-3: OTHER COATINGS* SUBJECT TO EXISTING RULES 1106 AND 1106.1
VOC LIMITS USED AT MARINAS**



* VOC contents in Figure 1-3 are as applied.

CONCLUSION

The majority of the operators in the marine and pleasure craft coating industry are non-permitted facilities, and are not typically inspected by SCAQMD inspectors. Staff visited several facilities and found many instances of non-compliance with the coatings VOC limits of both Rules 1106 and 1106.1. Staff also found that the most common maintenance operation at the marinas is the application of antifoulant coatings. Many marinas were observed to be using antifoulant coatings in excess of the VOC limit standards contrary to SCAQMD Rule 1106/1106.1 VOC limit requirements. The marina personnel informed SCAQMD staff during their site visits that they were not aware of the VOC limit restrictions or that they were using non-compliant coatings. In addition, staff also found that several product suppliers to both marinas and consumers were selling these non-compliant coating products. Staff proposes to eliminate confusion among marina personnel by providing clarification that the higher VOC content limits typically associated with antifoulants labeled for use on aluminum hulls cannot be used on non-aluminum hulls by clearly showing in Table of Standards I and II in PAR 1106 that antifoulant coatings have two types of substrate applications: Aluminum Substrates and Other Substrates.

RULE 1106 – MARINE AND PLEASURE CRAFT COATINGS

CHAPTER 2: SUMMARY OF PROPOSED AMENDED RULE 1106

- o OVERVIEW: RESCIND RULE 1106.1 AND SUBSUME THE REQUIREMENTS OF RULE 1106.1 INTO PROPOSED AMENDED RULE 1106
- o PROPOSED RESCISSION OF RULE 1106.1
- o PROPOSED AMENDMENT TO RULE 1106
- o PROPOSED REVISIONS TO RULE LANGUAGE

OVERVIEW: SUBSUME THE REQUIREMENTS OF RULE 1106.1 INTO PROPOSED AMENDED RULE 1106 AND RESCIND RULE 1106.1

Currently, the requirements for users of coatings for marine and pleasure craft vessels are covered in two separate SCAQMD rules. However, during staff's site visits, many marina personnel informed staff that they didn't know which rule applied to their coating applications. In fact, some marina personnel informed staff that they just picked the rule that had the higher VOC limits. Staff believes that Rule 1106 and Rule 1106.1 can be combined into one rule rather than two separate rules, thus alleviating this confusion. Combining these two rules into one rule would also be consistent with other air districts in California. Staff further believes that combining these two rules will provide the regulated community a better understanding of which category, marine or pleasure craft, their operation will fall under and which VOC content would be appropriate for their particular coating application. Staff is therefore proposing to subsume the requirements of Rule 1106.1 into Proposed Amended Rule 1106 – Marine and Pleasure Craft Coatings and rescind Rule 1106.1 - Pleasure Craft Coating Operations.

PROPOSED RESCISSION OF RULE 1106.1

On May 1, 1992, SCAQMD Rule 1106.1 was adopted as a separate rule independent from SCAQMD Rule 1106 (adopted November 4, 1988). The current version of Rule 1106.1 is applicable to all coating operations of pleasure craft (see Footnote 1 on page 1-2 of the Draft Staff Report for the definition of "Pleasure Craft"), or their parts and components, for the purpose of refinishing, repairing, modification, or manufacturing such craft. Staff proposes to move the contents of Rule 1106.1 into Proposed Amended Rule 1106 (PAR 1106) and rescind Rule 1106.1.

PROPOSED AMENDMENT TO RULE 1106

Proposed Amended Rule 1106 will revise VOC content limits for marine and pleasure craft coatings to align limits with U.S. EPA CTGs and other air districts, add new categories for coatings and sealants, and require the most restrictive VOC content limit. The coating categories suggested for addition to the proposed rule are included in the U.S. EPA CTGs for Shipbuilding and Ship Repair (Surface Coating), and are being added in order to comply with the federal guidelines to ensure coverage of these coating categories if any person were to potentially use them within the SCAQMD. The proposed amendment would also prohibit possession and sale of non-compliant coatings in order to increase compliance with rule requirements and to be consistent with other Regulation XI rules. The proposal also establishes coating application equipment transfer efficiency requirements, which are included in the U.S. EPA CTGs and in other Regulation XI rules.

PROPOSED REVISIONS TO RULE LANGUAGE

Staff proposes to add a provision stating the purpose of PAR 1106 to provide additional clarity on the purpose of the rule and to be consistent with other Regulation XI coatings rules, make

minor revisions to the applicability subdivision, make revisions and add new definitions to the definitions subdivision, add two tables of standards that will contain VOC limits, and include clarifications and editorial corrections to the entire rule as necessary.

Subdivision (a) Purpose

Staff proposes to add a “Purpose” subdivision in PAR 1106 to provide clarity to the purpose of the rule and make the rule consistent with other VOC Regulation XI rules that already include a purpose subdivision as follows:

[“The purpose of this rule is to reduce emissions of Volatile Organic Compounds \(VOC\) from Marine and Pleasure Craft Coatings.”](#)

Subdivision (b) Applicability

Staff proposes to subsume Rule 1106.1 into Rule 1106. Staff proposes to amend the applicability subdivision to clarify who the proposed amended rule will apply to. Since staff proposes to subsume Rule 1106.1 into Rule 1106, the proposed rule language for the applicability subdivision will address persons applicable to marine and pleasure craft coatings. The proposed rule language is as follows:

“This rule [is applicable to any person who supplies, sells, offers for sale, markets, manufactures, blends, packages, repackages, possesses or distributes any Marine or Pleasure Craft Coating and any associated solvent used with a Marine or Pleasure Craft Coating for use within the SCAQMD Jurisdiction, as well as any person who applies, stores at a worksite, or solicits the application of any Marine or Pleasure Craft Coating and any associated solvent used with a Marine or Pleasure Craft Coating within the SCAQMD Jurisdiction.](#) ~~applies to coating boats, ships, and their appurtenances, and to buoys and oil drilling rigs, intended for the marine environment. Coating operations of vessels which are manufactured or operated primarily for recreational purposes are subject to the requirements of Rule 1106.1—Pleasure Craft Coating Operations.~~

Subdivision (c) Definitions

Proposed New Definitions to Be Added to PAR 1106:

The Definition subdivision in current Rule 1106 is shown as (b); however, due to the new rule language for a Purpose subdivision, the Definition subdivision will be renumbered as subdivision (c). The following new definitions are proposed to address pleasure craft coatings and transfer efficiency provisions, and to make reference to SCAQMD Rule 1171 – Solvent Cleaning Operations to be consistent with other SCAQMD rules. Staff added Mist Coatings, Nonskid Coatings and Solvent-Based Organic Zinc Coatings categories to be consistent with the U.S. EPA Control Techniques Guidelines (CTG) for Shipbuilding and Ship Repair Operations (Surface Coating). Staff also added a definition for Solvent-Based Inorganic Zinc Coatings since it was missing from the current version of Rule 1106 even though it is a listed coating under Paragraph

(c)(1) “VOC Content of Marine Coatings” in current Rule 1106, and to make it consistent with the U.S. EPA CTG. Staff also proposes to add another definition for Marine Deck Sealant Primer to be consistent with other local air district definitions. Finally, staff proposes to add a new definition to the rule to define “Energy Curable Coatings” to provide clarity to energy curable marine and pleasure craft coating materials.

Staff proposes to add the following new definitions to PAR1106:

“(6) CLEAR WOOD COATINGS are clear and semi-transparent topcoats applied to wood substrates to provide a transparent or translucent film.”

“(7) DISTRIBUTOR means any person to whom a product is sold or supplied for the purposes of resale or distribution in commerce, except that manufacturers, retailers, and consumers are not distributors.”

“(9) ENERGY CURABLE COATINGS are single-component reactive products that cure upon exposure to visible-light, ultra-violet light or to an electron beam. The VOC content of thin film energy curable marine and pleasure craft coatings may be determined by manufacturers using ASTM test method 7767-11 “Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them”.”

“(12) FINISH PRIMER/SURFACER is any coating applied with a wet film thickness of less than 10 mils (one mil = 0.001 of an inch) and is applied prior to the application of a Marine or Pleasure Craft Coating for the purpose of providing corrosion resistance, adhesion for subsequent coatings, a moisture barrier, or promotes a uniform surface necessary for filling in surface imperfections.”

“(14) GRAMS OF VOC PER LITER OF MATERIAL (ACTUAL VOC) is the weight of VOC per volume of material and shall be calculated by the following equation:

$$\text{Grams of VOC per Liter of Material} = \frac{W_s - W_w - W_{es}}{V_m}$$

Where: W_s = weight of volatile compounds in grams
 W_w = weight of water in grams
 W_{es} = weight of exempt compounds in grams
 V_m = volume of material in liters”

“(18) HIGH BUILD PRIMER/SURFACER is any coating applied with a wet film thickness of 10 mils or more (one mil = 0.001 of an inch) prior to the application of a topcoat for

purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier, or promoting a uniform surface necessary for filling in surface imperfections.”

“(19) HIGH-VOLUME, LOW-PRESSURE (HVLP) means spray application equipment designed to atomize 100 percent by air pressure only and is operated between 0.1 and 10 pounds per square inch gauge (psig), air atomizing pressure measured dynamically at the center of the air cap and at the air horns.”

“(20) INORGANIC ZINC COATING is a coating that contains 960 grams per liter or more elemental zinc incorporated into an inorganic silicate binder that is applied to steel to provide galvanic corrosion resistance.”

“(22) LOW-SOLIDS COATINGS are coatings containing one pound or less of solids per gallon of material.”

“(24) MARINE DECK SEALANT PRIMER is any sealant primer intended by the manufacturer to be applied to wooden marine decks. A sealant primer is any product intended by the manufacturer to be applied to a substrate, prior to the application of a sealant, to enhance the bonding surface.”

“(26) MIST COATING is any low viscosity thin film epoxy coating applied to an inorganic zinc primer that penetrates the porous zinc primer and allows the occluded air to escape through the film prior to curing.”

“(28) NONSKID COATING means any coating applied to the horizontal surface of a marine vessel for the specific purpose of providing slip resistance for personnel.”

“(29) ORGANIC ZINC COATING is a coating that contains 960 grams per liter or more elemental zinc incorporated into an organic silicate binder that is applied to steel to provide galvanic corrosion resistance.”

“(30) PLEASURE CRAFT are marine or fresh water vessels that are less than 20 meters in length and are manufactured or operated primarily for recreational purposes, or are leased, rented, or chartered to a person or business for recreational purposes. Vessels operated in amusement theme parks in a fresh water environment solely for the purpose of an amusement park attraction shall be considered pleasure craft vessels regardless of their length. The owner or operator of a pleasure craft vessel shall be responsible for certifying that the intended use is for recreational purposes.”

