

APPENDIX E

COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT AND RESPONSES TO THE COMMENTS



Daniel B. Pourreau, Ph.D.
Technical Advisor

Lyondell Chemical Company
3801 West Chester Pike
Newtown Square, PA 19073

Phone: 610-359-6837
Fax: 610-359-5530
Email: dan.pourreau@lyondell.com

May 18, 2006

Michael Krause
Planning, Rule Development and Area Sources
c/o CEQA
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, California 91765

Re: Comments on the Draft Environmental Assessment for Proposed Amended Rule 1113 –
Architectural Coatings.

Dear Michael,

As the developer and leading producer of tertiary-butyl acetate (TBAC), Lyondell Chemical appreciates the opportunity to comment on the CEQA analysis for Proposed Amended Rule 1113 – Architectural Coatings. TBAC is a useful solvent for a variety of architectural and industrial maintenance coatings and, when exempted, will be an important tool to reduce ozone levels in the South Coast while allowing businesses to formulate cost-effective VOC-compliant coatings that meet performance requirements. This was again evident from the comments from the coating companies weighing in at the recent public workshop and from input by NPCA, representing other manufacturers and users of both industrial maintenance and architectural coatings.

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I. Lyondell Agrees that Exempting TBAC in IM Coatings Will not Pose a Health Risk

For this reason, we were pleased to see Staff conduct a health risk assessment (HRA) for the use of TBAC in low-VOC industrial maintenance coatings and zinc-rich primers. The HRA used OEHHHA's very conservative acute REL and hypothetical cancer URF (unit risk factor) based on the most sensitive endpoints for the TBA metabolite. In other words, the toxicity numbers used in the HRA already incorporate several worst-case assumptions regarding the potential toxicity of TBAC. Lyondell understands that it is SCAQMD policy to accept OEHHHA's toxicity numbers without question. However, it is important to note that these numbers already include several worst case assumptions about the potential toxicity of TBAC and are, themselves, worst-case hypothetical numbers.

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For example, Staff used the acute REL of 10,000 µg/m³ suggested by OEHHHA. This REL is based on a poorly conducted and documented 1953 acute inhalation study despite the availability of two more recent studies conducted on TBAC using Good Laboratory Practices. The more recent studies should have been used by OEHHHA but were dismissed or ignored. Similarly, OEHHHA's cancer slope factor and URF (unit risk factor) for TBAC are not based on TBAC chronic data but on chronic data for the metabolite TBA. These hypothetical cancer numbers for TBAC also include several worst case assumptions, including the assumption that TBA and TBAC are genotoxic, despite compelling scientific evidence that they are not.

To OEHHHA's worst-case toxicological assessment, SCAQMD Staff has added worst-case acute and chronic exposure scenarios. Yet, despite these cumulative conservative assumptions, Staff found that

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Lyondell Chemical comments on SCAQMD CEQA analysis for PAR 1113 – Architectural Coatings. May 18, 2006.

the increased use of TBAC in industrial maintenance coatings would not increase health risks above the CEQA levels of concern. Staff correctly states that “the HRA analysis concluded that both carcinogenic and non-carcinogenic acute risk to be less than significant.” Lyondell agrees with this conclusion, if not the process and assumptions made to reach it.

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(con’t)

Conspicuously absent for the analysis, however, are the health benefits that will result from the reduction in ozone and TAC emissions from increased use of TBAC in IM coatings. Also absent from this CEQA analysis is the impact of NOT exempting TBAC in other architectural coatings categories, as requested by Lyondell, NPCA, and other interested parties throughout the extended rulemaking process. In particular, we believe that exempting TBAC in the three coating categories whose compliance dates have been postponed because they are not technologically feasible would provide immediate economic and environmental benefits.

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We also believe that CEQA Rule 110 requires that SCAQMD Staff conduct a health risk assessment on clear wood varnishes and sanding sealers, and other coating categories whose VOC content limits are being reduced on 7/1/2006. We also request that Staff correct several inaccuracies concerning the available toxicological information on TBAC and that the health risk analysis also reflect the potential *benefits* from increased TBAC use in industrial maintenance and architectural coatings.

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II. The Draft EA Incorrectly States that TBAC has not Undergone Toxicity Testing.

The toxicity and environmental impacts of TBAC have been extensively studied and the abundant available information, although not exhaustive, supports the conclusion that its increased use will likely have a large beneficial impact on public health and the environment, when used instead of reactive TACs and VOCs such as toluene and xylene or known or probable carcinogens like PERC and methylene chloride.

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When EPA and OEHHA referred to “uncertainty,” they were merely pointing out that TBAC had not undergone subchronic or chronic toxicity testing. This is not uncommon for new chemicals such as TBAC or even for solvents that have been in commercial use for decades. For example, PCBTF, a solvent exempted several years ago and used extensively in the South Coast, has not been tested for chronic toxicity.

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However, TBAC has been extensively tested for acute and sub-acute toxicity, genotoxicity and mutagenicity. The overwhelming weight of the evidence shows that TBAC has low acute toxicity relative to the solvents it will replace and is not genotoxic or mutagenic. TBAC is currently undergoing a battery of subchronic toxicity tests and preliminary results indicate that it has low subchronic toxicity as well. As you know, the final results will be available later this year and will determine if further toxicity testing is warranted.