- “(31) PLEASURE CRAFT COATING is any marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to a pleasure craft.”
- “(32) PRETREATMENT WASH PRIMER is a coating that contains a minimum of 1/2 percent acid, by weight; applied directly to bare metal surfaces to provide necessary surface etching.”
- “(35) SEALER is a coating applied to bare wood to seal surface pores to prevent subsequent coatings from being absorbed into the wood.”
- “(39) TEAK PRIMER is a coating applied to teak wood or previously oiled teak wood decks in order to improve the adhesion of a seam sealer.”
- “(40) TOPCOAT is any final coating applied to the interior or exterior of a marine or pleasure craft.”
- “(42) TRANSFER EFFICIENCY means the amount of coating solids adhering to the object being coated divided by the total amount of coating solids sprayed; expressed as a percentage.”
- “(44) VARNISHES are clear or pigmented wood topcoats formulated with various resins to dry by chemical reaction.”

Staff proposes to make the following revisions to the existing definitions in Rule 1106 to clarify the intent of the definition and to make the definitions consistent with other Regulation XI coating rules.

- “(1) AEROSOL COATING PRODUCT ~~is-means~~ a pressurized coating product containing pigments, ~~or~~-resins, and/or other coating solids that ~~is-dispensed~~-dispenses product ingredients by means of a propellant, and is packaged in a disposable aerosol container ~~can~~-for hand-held application.”
- “(2) AIR DRIED COATING is any coating that is formulated by the manufacturer to be cured at a temperature below 90 °C (194 °F).”
- “(3) ANTENNA COATING is any coating applied to equipment and associated structural appurtenances ~~which-that~~ are used to receive or transmit electromagnetic signals.
- “(4) ~~ANTIFOULING~~-ANTIFOULANT COATING is any coating applied to the underwater portion of ~~a-boats, ships, and vessels~~ vessel-~~or pleasure craft~~ to prevent or

- reduce the attachment of biological organisms. ~~An antifoulant coating~~ and shall be registered with the ~~Environmental Protection Agency as a pesticide~~ United States Environmental Protection Agency (“U.S. EPA”) as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code Section 136).”
- “(5) BAKED COATING is any coating that is formulated by the manufacturer to be cured at a temperature at or above 90 °C (194 °F).”
- “(68) ELASTOMERIC ADHESIVE is any adhesive containing natural or synthetic rubber.” *(This definition is simply renumbered)*
- “(710) EXEMPT COMPOUNDS ~~are any of the following compounds:~~ (See Rule 102 - Definition of Terms).
- (A) ~~Group I (General)~~
- ~~trifluoromethane (HFC-23)~~
 - ~~pentafluoroethane (HFC-125)~~
 - ~~1,1,2,2-tetrafluoroethane (HFC-134)~~
 - ~~tetrafluoroethane (HFC-134a)~~
 - ~~1,1,1-trifluoroethane (HFC-143a)~~
 - ~~1,1-difluoroethane (HFC-152a)~~
 - ~~chlorodifluoromethane (HCFC-22)~~
 - ~~dichlorotrifluoroethane (HCFC-123)~~
 - ~~2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)~~
 - ~~dichlorofluoroethane (HCFC-141b)~~
 - ~~chlorodifluoroethane (HCFC-142b)~~
 - ~~cyclic, branched, or linear, completely fluorinated alkanes~~
 - ~~cyclic, branched, or linear, completely fluorinated ethers with no unsaturations~~
 - ~~cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations~~
 - ~~sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine~~
- (B) ~~Group II~~
- ~~Methylene chloride~~
 - ~~1,1,1-trichloroethane (methyl chloroform)~~
 - ~~trichlorotrifluoroethane (CFC-113)~~
 - ~~dichlorodifluoromethane (CFC-12)~~
 - ~~trichlorofluoromethane (CFC-11)~~
 - ~~dichlorotetrafluoroethane (CFC-114)~~

~~chloropentafluoroethane (CFC-115)~~

~~The use of Group II compounds and/or carbon tetrachloride may be restricted in the future because they are toxic, potentially toxic, upper-atmosphere ozone depleters, or cause other environmental impacts. By January 1, 1996, production of chlorofluorocarbons (CFC), 1,1,1-trichloroethane (methyl chloroform), and carbon tetrachloride will be phased out in accordance with the Code of Federal Regulation Title 40, Part 82 (December 10, 1993)."~~

“(811) EXTREME HIGH GLOSS COATING is any coating ~~which~~that achieves at least 95 percent reflectance on a 60°~~θ~~ meter when tested by ASTM Test Method D-523-14 - “Standard Test Method for Specular Gloss”.

“(913) GRAMS OF VOC PER LITER OF COATING, LESS WATER AND LESS EXEMPT COMPOUNDS (REGULATORY VOC) is the weight of VOC per combined volume of VOC and coating solids and can be calculated by the following equation:

Grams of VOC per Liter of Coating,

$$\text{Less Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where:

W_s	=	weight of volatile compounds in grams
W_w	=	weight of water in grams
W_{es}	=	weight of exempt compounds in grams
V_m	=	volume of material in liters
V_w	=	volume of water in liters
V_{es}	=	volume of exempt compounds in liters”

“(1015) HEAT RESISTANT COATING is any coating ~~which~~that during normal use must withstand temperatures of at least 204 °~~θ~~C (400 °~~θ~~F).”

“(1116) HIGH GLOSS COATING is any coating ~~which~~that achieves at least 85 percent reflectance on a 60°~~θ~~ meter when tested by ASTM Method D-523-14 ~~–~~“Standard Test Method for Specular Gloss”.

“(1217) HIGH TEMPERATURE COATING is any coating that during normal use ~~which~~ must withstand temperatures of at least 426 °~~θ~~C (800 °~~θ~~F).”

“(1321) LOW ACTIVATION INTERIOR COATING is any coating used on interior surfaces aboard ~~ships, boats, ships, and vessels~~, to minimize the activation of pigments on painted surfaces within a radiation environment.”

- “(1423) MARINE COATING is any coating, except unsaturated polyester resin (fiberglass) coatings, containing volatile organic materials and applied by any means to ~~ships,~~ boats, ships, and vessels, ~~and~~ their appurtenances, and structures such as piers, and docks, ~~to~~ buoys and oil drilling rigs; intended for the exposure to either a marine or fresh water environment.”
- “(1525) METALLIC HEAT RESISTANT COATING is any coating ~~which~~that contains more than 5 grams of metal particles per liter of coating as applied and which must withstand temperatures over 80 °C (~~175~~176 °F).”
- “(1627) NAVIGATIONAL AIDS COATING is any coating that is applied to ~~are~~ buoys or other Coast Guard waterway markers that are recoated at their usage site aboard ship and immediately returned to the water.”
- “(1833) REPAIR AND MAINTENANCE THERMOPLASTIC COATING is any resin-bearing coating, such as vinyl, chlorinated rubber, or bituminous coatings; where in ~~which~~ the resin becomes pliable with the application of heat, and is used to recoat portions of a previously coated substrate which that has sustained damage to ~~the coating~~ following ~~normal~~the initial coating ~~operations.~~”
- “(1934) SEALANT FOR WIRE-SPRAYED ALUMINUM is any coating of up to one mil (one mil = 0.001 of an inch) in thickness of an epoxy material ~~which~~that is reduced for application with an equal part of an appropriate solvent (e.g. naphtha; or ethylene glycol monoethyl ether).”
- “(2036) SOLVENT CLEANING ~~OPERATION~~ is ~~the removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants from parts, products, tools, machinery, equipment, and general work areas. Contaminants include, but are not limited to, dirt, soil, and grease. In a cleaning process which consists of a series of cleaning methods, each distinct method shall constitute a separate solvent cleaning operation~~ as defined in Rule 1171 - Solvent Cleaning Operations.”
- “(2137) SPECIAL MARKING COATING is any coating used for items such as flight decks, ~~ships'~~vessel identification numbers and other demarcations for safety/ or identification ~~applications.~~”
- “(2238) TACK COAT is an epoxy coating of up to two mils (~~0.002 inch~~)(one mil = 0.001 of an inch) thick applied to an existing epoxy coating that has aged beyond the time limit specified by the manufacturer ~~for application of the next coat.~~”

- “(2341) TOUCH-UP COATING is any coating ~~operation~~ applied incidental to the main coating process but necessary ~~used~~ to cover minor imperfections ~~prior to shipment appearing after the main coating operation~~ or minor mechanical damage incurred prior to intended use.”
- “(2443) UNDERSEA WEAPONS SYSTEM COATING is any coating applied to any ~~or all~~ components of a weapons system intended for exposure to a marine environment that is intended to be launched or fired ~~underwater~~ undersea.”
- “(2545) VOLATILE ORGANIC COMPOUND (VOC) is ~~any volatile compound which contains the element carbon, excluding methane, carbon dioxide, carbon monoxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds~~ as defined in Rule 102 - Definition of Terms.”
- “(2646) WIRE-SPRAYED ALUMINUM is any molten multi-aluminum coating applied to a steel substrate using oxygen fueled combustion spray ~~methods~~ equipment.”

Subdivision (d) Requirements

Paragraph (d)(1)

The current Rule 1106 shows the Requirements subdivision as (c). PAR 1106 will show the Requirements subdivision as (d) due to the added subdivision for the Purpose subdivision. Staff proposes to renumber Paragraph (c)(1) of the current Rule 1106 to Paragraph (d)(1) for PAR 1106 to distinguish the Paragraph as introducing a Table of Standards I for Marine Coatings. The revisions are as follows:

“Except as otherwise provided in this rule, a person shall not apply a marine coating within the SCAQMD jurisdiction with a VOC content in excess of the following limits shown in the Table of Standards I that are expressed as grams of VOC per liter of coating, as applied, less water and ~~less~~ exempt solvents:”

Table of Standards I

The current version of Rule 1106 - Marine Coating Operations, contains a list of coating categories and their corresponding VOC content limits. This list is spread over two pages and because there are no line separations between the coating categories, determining the VOC limits for each of the coating categories may be difficult as one traces their finger from the coating category on the left side of the page to the VOC limits on the right side of the page. Staff proposes to create a Table of Standards I that will contain this list of coating categories and their corresponding VOC content limits in a much easier-to-read tabular format. Table of Standards I will contain just the coating categories and VOC limits for Marine Coatings (Pleasure Craft Coating VOC limits will be in a proposed subsequent table, Table of Standards II).

In the Table of Standards I, there are currently four coating categories that have VOC content limits in excess of other California APCDs/AQMDs and one coating category that has a VOC content limit in excess of both the U.S. EPA CTG and other California APCDs/AQMDs. Staff proposes to make these VOC content limits consistent with the other local APCDs/AQMDs and the U.S. EPA CTG as shown in Table 2-1:

TABLE 2-1: FIVE COATING CATEGORIES IN RULE 1106 THAT NEED TO BE ADJUSTED FOR CONSISTENCY WITH THE U.S. EPA CTG AND LOCAL APCDs/AQMDs VOC LIMITS

COATING CATEGORY	SCAQMD RULE 1106		U.S. EPA CTG	BAAQMD	SDAPCD	VCAPCD
	Current Limit (g/L)	Proposed Limit (g/L)	Current Limit (g/L)	Current Limit (g/L)	Current Limit (g/L)	Current Limit (g/L)
Antenna Coating	530	340	530	--	340	340
Pre-Treatment Wash Primer	780	420	780	420	420	780
Repair & Maintenance Thermoplastic Coating	550	340	550	340	550	340
Inorganic Zinc Coating	650	340	340	340	340	340
Special Marking Coating	490	420	490	490	420	420

The current version of Rule 1106 has an exemption for antifoulant coatings that are applied on aluminum substrates, but the current version of Rule 1106.1 does not have this exemption. Instead, the current Rule 1106.1 has a 560 g/L VOC content limit for antifoulant coatings that are applied to aluminum substrates. The Ventura County APCD has a 560 g/L VOC content limit for antifoulant coatings and does not provide for any exemption for aluminum substrates. Staff found several antifoulant coatings suitable for use on aluminum substrates that can also be used on commercial vessels and the U.S. Coast Guard fleet and still meet the 560 g/L VOC content limit. In fact, some of these antifoulant coatings were being used in some marinas on aluminum substrates. Furthermore, staff found that the retail prices of fourteen aluminum substrate-suitable antifoulant coating products that are currently available on the market average around \$143 per gallon container (range from \$65 to \$340 per gallon container), and are comparable to the retail prices of antifoulant coating products suitable for use on non-aluminum substrates. Therefore, staff is proposing to eliminate the aluminum substrate exemption and incorporate a 560 g/L VOC content limit for antifoulant coatings that are applied to aluminum substrates in Table of Standards I.

Staff proposes to add three new additional coating categories to Table of Standards I that are already included in the U.S. EPA CTG (Table 2-2):

TABLE 2-2: THREE COATING CATEGORIES TO BE ADDED TO PROPOSED AMENDED RULE 1106 FOR CONSISTENCY WITH THE U.S. EPA CTG AND LOCAL APCDs/AQMDs VOC LIMITS

COATING CATEGORY	SCAQMD RULE 1106		U.S. EPA CTG	BAAQMD	SDAPCD	VCAPCD
	Current Limit (g/L)	Proposed Limit (g/L)	Current Limit (g/L)	Current Limit (g/L)	Current Limit (g/L)	Current Limit (g/L)
Mist Coating	--	610	610	--	610	--
Nonskid Coating	--	340	340	--	--	--
Organic Zinc Coating	--	340	360	--	340	--

Table 2-3 shows the Table of Standards I for PAR 1106 with the revised VOC limits for the five categories discussed above and three new additional coating categories added. The “General Coating” category in the current Rule 1106 is proposed to be renamed as “Any Other Coating Type” to be consistent with other Regulation XI rules and will include coating categories that are not listed in Table of Standards I such as bilge coatings and propeller coatings.

TABLE 2-3: PROPOSED TABLE OF STANDARDS FOR MARINE COATINGS:
TABLE OF STANDARDS I

<u>MARINE COATING CATEGORIES</u>	<u>VOC LIMITS</u> <u>Less water and exempt compounds</u> <u>Grams per Liter (g/L)</u>	
	<u>BAKED</u>	<u>AIR DRIED</u>
	<u>CURRENT LIMIT</u>	<u>CURRENT LIMIT</u>
<u>Antenna Coating</u>		<u>340</u>
<u>Antifoulant Coatings:</u>		
<u>Aluminum Substrate</u>		<u>560</u>
<u>Other Substrate</u>		<u>400</u>
<u>Elastomeric Adhesives (with 15%, by Weight, Natural or Synthetic Rubber)</u>		<u>730</u>
<u>Inorganic Zinc Coating</u>		<u>340</u>
<u>Low Activation Interior Coating</u>		<u>420</u>
<u>Mist Coating</u>		<u>610</u>
<u>Navigational Aids Coating</u>		<u>340</u>
<u>Nonskid Coating</u>		<u>340</u>
<u>Organic Zinc Coating</u>		<u>340</u>
<u>Pre-Treatment Wash Primer</u>	<u>420</u>	<u>420</u>
<u>Repair and Maintenance Thermoplastic Coating</u>		<u>340</u>
<u>Sealant for Wire-Sprayed Aluminum</u>		<u>610</u>
<u>Special Marking Coating</u>		<u>420</u>
<u>Specialty Coatings:</u>		<u>420</u>
<u>Heat Resistant Coating</u>	<u>360</u>	<u>420</u>

Metallic Heat Resistant Coating		530
High Temperature Coating		500
Tack Coating		610
Topcoats:		
Extreme High Gloss Coatings	420	490
High Gloss Coatings	275	340
Undersea Weapons Systems Coating	275	340
Any Other Coating Type	275	340

Paragraph (d)(2)

Staff proposes to add a new paragraph to PAR 1106 to include the pleasure craft coating categories and VOC limits. The current version of Rule 1106.1 contains a list of coating categories and their corresponding VOC content limits. Similar to the VOC categories and VOC limits in the current version of Rule 1106, there are no line separations between the coating categories and determining the VOC limits for each of the coating categories may be difficult as one traces their finger from the coating category on the left side of the page to the VOC limits on the right side of the page. Staff proposes to create a Table of Standards II that will contain this list of coating categories and the corresponding VOC content limits in a much easier-to-read tabular format. Table of Standards II will contain just the coating categories and VOC limits for Pleasure Craft Coatings. Table of Standards II contains all the original coating categories and VOC content limits that are currently shown in Rule 1106.1 but the list will be arranged in alphabetical order. There is only one addition to Table of Standards II and that is the inclusion of the Marine Deck Sealant Primer along with the corresponding 760 g/L VOC content limit. This coating category has been added to be consistent with another local APCD that also has a pleasure craft coating rule. Finally, the “Others” category in the current Rule 1106.1 is proposed to be renamed as “Any Other Coating Type” to be consistent with other Regulation XI rules and will include coating categories that are not listed in Table of Standards I such as bilge coatings and propeller coatings.

“(2) VOC Content of Pleasure Craft Coatings

Except as otherwise provided in this rule, a person shall not apply a pleasure craft coating within the SCAQMD jurisdiction with a VOC content in excess of the following limits shown in the Table of Standards II that are expressed as grams of VOC per liter of coating, as applied, less water and exempt solvents:”

TABLE 2-4 - PROPOSED TABLE OF STANDARDS FOR PLEASURE CRAFT COATINGS:TABLE OF STANDARDS II

<u>VOC LIMITS</u> <u>Less water and exempt compounds</u> <u>Grams per Liter (g/L)</u>	
<u>PLEASURE CRAFT COATING CATEGORIES</u>	<u>Current Limit</u>
<u>Antifoulant Coatings:</u>	
<u>Aluminum Substrate</u>	<u>560</u>
<u>Other Substrates</u>	<u>330</u>
<u>Clear Wood Finishes:</u>	
<u>Sealers</u>	<u>550</u>
<u>Varnishes</u>	<u>490</u>
<u>Primer Coatings:</u>	
<u>Finish Primer/Surfacer</u>	<u>420</u>
<u>High Build Primer Surfacer</u>	<u>340</u>
<u>Marine Deck Sealant Primer</u>	<u>760</u>
<u>Pretreatment Wash Primer</u>	<u>780</u>
<u>Teak Primer</u>	<u>775</u>
<u>Topcoats:</u>	
<u>Extreme High Gloss Coating</u>	<u>490</u>
<u>High Gloss Coating</u>	<u>420</u>
<u>Any Other Coating Type</u>	<u>420</u>

Staff will also add a low-solids coating category for both marine and pleasure craft coatings. Low-solids marine and pleasure craft coatings will be limited to 120 grams per liter of VOC and will be classified as a low-solids coating if they have no more than one pound of solids per gallon. Staff will add the following table to the proposed amended rule:

“(3) VOC Content of Low-Solids Coatings

Except as otherwise provided in this rule, a person shall not apply a marine coating or a pleasure craft coating within the SCAQMD jurisdiction with a VOC content in excess of the following limit shown in the Table of Standards III that is expressed as grams of VOC per material of coating, as applied.”

TABLE 2-5: PROPOSED TABLE FOR LOW-SOLIDS COATINGS:TABLE OF STANDARDS III

<u>VOC LIMIT – MARINE & PLEASURE CRAFT COATINGS</u> <u>Grams per liter of material VOC</u>	
<u>COATING CATEGORY</u>	<u>CURRENT LIMIT</u>
<u>Low-Solids Coating</u>	<u>120</u>

Paragraph (d)(4) - Most Restrictive VOC Limit

Staff proposes to include a new provision in PAR 1106 to address the need to apply the most restrictive VOC limit for a specific coatings use. This provision is included in other Regulation XI VOC rules and is now being proposed to be included in PAR 1106 for consistency and to enhance enforceability of VOC limits. When implementing Regulation XI rules with maximum allowable VOC limits for specific categories, staff has encountered instances of products that meet the definition of or are recommended for use for one category, but are sold or used in applications matching a different coating category that has a VOC limit in excess of the limit prescribed for the category that the product is subject to. For example, at many of the marinas staff has encountered uses of antifoulant coatings intended for marine vessels on pleasure craft because it has a higher VOC limit per Rule 1106 than the VOC limit for antifoulant coatings per Rule 1106.1. The most restrictive VOC limit will eliminate this ambiguity among multiple marine and pleasure craft coating categories as it pertains to VOC limits, and will ensure that end-users use compliant marine and pleasure craft coatings.

“(4) Most Restrictive VOC Limit

If any representation or information on the container of any coating subject to this rule, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature that indicates that the coating meets the definition of, is recommended for use or is suitable for use for more than one of the marine coating categories listed in paragraph (d)(1) or the pleasure craft coating categories listed in paragraph (d)(2), or the low-solids coating category listed in paragraph (d)(3), then the lowest VOC content limit shall apply.”

Paragraph (c)(2) - Approved Emission Control System

Staff proposes to strike-out the rule language due to none of the facilities use emission collection and destruction equipment that collectively makes up an approved emission control system.

~~“(2) Approved Emission Control System~~

~~(A) Approved Emission Control System~~

~~Owners and/or operators may comply with the provisions of paragraphs (c)(1) by using an emission control system, which has been approved in writing by the Executive Officer, for reducing VOC emissions. The control system must achieve a minimum capture efficiency using USEPA, ARB, and District methods specified in subparagraph (c)(4)(A) and a destruction efficiency of at least 85 percent by weight, and,~~

~~(B) The approved system shall reduce the VOC emissions, when using non-compliant coatings, to an equivalent or greater level that would be achieved by the provisions in paragraph (c)(1). The required efficiency of an emission control system at which~~

~~an equivalent or greater level of VOC reduction will be achieved shall be calculated by the following equation:~~

$$C.E. = \left[1 - \left\{ \frac{(VOC_{LW_e}) \frac{1 - (VOC_{LW_{n,Max}} / D_{n,Max}})}{(VOC_{LW_{n,Max}}) \frac{1 - (VOC_{LW_e} / D_e)}}{x} \right\} \right] \times 100\%$$

~~Where: C.E. = Control Efficiency, expressed as a percentage
 VOC_{LW_e} = VOC Limit of Rule 1106, less water and less exempt compounds, pursuant to subdivision (d).
 $VOC_{LW_{n,Max}}$ = Maximum VOC content of non-compliant coating used in conjunction with a control device, less water and less exempt compounds.
 $D_{n,Max}$ = Density of solvent, reducer, or thinner contained in the non-compliant coating, containing the maximum VOC content of the multi-component coating.
 D_e = Density of corresponding solvent, reducer, or thinner used in the compliant coating system = 880 g/L.”~~

Paragraph (c)(3) - Alternative Emission Control Plan

Staff proposes the following updates to the existing rule language to enhance clarity and then renumber the paragraph to (d)(5).

“(3) Alternative Emission Control Plan

~~Owners and/or operators may achieve compliance with the requirements~~ A person may comply with the provisions of paragraphs (d)(1), (d)(2) and (d)(3) ~~paragraph (e)(1)~~ by means of an Alternative Emission Control Plan, pursuant to Rule 108 - Alternative Emissions Control Plans.”

Paragraph (d)(6) - Exempt Compounds

Staff proposes to add new rule language for exempt compounds to maintain consistency with other Regulation XI coating rules and then renumber the paragraph (d)(6).

“(6) Exempt Compounds

A person shall not manufacture, sell, offer for sale, distribute for use in the SCAQMD jurisdiction, or apply any marine or pleasure craft coating which contains any Group II Exempt Compounds listed in Rule 102 - Definition of Terms, in quantities greater than 0.1

percent by weight. Cyclic, branched, or linear, completely methylated siloxanes (VMS) are not subject to this provision.”

Paragraph (d)(7) - Carcinogenic Materials

Staff proposes to add new rule language for carcinogenic materials to maintain consistency with other Regulation XI coating rules and then renumber the paragraph (d)(7).

“(7) Carcinogenic Materials

A person shall not manufacture, sell, offer for sale, distribute for use in the SCAQMD jurisdiction, or apply any marine or pleasure craft coating which contains cadmium, nickel, lead or hexavalent chromium that was introduced as a pigment or as an agent to impart any property or characteristic to the marine or pleasure craft coatings during manufacturing, distribution, or use of applicable marine or pleasure craft coatings.”

Paragraph (d)(8) - Application Equipment Transfer Efficiency

Staff proposes to add the new language for transfer efficiency, align transfer efficiency requirements of this rule with other Regulation IX coating rules, and then renumber the paragraph (d)(8).

“(8) Application Equipment Transfer Efficiency

- (A) A person shall not apply any marine coating or pleasure craft coating unless one of the following methods of coating transfer is used:
- (i) Electrostatic application;
 - (ii) High-volume, low-pressure (HVLP) spray;
 - (iii) Brush, dip, or roller;
 - (iv) Spray gun application, provided the owner or operator demonstrates that the spray gun meets the HVLP definition in paragraph (c)(19) in design and use. A satisfactory demonstration must be based on the manufacturer’s published technical material on the design of the spray gun and by a demonstration of the operation of the spray gun using an air pressure tip gauge from the manufacturer of the spray gun; or
 - (v) Any such other marine or pleasure craft coating application methods as demonstrated, in accordance with the provisions of paragraph (g)(6), to be capable of achieving equivalent or better transfer efficiency than the marine or pleasure craft coating application method listed in clause (d)(8)(A)(ii), provided written approval is obtained from the Executive Officer prior to use.

(B) A person shall not apply any marine coating or pleasure craft coating by any of the methods listed in subparagraph (d)(8)(A) unless such coating is applied with properly operating equipment, operated according to procedures recommended by the manufacturer and in compliance with applicable permit conditions, if any.”

Paragraph (d)(9) - Solvent Cleaning, Storage and Disposal of VOC-containing Materials

The current Rule 1106 shows the solvent cleaning subdivision as (c). PAR 1106 now shows the solvent cleaning subdivision as (d) due to the added subdivision for Purpose. Staff proposes the following updates to the existing rule language in efforts to make this rule consistent with other Regulation XI coating rules and then renumber the paragraph (d)(9).

~~(49)~~ Solvent Cleaning ~~Operations~~, Storage and Disposal of VOC-containing Materials

~~All solvent~~Solvent cleaning ~~operations~~of application equipment, parts, products, tools, machinery, equipment, general work areas, and the storage and disposal of VOC-containing materials used in solvent cleaning ~~operations~~ activities shall be carried out pursuant to SCAQMD Rule 1171 - Solvent Cleaning Operations.

(c)(5) Recordkeeping

The current Rule 1106 contains a paragraph for recordkeeping. Staff believes this is already covered by SCAQMD Rule 109 - Recordkeeping for Volatile Organic Compound Emissions. Staff proposes to delete this rule language. (See subdivision (f) for additional discussion for recordkeeping).

~~(5) — Recordkeeping~~

~~Notwithstanding the provisions of subdivision (g), records shall be maintained pursuant to Rule 109.”~~

Subdivision (e) - Prohibition of Possession, Specification and Sale

The current Rule 1106 shows the Prohibition of Specification subdivision as (d). Staff proposes to renumber subdivision (d) as subdivision (e). For subdivision (e), staff proposes to include a Prohibition of Possession and Sale of non-compliant coatings in the existing provision in addition to the existing Prohibition of Specification to be consistent with SCAQMD Rule 1151 - Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations. Staff found non-compliant marine and pleasure craft coatings stored in the marinas that were visited. In addition, staff found multiple non-compliant marine and pleasure craft coatings offered for sale at many marine stores in the SCAQMD jurisdiction. Staff proposes to replace the current rule language with the following rule language to prohibit possession and sales of non-compliant marine and pleasure craft coating products subject to Rule 1106.

~~“(d) Prohibition of Specification~~

- ~~(1) A person shall not solicit or require any other person to use, in the district, any coating or combination of coatings to be applied to any marine vessel or marine component subject to the provisions of this rule that does not meet the limits requirements of this rule or of an Alternate Emission Control Plan approved pursuant to the provisions of paragraph (e)(3) of this rule.~~
- ~~(2) The requirements of paragraph (d)(1) shall apply to all written or oral agreements executed or entered into after November 4, 1988.”~~

“(e) Prohibition of Possession, Specification and Sale

- (1) For the purpose of this rule, no person shall store at a worksite any marine coating or pleasure craft coating subject to this rule within the SCAQMD jurisdiction that is not in compliance with the requirements shown in the Tables of Standards of paragraphs (d)(1), (d)(2), and (d)(3) unless the following condition applies:
- (A) The marine or pleasure craft coating is for use at a facility that operates in compliance with an approved Alternative Emissions Control Plan pursuant to paragraph (d)(5), and the marine or pleasure craft coating is specified in the plan.
- (2) For the purpose of this rule, no person shall solicit from, specify, or require any other person to use in the SCAQMD jurisdiction any marine or pleasure craft coating that does not meet the:
- (A) Applicable VOC limits required by paragraph (d)(1), (d)(2) or (d)(3) for the specific application unless:
- (i) The marine or pleasure craft coating is located at a facility that operates in compliance with an approved Alternative Emissions Control Plan pursuant to paragraph (d)(5), and the marine or pleasure craft coating is specified in the plan.
- (B) The requirements of paragraphs (d)(6) and (d)(7).
- (3) For the purpose of this rule, no person shall supply, sell, offer for sale, market, blend, package, repack or distribute any marine or pleasure craft coating for use within the SCAQMD jurisdiction subject to the provisions in this rule that does not meet the:
- (A) Applicable VOC limits required by paragraphs (d)(1), (d)(2) and (d)(3) for the specific application, unless:

- (i) The marine or pleasure craft coating is for use at a facility that operates in accordance with an approved Alternative Emissions Control Plan pursuant to paragraph (d)(5), and the marine or pleasure craft coating is specified in the plan; and,
- (B) The requirements of paragraphs (d)(6) and (d)(7).
- (4) For the purpose of this rule, no person shall solicit from, specify, require, offer for sale, sell, or distribute to any other person for use in the District any marine or pleasure craft coating application equipment that does not meet the requirements of subparagraph (d)(8)(A).
- (5) For the purpose of this rule, no person shall offer for sale, sell, supply, market, offer for sale or distribute an HVLP spray gun for use within the SCAQMD unless said person provides accurate information to the spray gun recipient. Such accurate information shall include the maximum inlet air pressure to the spray gun that would result in a maximum air pressure of 10 pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns based on the manufacturer's published technical material on the design of the spray application equipment and by a demonstration of the operation of the spray application equipment using an air pressure tip gauge from the manufacturer of the gun. The information shall either be permanently marked on the gun, or provided on the company's letterhead or in the form of technical literature that clearly identifies the spray gun manufacturer, the seller, or the distributor.
- (6) Paragraphs (d)(1), (d)(2) and (d)(3) shall not apply to marine coatings or pleasure craft coatings that are sold, offered for sale, or solicited, for shipment or use outside of the SCAQMD jurisdiction, or for shipment to other manufacturers for repackaging provided such coatings are sold, offered for sale, or solicited, for shipment or use outside the SCAQMD jurisdiction.

Subdivision (f) - Recordkeeping Requirements for Marine and Pleasure Craft Coatings

The current Rule 1106 shows the Recordkeeping under paragraph (d)(5) whereas PAR 1106 will show Recordkeeping in subdivision (f). Staff proposes to revise the recordkeeping rule language in the current version of Rule 1106 to make it consistent with other Regulation IX coating rules.

~~(5) Recordkeeping
Notwithstanding the provisions of subdivision (g), records shall be maintained pursuant to Rule 109.”~~

“(f) Recordkeeping Requirements(1) Recordkeeping for VOC Emissions

Notwithstanding the provisions of subdivision (i), records of marine coating usage and pleasure craft coating usage, as applicable, shall be maintained pursuant to SCAQMD Rule 109 - Recordkeeping for Volatile Organic Compound Emissions, and shall be made available to the Executive Officer upon request.

Paragraph (g)(1), (g)(2) and (g)(3) - Test Methods

The current version of Rule 1106 shows the test methods under subdivision (e), whereas PAR 1106 will show the test methods under subdivision (g). Staff proposes the following updates to the existing rule language and renumber the subdivision to (g). The following test methods are used to determine the VOC content of marine and pleasure craft coatings. ASTM Test Method D7767-11 “Standard Test Method to Measure Volatiles from Radiation Curable acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them” may be used to estimate the VOC content of thin-film Energy Curable Coatings. Staff proposes to add a new exemption for marine and pleasure craft coatings that contain 50 g/L of VOC or less from PAR 1106 requirements. For Energy Curable Coatings, test results from the ASTM D7767-11 method will be allowed, in conjunction with product formulation data, to be used to verify if these coatings qualify for this new exemption. Formulation data is the actual product recipe which itemizes all the ingredients contained in a product including VOCs and the quantities thereof used by the manufacturer to create the product (note that Safety Data Sheets (SDS) are not considered formulation data).

In September 2012, SCAQMD Laboratory staff met with a developer of ASTM D7767-11 that was part of a larger committee formed by RADTECH, a non-profit association serving the UV & EB Industry and Market. During that visit they performed ASTM D7767-11 at 3M (Minneapolis, MN). SCAQMD Laboratory staff observed the following limitations of ASTM D7767-11 with regard to it being a potential test method for VOC compliance determination:

- 1) The method provides only an estimation of the VOC content, a distinction that was confirmed in-person by the creator of the method during the 3M visit;
- 2) The volatiles estimate is based on the measurement of the reactive components (i.e. acrylate monomers, oligomers, and blends), not of the fully-formulated product which also includes the pigments and additives that are excluded so that the product can be tested at a thick enough film in order to accurately measure the weight loss for VOC quantification;
- 3) Supplier-specified cure condition, end-use film thickness, and specific photo-initiator are required to accurately perform the method; and

- 4) It is not a direct method for measuring volatiles from thin coatings, as the method was developed to help formulators identify and select lower VOC constituents during coating production.

For enforcement purposes, which relies on the fully formulated product to be tested, a third party laboratory, such as the SCAQMD Laboratory, cannot independently perform ASTM D7767-11 and have the confidence that the results accurately reflect the composition of the sample. If SCAQMD compliance staff collected a sample of a thin-film energy curable product, the manufacturer would need to supply the raw materials and a photo-initiator in order to accurately perform the method. ASTM D7767-11 offers no ability to confirm that the ingredients are actual constituents of the commercial product being tested. For these reasons, ASTM D7767-11 cannot be added as a test method to paragraph (h)(1) - Determination of VOC Content in the proposed amended rule language. Staff will work with manufacturers to develop or enhance a test method that can be used to directly measure the VOC of thin-film coatings. However, staff has proposed a new exemption for coatings containing 50 g/L VOC or less, which will require product formulation data and ASTM D7767-11 test results to be provided by the manufacturer for energy curable coatings.

“(eg) Test Methods

(1) Determination of VOC Content:

The VOC content of coatings, subject to the provisions of this rule shall be determined by the following methods:

- (A) ~~United States Environmental Protection Agency (U.S. EPA)~~ Reference [Test Method 24 \(Determination of Volatile Matter Content, Water Content, Volume Solids and Weight Solids of Surface Coatings, Code of Federal Regulations, Title 40, Part 60, Appendix A\)](#). The exempt compounds' content shall be determined by SCAQMD [Laboratory Test Method 303 \(Determination of Exempt Compounds\)](#) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; [or](#),
- (B) SCAQMD Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; [or](#),

- (C) SCAQMD Method 313 [Determination of Volatile Organic Compounds VOC by Gas Chromatography-Mass Spectrometry] in the SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual.
- (2) VOC content determined to exceed the limits established by this rule through the use of any of the above-referenced test methods shall constitute a violation of this rule.
- (E3) Exempt Perfluorocarbon Compounds
The following classes of compounds:
Cyclic, branched, or linear, completely fluorinated alkanes;
Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and
Ssulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine,
~~will shall~~ be analyzed as exempt compounds for compliance with subdivision (ed), only ~~when at such time~~ as manufacturers specify which individual compounds are used in the ~~coating~~-formulation of the coatings subject to this rule. In addition, prior to any such analysis, the manufacturers shall also identify the test methods approved by the U.S. EPA, California Air Resources Board (CARB), and the SCAQMD ~~approved test methods that will be~~ used to quantify the amount of each exempt compound.”

Paragraph (g)(4) - Determination of Metal Content

Staff proposes the following updates to the existing rule language and to renumber this paragraph from (e)(2) in the current Rule 1106 to paragraph (g)(4) in PAR 1106 as follows:

- “(24) Determination of ~~Metal Content~~Iridescent Particles in Metallic/Iridescent Coatings
The metal and silicon content in metallic/iridescent coatings subject to the provisions of this rule shall be determined by the SCAQMD Method 311 (Determination Analysis of Percent Metal in Metallic Coatings by Spectrographic Method) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.”

Paragraph (g)(5) - Determination of Acid Content

Staff proposes the following updates to the existing rule language and to renumber this paragraph from (e)(3) in the current Rule 1106 to paragraph (g)(5) in PAR 1106 as follows:

~~“(3.5) Determination of Acid Content in Marine and Pleasure Craft Coatings~~

The acid content of any coating subject to the provisions of this rule shall be determined by ASTM D-1613-~~85-06 (2012)~~ (Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products) ~~contained in the SCAQMD “Laboratory Methods of Analysis for Enforcement Samples” manual.~~”

Paragraph (g)(6) - Determination of Transfer Efficiency of Application Equipment

Staff proposes to add new language for transfer efficiency test methods to align this requirement with other Regulation IX coating rules. The proposed new rule language is as follows:

“(6) Determination of Transfer Efficiency of Application Equipment

The transfer efficiency of alternative marine coating and pleasure craft coating application methods, as defined by clause (d)(9)(A)(v), shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989," and SCAQMD “Guidelines for Demonstrating Equivalency With District Approved Transfer Efficiency Spray Gun September 26, 2002”.

Paragraph (e)(4) - Determination of Efficiency of Emission Control System

Staff proposes to strike out the rule language since none of the facilities use emission collection and destruction equipment that collectively makes-up an approved emission control system. If a facility desires to use emission collection and destruction equipment in the future, the facility may demonstrate compliance with PAR 1106 with this system by means of an Alternative Emission Control Plan, pursuant to Rule 108 – Alternative Emissions Control Plans.

~~“(4) Determination of Efficiency of Emission Control System~~

~~—(A) The efficiency of the collection device of the emission control system as specified in paragraph (c)(2) shall be determined by the USEPA method cited in 55 Federal Register 26865 (June 29, 1990), or any other method approved by the USEPA, the California Air Resources Board, and the SCAQMD.~~

~~—(B) The efficiency of the control device of the emission control system as specified in paragraph (c)(2) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by U.S. EPA Test Methods 25, 25A, or SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic~~

~~Emissions as Carbon) as applicable. U.S. EPA Test Method 18, or ARB Method 422 shall be used to determine emissions of exempt compounds.”~~

Paragraph (g)(7) - Multiple Test Methods - and paragraph (g)(8)

Staff proposes to renumber the Multiple Test Methods paragraph from (e)(5) in the current Rule 1106 to paragraph (g)(7) in PAR 1106 and to renumber the following paragraph (e)(6) in the current Rule 1106 to paragraph (g)(8) in PAR 1106 as follows:

“(57) Multiple Test Methods

When more than one test method or set of test methods are specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

(68) All test methods referenced in this section shall be the most recently approved version.”

Subdivision (h) - Rule 442 Applicability

Staff proposes to revise the rule language to include usage of solvents and make this rule consistent with other Regulation XI rules. Staff also proposes to renumber subdivision (f) in current Rule 1106 to subdivision (h) in PAR 1106. The proposed rule language is as follows:

“(fh) Rule 442 Applicability

Any ~~marine coating operation~~ Marine Coating or Pleasure Craft Coating or any facility ~~which that~~ is exempt pursuant to subdivision (j) from all or a portion of the VOC limits of subdivision (d) this rule shall comply with the provisions of Rule 442 - Usage of Solvents.”

Subdivision (j) - Exemptions:

Staff proposes minor corrections and three new exemptions to subdivision (j) addressing coatings with viscosities greater than 650 centipoise, coatings that have a VOC content of no more than 50 g/L or its equivalent, less water and less exempt compounds, as applied, and coatings that are intended for vessels that submerge to at least 500 feet below the surface of the water.

Subdivision (j) is numbered as subdivision (i) in the current rule. Staff proposes the following revisions to the exemptions subdivision starting with subdivision (j) followed by an explanation for all the subsequent paragraphs:

“(g) Exemptions:

The provisions of this rule shall not apply to:

Coatings with VOC Content of 50 g/L or Less:

Low- to near-zero VOC coating technologies are increasingly being developed and are currently available for use in a multitude of industries, including graphic arts, architectural and industrial

maintenance coatings, and marine coatings. To incentivize users to choose lower VOC coatings and manufacturers to formulate lower VOC products, staff proposes to provide an exemption for marine or pleasure craft coatings that have a VOC content of 50 g/L or less, or its equivalent, less water and exempt compounds, as applied, from the requirements of Proposed Amended Rule 1106. For energy curable coatings to qualify for this exemption, staff proposes that product formulation data and test results using the ASTM D7767-11 method first be submitted to the SCAQMD by the manufacturer. Staff proposes the following rule language to exempt coatings that have a VOC content of 50 g/L or less:

- (1) Marine or pleasure craft coatings that have a VOC content of 50 g/L or less, or its equivalent, less water and exempt compounds, as applied, provided that for energy curable coatings, product formulation data and test results, determined by ASTM D7767-11, shall first be submitted to the Executive Officer by the manufacturer.

Paragraphs (j)(2), (j)(3) and (j)(4) are editorial corrections. The language in paragraph (i)(3) of the current rule can be removed as the date January 1, 1992 has long since passed. The language in paragraph (i)(4) of the current rule can also be removed since the VOC content limit for aluminum hulls is now shown in the Table of Standards I and II.

- ~~(12)~~ Marine coatings applied to interior surfaces of potable water containers.
- ~~(23)~~ Touch-up coatings, as defined by paragraph (c)(41) of this rule.
- ~~(3) — marine coatings purchased before January 1, 1992, in containers of one quart or less and applied to pleasure craft.~~
- ~~(4) — antifoulant coatings applied to aluminum hulls.~~
- ~~(34)~~ Any aerosol coating products.

Coatings that have a viscosity greater than 650 centipoise:

Staff proposes to include an exemption in the proposed amendment for certain coatings that are too thick to be sprayed by conventional spray equipment. The proposal will exempt coatings that have a viscosity greater than 650 centipoise, which have poor flow characteristics, from the proposed transfer efficiency requirements in paragraph (d)(9), Application Equipment Transfer Efficiency, including HVLP. The spraying equipment required to spray such thick fluids includes spraying equipment such as plural type application equipment or spraying equipment that must use very high pressure (greater than 1,000 psi) and heated elements to apply coatings. Without the proposed exemption, shops forced to use HVLP equipment would otherwise have to thin high solids coatings with VOC solvents to allow them to be sprayed, thus eliminating the benefit of the low-VOC high solids coatings. Staff proposes the following rule language to exempt coatings that have a viscosity of 650 centipoise or greater from the requirements in paragraph (d)(9):

- (45) The provisions of paragraph (d)(9) shall not apply to Marine or Pleasure Craft coatings with a viscosity of 650 centipoise or greater, as applied.

Department of Defense Specified Coatings for Submarines:

Staff determined that Pre-treatment Wash Primers and Special Marking Coatings that are intended to be used on submerged vessel (submarine) components require the use of these coatings per military specifications (Mil-Specs) and currently meet the VOC limits in Rule 1106 - Marine Coating Operations. However, these coatings will not meet the new aligned VOC limits in Proposed Amended Rule 1106, which seeks to align these VOC limits with other air districts. Staff proposes to craft an exemption for these types of coatings but limit use to no more than 12 gallons per calendar year, of all products combined, for this type operation and will require that the products used will have to be in compliance with the U.S. EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) for Shipbuilding and Ship Repair (Surface Coating) as provided in Part 63 of the Code of Federal Regulations. Staff proposes the following rule language to exempt Department of Defense Specified Coatings for Submarines:

- (56) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to Marine coatings that are used for vessels that are intended to submerge to at least 500 feet below the surface of the water provided that the total combined usage of such coatings does not exceed one gallon per month and such coatings are in compliance with the VOC limits in the U.S. EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) for Shipbuilding and Ship Repair (Surface Coatings).

RULE 1106 – MARINE AND PLEASURE CRAFT COATINGS

CHAPTER 3: IMPACT ASSESSMENT OF PROPOSED AMENDED RULE 1106

- o Emission Impact Assessment
- o Cost Analysis
- o Incremental Cost-Effectiveness
- o California Environmental Quality Act (CEQA)
- o Socioeconomic Impact Assessment
- o Draft Findings under California Health and Safety Code 40727
- o Comparative Analysis
- o Draft Conclusions and Recommendations
- o Public Comments and Responses

EMISSION IMPACT ASSESSMENT

Staff does not anticipate any real quantifiable emission reductions or increases as a result of this proposed amendment. The coatings that are applied to marine and pleasure craft vessel are comprised of above waterline (top side) coatings and below waterline (bottom side) coatings. The coating categories that are not in compliance with the U.S. EPA CTGs and NESHAP for Shipbuilding and Ship Repair (Surface Coating) are the top side coatings. The top side coatings affected are the mist, nonskid and solvent-based organic zinc coatings. Staff has found these products on shelves and determined that the VOC content offered for sale is within the VOC limitations prescribed by the VOC limits in the U.S. EPA CTGs/NESHAP and have been in place since 1995. Staff does not believe that there will be any VOC reductions because the end-users are already using readily available compliant coatings. There are also niche categories for antenna coatings, pre-treatment primers, repair and maintenance thermal coatings and special marking coatings where other air districts have lower VOC limits than the current version of Rule 1106. However, because they are niche products, they are infrequently used. Staff proposes to align these coating categories in Rule 1106 with these coating categories to be consistent with other air districts. Staff found these coatings to already meet the VOC limits already prescribed by other air districts and therefore an emission reduction is not quantifiable. These proposed amendments will not lead to any need for manufacturers to reformulate their products or affect the cost of these products to the end-user, substantiating PAR 1106 as administrative in nature. However, it is expected that compliance will be improved with increased clarity of rule requirements.

There would be, at best, a miniscule reduction in VOCs for the top side coating categories that were reduced to the U.S. EPA CTG/NEHAP and other air district VOC limits. However, even after staff learned that the top side coatings are within the VOC limits set forth by the U.S. EPA CTGs/NESHAP, it was the bottom side antifoulants that are predominately used at the harbors. This is logical because antifoulants must be applied every two years and top side coatings can last up to ten years. Top side coatings is a small market compared to other VOC-containing materials regulated by the SCAQMD, such as architectural coatings. PAR 1106 retains the VOC limits for antifoulant coatings from the current Rule 1106, and prescribes a VOC limit for aluminum substrate-specific antifoulant coatings that aligns with another air district that currently has this VOC limit for this type of antifoulant coating. Furthermore, staff found several antifoulant coatings suitable for use on aluminum substrates that already meet the prescribed VOC limit. Therefore, for the top side and bottom side coatings, staff believes there is no VOC reduction benefits that can be calculated.

COST ANALYSIS

The proposed amendment to Rule 1106 is not expected to have a net cost impact, since industry will be able to continue business as usual and operate their equipment subject to PAR 1106 in a similar manner to the current rules. The cost of bottom side coating products (e.g. antifoulant coatings) for aluminum and non-aluminum substrates currently available in the market is similar. Furthermore, the top side coatings to be affected by the proposed VOC limit adjustments (e.g. mist, nonskid, organic zinc, antenna, repair and maintenance thermal, special marking, and pre-treatment primer) are niche categories and are applied less frequently than other top side and bottom side coatings. There are readily available products in these categories that meet the VOC limits prescribed by the U.S. EPA

CTGs and other air districts, and the cost of these products are not expected to change. For those who are currently not complying with the existing rule requirements, the cost range of readily available products that already comply with the prescribed VOC limits is comparable to the cost range of products that do not comply with the prescribed VOC limits.

INCREMENTAL COST-EFFECTIVENESS

Under Health and Safety Code § 40920.6, the SCAQMD is required to perform an incremental cost analysis when adopting a Best Available Retrofit Control Technology (BARCT) rule or feasible measure required by the California Clean Air Act. To perform this analysis, the SCAQMD must (1) identify one or more control options achieving the emission reduction objectives for the proposed rule, (2) determine the cost-effectiveness for each option, and (3) calculate the incremental cost-effectiveness for each option. To determine incremental costs, the SCAQMD must “calculate the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option.” Staff reviewed the current standards throughout the state and determined that PAR 1106 represents BARCT for Marine and Pleasure Craft Coatings because there are no other more stringent limits available. PAR 1106 will not result in emission reductions and therefore no incremental cost analysis is required under Health and Safety Code § 40920.6.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Pursuant to the California Environmental Quality Act (CEQA) and SCAQMD’s Certified Regulatory Program (Rule 110), the SCAQMD, as lead agency for the proposed project, prepared a Draft Environmental Assessment (EA) for Proposed Amended Rule 1106 - Marine and Pleasure Craft Coatings and proposed rescission of Rule 1106.1 - Pleasure Craft Coating Operations. The environmental analysis in the Draft EA concluded that the proposed project would not generate any significant adverse impacts. The Draft EA was released for a 30-day public review and comment period from August 19, 2015 to September 18, 2015, and no comment letters were received relative to the analysis in the Draft EA. Subsequent to the release for public review, Proposed Amended Rule 1106 was modified to add two exemptions. The first exemption was for high viscosity/high solids coatings for metal parts and products and the second exemption was for certain pre-treatment wash primers and special marking coatings. A new definition was added for ultraviolet/electron beam (UV/EB) curable thin film marine and pleasure craft coatings.

Staff reviewed the modifications to Proposed Amended Rule 1106 and concluded that none of the revisions constituted: 1) significant new information; 2) a substantial increase in the severity of an environmental impact, or 3) provided new information of substantial importance relative to the draft document. Further, revisions to the proposed project, in response to verbal or written comments, did not create new, avoidable significant effects. Pursuant to CEQA Guidelines Sections 15073.5 and 15088.5, Staff determined that these revisions did not require recirculation of the Draft EA. Consequently, Staff incorporated the aforementioned changes into the Final EA and it was released as part of the Governing Board package for the October 2, 2015 public hearing. The project, however, was not adopted and moreover, the Final EA was not certified at that time.

Since the release of the Final EA, additional changes have been made to Proposed Amended Rule 1106 that would remove the previously proposed reporting, recordkeeping, and labeling requirements. Staff has reviewed these additional modifications to Proposed Amended Rule 1106 and concluded that none of these additional revisions constitute: 1) significant new information; 2) a substantial increase in the severity of an environmental impact; or 3) provide new information of substantial importance relative to the draft document. Additionally, revisions to the proposed project in response to verbal or written comments would not create new, avoidable significant effects. These revisions do not require recirculation of the Draft EA pursuant to CEQA Guidelines Sections 15073.5 and 15088.5. Therefore, staff is preparing a Revised Final EA which will be included in the Governing Board package for the May 3, 2019 public hearing (date subject to change) which will include exemptions for coatings containing 50 g/L of VOC or less, coatings that have a viscosity greater than 650 centipoise, and coatings that are not used for vessels that are intended to submerge to at least 500 feet below the surface of the water.

SOCIOECONOMIC IMPACT ASSESSMENT

Proposed Amended Rule 1106 clarifies existing requirements for Marine and Pleasure Craft Coatings found in current Rules 1106 and 1106.1, and proposes requirements that align with existing requirements found in current SCAQMD Regulation XI rules, U.S. EPA CTGs, and similar rules of other California air districts. Since there are already available marine and pleasure craft coating products that are already being used and meet the VOC requirements in this proposal and the cost of products in the affected coating categories are to remain the same, the proposed amendments are not expected to result in increased compliance costs to affected facilities beyond what is currently required. Additionally, the proposed amendments are administrative in nature and will not significantly affect air quality or emission limitations. As such, no socioeconomic impact assessment was performed for the proposed amendments.

DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE 40727

The draft findings include necessity, authority, clarity, consistency, non-duplication and reference, as defined in Health and Safety Code Section 40727. The draft findings are as follows:

Necessity - The SCAQMD Governing Board finds and determines that Proposed Amended Rule 1106, Marine and Pleasure Craft Coatings, is necessary to enhance readability and provide clarity of rule language, and ensure consistency with U.S. EPA Control Techniques Guidelines and other air district rules.

Authority - The SCAQMD Governing Board obtains its authority to adopt, amend or repeal rules and regulations from Health and Safety Code Sections 39002, 40000, 40001, 40440, 40702, 40725 – 40728, 41508 and 41700.

Clarity - The SCAQMD Governing Board finds and determines that Proposed Amended Rule 1106 is written and displayed so that the meaning can be easily understood by persons directly affected by it.

Consistency - The SCAQMD Governing Board finds and determines that Proposed Amended Rule 1106 is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or federal or state regulations.

Non-Duplication - The SCAQMD Governing Board has determined that Proposed Amended Rule 1106 does not impose the same requirement as any existing state or federal regulation, and the proposed amendment is necessary and proper to execute the powers and duties granted to, and imposed upon, the SCAQMD.

Reference - In adopting this Proposed Amended Rule 1106, the SCAQMD Governing Board references the following statutes which SCAQMD hereby implements, interprets or makes specific: Health and Safety Code Sections 40001, 40440, and 40702, and Clean Air Act Section 172 (c)(1) (Reasonably Available Control Technology).

COMPARATIVE ANALYSIS

California Health and Safety Code Section 40727.2 requires the comparative analysis with any federal or other SCAQMD rules that apply to the same equipment or source type as the proposed amendment. The existing VOC limits in current Rule 1106 and Rule 1106.1 as well as the proposed VOC limits in Proposed Amended Rule 1106 are not in conflict with the current National Emission Standards for Hazardous Air Pollutants (NESHAP) for Shipbuilding and Ship Repair Operations (Surface Coating), 40 CFR Part 63, dated June 18, 1996. The existing VOC limits in current Rule 1106 and Rule 1106.1 as well as the proposed VOC limits in Rule 1106 are not in conflict with the current U.S. EPA CTG, dated August 27, 1996. Proposed Amended Rule 1106 seeks to align the VOC limit for Inorganic Zinc Coating in current Rule 1106 from 650 g/L to 340 g/L to be consistent with the U.S. EPA VOC limit of 340 g/L.

The NESHAP for Shipbuilding and Ship Repair Operations (Surface Coating) sets forth Hazardous Air Pollutants (“HAP”) emission limits for major source facilities that apply coatings used in volumes of 200 liters (52.8 gallons) or more. Affected sources under this NESHAP are Shipbuilding and Ship Repair Operations (Surface Coating) that are major sources under federal law, or are coating operations located within the confines of a federal major source.

The U.S. EPA CTG is intended to provide state and local air pollution authorities’ information to assist them in determining RACT for VOCs for Shipbuilding and Ship Repair Operations (Surface Coating).

The proposed amendments to Rule 1106 are not expected to reduce or increase VOC emissions. Current Rules 1106 and 1106.1 and Proposed Amended Rule 1106 does not regulate Hazardous Air Pollutants (HAP) emissions directly. Therefore, the existing as well as the proposed VOC limits of Rule 1106 are not in conflict with federal regulations.

Table 3-1 has been prepared to show comparisons between SCAQMD Proposed Amended Rule 1106, the U.S. EPA CTG, and the NESHAP regulation.

TABLE 3-1: COMPARATIVE ANALYSIS

CATEGORY	SCAQMD PAR1106 – Marine and Pleasure Craft Coatings	U.S. EPA CTG Control Techniques Guidelines for Shipbuilding and Ship Repair Operations (Surface Coating)	USEPA NESHAP 40 CFR Part 63 – NESHAP for HAP for Shipbuilding and Ship Repair Operations (Surface Coating)
Purpose	Reduces emissions of VOC and stratospheric ozone depleting and global warming compounds from Marine & Pleasure Craft Coatings.	Provides state and local air pollution authorities' information to assist them in determining RACT, to control VOCs from surface coating operations in the shipbuilding and ship repair industry.	Establishes National Emission Standards for Hazardous Air Pollutants for shipbuilding and ship repair (surface coating) facilities.
Applicability	Applies to local Marine and Pleasure Craft Coatings.	Applies to facilities that perform surface coating operations in the shipbuilding and ship repair industry. Does not include pleasure craft coating operations.	Applies to shipbuilding and ship repair (surface coating) operations at any facility that is a major source. Does not include pleasure craft coating operations.
Averaging Provisions	None.	None.	None.
Units	Mass/Volume: Grams/Liter (less water and exempt compounds) or Pounds/Gallon.	Mass/Volume: Grams/Liter (minus water and exempt compounds).	Mass/Volume: Grams/Liter (minus water and exempt compounds).
Requirements	VOC Limits For Marine Coatings: Antenna Coating: 340 Antifoulant Coatings: Aluminum Substrates: 560 Other Substrates: 400 Elastomeric Adhesives: 730 Inorganic Zinc Coating: 340 Low Activation Interior Coating: 420 Mist Coating: 610 Navigational Aids Coating: 340 Nonskid Coating: 340 Organic Zinc Coating: 340 Pre-Treatment Wash Primer: 420 Repair and Maint. Thermoplastic Coating: 340 Sealant for Wire-Sprayed Aluminum: 610 Special Marking Coating: 420 Specialty Coatings:	VOC Limits For Marine Coatings: General use: 340 Specialty Air flask: 340 Antenna: 530 Antifoulant: 400 Heat resistant: 420 High-gloss: 420 High-temperature: 500 Inorganic zinc high-build: 340 Military exterior: 340 Mist: 610 Navigational aids: 550 Nonskid: 340 Nuclear: 420 Organic zinc: 360 Pretreatment wash primer: 780 Repair and maint. of thermoplastics: 550 Rubber camouflage: 340 Sealant for thermal spray aluminum: 610 Special marking: 490 Specialty interior: 340 Tack coat: 610 Undersea weapons systems: 340 Weld-through precon. primer: 650	VOC Limits For Marine Coatings: General use: 340 Specialty Air flask: 340 Antenna: 530 Antifoulant: 400 Heat resistant: 420 High-gloss: 420 High-temperature: 500 Inorganic zinc high-build: 340 Military exterior: 340 Mist: 610 Navigational aids: 550 Nonskid: 340 Nuclear: 420 Organic zinc: 360 Pretreatment wash primer: 780 Repair and maint. of thermoplastics: 550 Rubber camouflage: 340 Sealant for thermal spray aluminum: 610 Special marking: 490 Specialty interior: 340 Tack coat: 610 Undersea weapons systems: 340 Weld-through precon. primer: 650

	Heat Resistant Coating: 360 (baked), 420 (air dried) Metallic Heat Resistant Coating: 530 High Temperature Coating: 500 Tack Coating: 610 Topcoats: Extreme High-Gloss Coating: 420 (baked), 490 (air dried) High Gloss Coating: 275 (baked), 340 (air dried) Undersea Weapons Systems Coating: 275 (baked), 340 (air dried) Any Other Coating Type: 275 (baked), 340 (air dried)		
Operating Parameters	Has HVLP type transfer efficiency requirements for coating application equipment.	No HVLP type transfer efficiency requirements for application equipment.	Does not include the use of HVLP type transfer efficiency for application equipment.
Method to Determine VOC	U.S. EPA Method 24, or SCAQMD Method 304, or SCAQMD Method 313.	Does not mention U.S. EPA Methods for determining VOC.	U.S.EPA Method 24 of 40 CFR part 60, appendix A.
Capture Efficiency	None.	Does not mention U.S. EPA Methods for capture efficiency.	Does not mention U.S.EPA Methods for capture efficiency.
Control Device Efficiency	None.	Does not mention U.S. EPA Methods for control device efficiency.	Does not mention U.S. EPA Methods for control device efficiency.
Work Practices	Defers to Rule 1171 for storage and disposal of VOC containing materials.	Does not contain any work practices recommendations.	VOC containing containers to be kept closed when not in use. Minimize spills of VOC containing materials.
Monitoring	None	None	None
Reporting	None	No mention for reporting	No mention for reporting
Recordkeeping	Defers recordkeeping to Rule 109.	No mention for recordkeeping.	Comprehensive records required annually to support compliance.
Other Elements	Prohibition of possession, specification and sale for non-compliant marine and pleasure craft coatings.	No mention of a prohibition of sale requirement.	No mention of a prohibition of sale requirement.
	Offers five exemptions: Marine or pleasure craft coatings with 50 g/L VOC or less, marine coatings applied to interior surfaces of potable water	No transfer efficiency requirements in the CTG.	Offers two exemptions: annual usage of less than 200 liters for an individual coating and aerosol containers.

	containers, touch-up coatings, aerosol containers, marine or pleasure craft coatings that are greater than 650 centipoise viscosity from transfer efficiency requirements, and coatings used on vessels intended to be submerged at least 500 feet below the water surface.		
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DRAFT CONCLUSIONS AND RECOMMENDATIONS

Based on the foregoing, staff recommends the adoption of Proposed Amended Rule 1106 - Marine and Pleasure Craft Coatings.

PUBLIC COMMENTS AND RESPONSES

Staff has held several public meetings where the stakeholders and other interested parties were provided an opportunity to respond to the developing rulemaking for the rescission of Rule 1106.1 and the amendment to Rule 1106. Staff received several comment letters during the rulemaking and those comments along with staff's responses to those comments will be provided here after the conclusion of the commenting period from Working Group Meeting #2. All the public meetings for this rulemaking are shown below in Table 3-2.

TABLE 3-2: PUBLIC MEETINGS HELD DURING THE RULEMAKING FOR PAR1106

PUBLIC MEETING	DATE HELD
Working Group Meeting #1	1/16/19
Public Workshop	2/12/19
Working Group Meeting #2	3/12/19
Stationary Source Committee	3/15/19

Comment Letter 1



January 31, 2019

Ms. Charlene Nguyen.
 South Coast Air Quality Management District
 21865 Copley Drive
 Diamond Bar, CA 91765

Re: Public comments to Proposed Amended Rule 1106 (Marine and Pleasure Craft Coating Operations)

Dear Charlene:

RadTech International is pleased to comment on the proposed amendments to Rule 1106. Although UV/EB technology does not dominate the marine and pleasure craft coatings market, it is being used for this type of coating application. RadTech supports the district's efforts to improve air quality in the Basin without sacrificing a healthy business climate and believes that the implementation of UV/EB technology can accomplish both goals.

Request for Exemption

As mentioned during the public workshop, RadTech urges the district to provide regulatory flexibility to UV/EB/LED processes. Our materials are typically well below 50 grams/liter in VOC content which is minimal compared to the proposed limits, some as high as 780 grams/liter. While it may make regulatory sense to scrutinize high VOC materials, it simply does not make sense to subject companies who are investing in clean air technology to the same level of scrutiny. In keeping with past district policies and direction from the Governing Board, we respectfully request that UV/EB/LED materials be exempted from the rule requirements. Any relief from administrative burdens will amount to incentives for businesses to voluntarily choose UV/EB/LED technology.

1-1

Test Method

We very much appreciate the inclusion of a definition for energy curable materials in the rule and inclusion of ASTM D7767 (the test method for thin film UV/EB curable materials). In order to increase consistency and avoid confusion, we urge the district to include ASTM F7767-11 in Section (h) Test Methods.

1-2

Support for other Stakeholders

We support the comments made by the American Coatings Association regarding allowing the industry one year for rule implementation. We also support the Metropolitan Water District's request to exempt high viscosity (above 650 cps) materials from the transfer efficiency requirements of the rule. Flexibility should be offered to UV/EB processes as related to the requirements for transfer efficiency in the rule. UV/EB materials not only meet but far exceed any proposed rule requirements

1-3

and any added flexibility to companies that choose these pollution preventive processes will encourage voluntary emission reductions thereby furthering the district's mission.

} 1-3

We appreciate your attention to this matter and look forward to a productive rulemaking process.

Sincerely,

Rita M. Loof

Director, Environmental Affairs

Response to Comment 1-1

Staff decided to include an exemption for marine and pleasure craft coatings containing a VOC content of 50 g/L or less, or its equivalent, less water and exempt compounds, as applied, from the requirements of Proposed Amended Rule 1106 as an incentive for users to choose lower VOC coatings and for manufacturers to formulate lower VOC marine and pleasure craft coatings. Staff believes the 50 g/L VOC content limit is an appropriate limit for exemption because this limit is approximately 10% of the weighted average of the VOC limits presented per coating type in Proposed Amended Rule 1106 and this limit is consistent with other VOC coating rules where the VOC limits are as low as 50 g/L.

Response to Comment 1-2

Staff added a new definition to Proposed Amended Rule 1106 for “Energy Curable Coatings” and included a reference to ASTM D7767-11 in this definition. Staff decided to include ASTM D7767-11 in the definition for energy curable coatings to indicate that manufacturers may use this method to help identify and select lower VOC constituents for formulation and production. However, this method is not a direct method for measuring VOC content in thin-film coatings, and therefore, it is not included in the Test Methods section of Proposed Amended Rule 1106. Staff proposes to provide an exemption for marine or pleasure craft coatings that have a VOC content of 50 g/L or less from rule requirements. For energy curable coatings, product formulation data and test results from the ASTM D7767-11 method will be allowed to be used to determine if the coating qualifies for this exemption.

Response to Comment 1-3

Staff did not include any additional recordkeeping or other administrative requirements (e.g. labeling) to Proposed Amended Rule 1106 and instead, clarified existing rule requirements. Furthermore, staff has found that there are readily available marine and pleasure craft coatings that already meet the VOC limits proposed in Proposed Amended Rule 1106 and end-users are using coatings that already meet the proposed limits. Therefore, staff does not see a need for a rule implementation period. Staff also included an exemption for coatings that have a viscosity of 650 centipoise or greater from the proposed transfer efficiency requirements. A more detailed response to this comment regarding high viscosity materials is included in Chapter 2 of the Staff Report.

Comment Letter 2



February 26, 2019

Ms. Charlene Nguyen
 Planning, Rule Development & Area Sources
 South Coast Air Quality Management District
 21865 Copley Drive
 Diamond Bar, CA 91765-4178

RE: Proposed Amended Rule 1106; ACA Comments

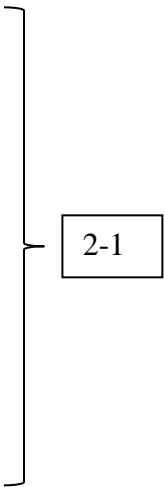
Dear Ms. Nguyen:

The American Coatings Association (ACA)¹ submits the following comments regarding South Coast Air Quality Management District’s (SCAQMD) Proposed Amended Rule 1106 – Marine and Pleasure Craft Coating Operations. As always, our goal is to support the District’s efforts to improve air quality while ensuring that top quality marine coatings products are available for customers in the South Coast basin. ACA appreciates the opportunity to provide comments and looks forward to assisting SCAQMD throughout this rulemaking process.

1. ACA requests that SCAQMD include a one-year compliance date in Amended Rule 1106.

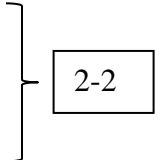
Once Amended Rule 1106 is finalized, all of its requirements will go into effect immediately. This is problematic because there were new provisions added to the proposed rule that industry will need time to comply with before the rule goes into effect. For example, there are new labeling requirements in paragraph (g)(1) that apply to *all* marine coating manufacturers. In the current Rule 1106.1, there are no labeling requirements for pleasure craft coating manufacturers, which means that those entities will need to adjust their supply chain processes to ensure appropriate labels are prepared and placed on their products. As a result, those affected manufacturers will need sufficient time to properly implement the new labeling requirements before the compliance date goes into effect.

Similarly, there are new provisions in section (e) regarding prohibitions on possession, specification, and sale of products that are not in compliance with certain requirements in the rule. Marine coatings manufacturers will need a reasonable amount of lead time to ensure that any non-compliant products are not in their possession nor being sold within the District’s jurisdiction. Consequently, ACA requests that SCAQMD include a one-year compliance date in Amended Rule 1106 to ensure that industry has enough time to comply with new provisions in the amended rule.



2. ACA also requests that SCAQMD add a three-year sell through provision to Amended Rule 1106.

Since there are new requirements that will alter the way marine coatings manufacturers assemble and supply their products, ACA requests that SCAQMD add a three-year sell through provision to Amended Rule 1106. As mentioned, SCAQMD proposed new labeling requirements for *all* marine coating manufacturers. A sell through



¹ The American Coatings Association (ACA) is a voluntary, nonprofit trade association working to advance the needs of the paint and coatings industry and the professionals who work in it. The organization represents paint and coatings manufacturers, raw materials suppliers, distributors, and technical professionals. ACA serves as an advocate and ally for members on legislative, regulatory, and judicial issues, and provides forums for the advancement and promotion of the industry through educational and professional development services.

provision would allow companies to continue selling regulated, unlabeled products that were manufactured prior to the amended rule’s effective date for a set period of time after the amended rule’s effective date. This would give industry time to sell through their existing inventory while reducing the amount of waste that would occur if no sell through provision was included in the amended rule. The addition of a sell through provision would also be consistent with SCAQMD’s longstanding practice of including sell through provisions in its rules.

2-2

3. Lastly, ACA requests that SCAQMD modify the Most Restrictive VOC Limit provision.

In paragraph (d)(4), if a coatings product “meets the definition of or is recommended for use for more than one of the marine coating categories listed in paragraph (d)(1) or the pleasure craft coating categories listed in paragraph (d)(2), or the low-solids coating category listed in paragraph (d)(3), then the lowest VOC content limit shall apply.” The issue with this provision lies in the fact that the District is combining the marine coating and pleasure craft coating rules into one rule. The problem with combining the marine coatings and pleasure craft coatings rules together is that companies may sell products that can be used on both pleasure craft and marine vessels. According to paragraph (d)(4), these products would be subject to the lowest limit of both tables.

For example, under the current regulations, companies that sell high gloss products intended for pleasure craft (i.e. wood, fiberglass, or metal substrates) must meet the 420 g/L limit pursuant to Rule 1106.1. Inversely, companies that sell high gloss products intended for marine vessels must meet the 340 g/L limit pursuant to Rule 1106. Under Proposed Amended Rule 1106, companies would either have to market two separate products (one for marine and one for pleasure craft) or apply the 340 g/L limit according to the most restrictive VOC limit provision in paragraph (d)(4). The same issue arises for antifoulant, pretreatment wash primer, and “any other coating type” categories. As written, this new provision would be extremely burdensome on both industry and SCAQMD because it would cause a great deal of regulatory confusion and uncertainty.

2-3

In the alternative, ACA suggests that SCAQMD modify this provision in Amended Rule 1106 so that the most restrict VOC limit would apply separately to Marine Coatings Categories in Table of Standards I and Pleasure Craft Coatings Categories in Table of Standards II instead of across both tables. This would eliminate the expected confusion that would undoubtedly arise.

Thank you for your consideration of our concerns. Please do not hesitate to contact us if you have any questions.

Sincerely,



Rhett Cash
Counsel, Government Affairs



Raleigh Davis
Assistant Director, Environmental Health and Safety

Response to Comment 2-1

Staff did not include any additional recordkeeping or other administrative requirements (e.g. labeling) to Proposed Amended Rule 1106 and instead, clarified existing rule requirements. VOC labeling of VOC-containing materials in containers with capacities of one quart or larger has been required since December 5, 1986 per Rule 443.1 – Labeling of Materials Containing Organic Solvents. Furthermore, staff has found that there are readily available marine and pleasure craft coatings that already meet the VOC limits proposed in Proposed Amended Rule 1106 and end-users are using coatings that already meet the proposed limits. Except for the newly added coating categories and coating categories affected by the VOC limit adjustments in accordance with the VOC limits prescribed by the U.S. EPA Control Techniques Guidelines for Shipbuilding and Ship Repair Operations (Surface Coating) and other air districts, the VOC limits for the rest of the coating categories are still retained from the existing Rules 1106/1106.1 in Proposed Amended Rule 1106. Therefore, staff does not see a need for a rule implementation period. The proposed amendment to Rule 1106 is intended to align VOC limits with the U.S. EPA Control Techniques Guidelines and other air districts.

Response to Comment 2-2

See Response to Comment 2-1

Response to Comment 2-3

Staff added the Most Restrictive VOC Limit provision to be consistent with other SCAQMD Regulation XI coating rules and is intended to enhance clarity and compliance. During the rulemaking process, staff discussed with marine and pleasure craft manufacturers about their individual potential compliance issues pertaining to this added rule provision, and they did not have concerns that could not be remedied by SCAQMD compliance and enforcement activities already in place per existing rules. Staff believes that the most restrictive VOC limit as written in Proposed Amended Rule 1106 will eliminate regulatory confusion and uncertainty among multiple marine and pleasure craft coating categories as it pertains to VOC limits, and will ensure that end-users use compliant marine and pleasure craft coatings. A more detailed explanation for the inclusion of the Most Restrictive VOC Limit provision, to be applied across both tables of standards for marine and pleasure craft coatings, is included in Chapter 2 of the Staff Report.

Comment Letter 3



March 24, 2019

Mr. Wayne Nastri
 Executive Officer
 South Coast Air Quality Management District
 21865 Copley Drive
 Diamond Bar, CA 91765
wnastri@aqmd.gov

Re: Public comments to Proposed Amended Rule 1106 (Marine and Pleasure Craft Coating Operations)

Dear Mr. Nastri:

Saint Clair Systems, Inc. is involved in the robotic application of coatings in the marine industry and is pleased to comment on the proposed amendments to Rule 1106. We support the RadTech proposal for (1) an exemption for materials that contain less than 50 grams per liter in Volatile Organic Compounds (VOCs) and (2) additional clarity for test method for UV/EB thin film materials.

Request for Exemption

Our company urges the district to provide regulatory flexibility to UV/EB/LED processes. Our materials are typically well below 50 grams/liter in VOC content which is minimal compared to the proposed limits, some as high as 780 grams/liter. While it may make regulatory sense to scrutinize high VOC materials, it simply does not make sense to subject companies who are investing in clean air technology to the same level of scrutiny. In keeping with past district policies and direction from the Governing Board, we respectfully request that UV/EB/LED materials be exempted from the rule requirements. Relief from administrative burdens provides strong incentives for businesses to voluntarily choose UV/EB/LED technology, and thus a path of least environmental impact.

3-1

Test Method

We very much appreciate the inclusion of a definition for energy curable materials in the rule and inclusion of ASTM D7767 (the test method for thin film UV/EB curable materials). In order to increase consistency and avoid confusion, we urge the district to include ASTM F7767-11 in Section (h) Test Methods.

3-2

12427 31 Mile Road • Washington Township, Michigan • 48095
 586.336.0700 • www.saintclairsystems.com



We appreciate your attention to this matter and look forward to a productive rulemaking process.

Sincerely,

Saint Clair Systems, Inc.

A handwritten signature in black ink that reads 'Michael R. Bonner'.

Michael R. Bonner
VP – Engineering & Technology

12427 31 Mile Road • Washington Township, Michigan • 48095
586.336.0700 • www.saintclairsystems.com

Response to Comment 3-1

See Response to Comment 1-1 on page 3-10 of the Staff Report.

Response to Comment 3-2

See Response to Comment 1-2 on page 3-10 of the Staff Report.

REFERENCES

SCAQMD Final Staff Report for proposed amendment to: 1106 - Marine Coating Operations, December 1994.

SCAQMD Final Staff Report, Proposed Amended Rule 1106.1 - Pleasure Craft Coating Operations, January 1999.

Websites:

http://en.wikipedia.org/wiki/Anti-fouling_paint

<http://en.wikipedia.org/wiki/Ablation>