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It is also important to note that the pharmacokinetics of TBAC are well understood. TBAC has been shown to be rapidly exhaled and excreted when inhaled and the metabolites to be rapidly excreted via the urinary pathway. One of its metabolites is tertiary butanol, TBA, whose toxicity is very well understood. TBA has low acute and chronic toxicity, is non-mutagenic, and is not a reproductive toxin. Another metabolite is acetic acid, a component of vinegar and part of the citric acid cycle. TBA has been shown to produce small increases in tumors in rats and mice when ingested at very high doses only.

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Leading toxicology experts believe these rat tumors to be irrelevant to human carcinogenicity because they are caused by rodent-specific modes of action that do not exist in humans (α 2-u and CPN). Humans are also much less susceptible to thyroid tumors than mice. The increase in these tumors was also small and only occurred at the highest dose in female mice, indicative of a threshold mechanism. Both types of tumors occur naturally in aging rats and mice.

Furthermore, several authoritative agencies, including NTP, ACGIH and EPA have reviewed the TBA chronic data and have listed it as “not-classifiable” as a human carcinogen. Although OEHHA has calculated a worst-case cancer unit risk factor for TBAC based on the most sensitive TBA rat data, and assuming a non-threshold mechanism, it has not classified either chemical as known or probable human carcinogens or listed them as TACs. There is ample evidence that TBA and TBAC have low toxicity.

Based on the known metabolism of TBAC, mice would have to be exposed to over 4,500 ppm of TBAC for extended periods to produce comparable doses of TBA. It would be impossible to expose animals or humans to such high levels of TBAC from occasional or even occupational use of architectural coatings. Therefore, TBAC cannot pose a significant cancer risk from its TBA metabolite and occasional use of architectural coatings.

Therefore, Lyondell requests that Staff delete or correct the following statements in the acute (non-cancer) health effects section of the draft EA and acknowledge that there is extensive toxicological information on both TBAC and TBA:

- “TBAC has not undergone specific toxicity testing” (4-2 first paragraph).
- “As noted above, no toxicity studies have been conducted for TBAC so no REL data are available.” (4-3 second paragraph).
- “Therefore, TBAC (*sic*) is used as a surrogate for TBAC to evaluate non-cancer health effects from exposure to IM coatings formulated with TBAC.” (4-3 second paragraph).

These statements are not only factually incorrect but very similar to statements made by Katie Wolf, a paid SCAQMD contractor, in her January 31, 2006 letter to you,¹ in which she strenuously objects to the TBAC exemption. In her letter, Dr. Wolf makes several incorrect statements about the toxicity of TBA and TBAC even though she is not a toxicologist. Dr. Wolf also informed Staff in her letter and at the public workshop that the LACSD was using IM coatings occupationally at their Carson treatment facility, which led to your risk assessment on TBAC. It is disturbing that several of Dr. Wolf’s incorrect statements on the toxicity of TBAC and TBA can be found almost verbatim in this CEQA document.

III. Exempting TBAC in Other Architectural Coating Categories Would Result in Substantial Health Benefits by Reducing VOC and TAC Emissions.

As you stated in the NOP/IS document, chronic toxicity is not relevant to short term risk assessment. To the extent that a few architectural coatings may be used occupationally, it may be appropriate to consider chronic health effects and assess potential chronic risks in these specific cases. However, the majority of architectural coating categories are not used occupationally and, if some are, they are likely to be used in scenarios similar to industrial maintenance coatings uses. The risk assessment for the exemption of TBAC in industrial maintenance showed that there is no cause for concern. A similar assessment in other coating categories would likely produce the same answer. Therefore, the TBAC

¹ <http://www.aqmd.gov/ceqa/documents/2006/aqmd/draftEA/1113/appC.doc>

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exemption should not be arbitrarily limited to industrial maintenance coatings based on unsubstantiated health risks and claims that TBAC is not needed in other coating categories.

In fact, the public record and the draft EA itself provide several examples of coating categories where a VOC-exempt TBAC would provide immediate health, environmental, and economic benefits. The National Paint and Coatings Association, who represents manufacturers and users of these coatings, has requested that the TBAC exemption be expanded to at least varnishes and lacquers and, preferably, to all coating categories in rule 1113. In addition, Staff is proposing to delay the compliance date for high gloss coatings, quick dry enamels, and specialty primers, because current low-VOC products are inadequate. VOC-exempt TBAC could be a useful compliance tool in these coating categories as well.

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(con't)

To date, Staff has not provided any evidence to show that exempting TBAC in any coating categories in rule 1113 would pose a significant health or environmental risk. On the other hand, delaying the compliance date for VOC reductions is clearly not health protective. In addition, Staff continues to allow the use of exempt and non-exempt TACs such as PERC, methylene chloride, toluene, and xylene in architectural coatings.

CEQA rule 110 requires that Staff assess the potential adverse environmental impacts of PAR 1113. To the extent that Staff is proposing to limit the exemption of TBAC to Industrial Maintenance coatings, it is required to assess *the overall impact* of this decision, not just the potential negative health impacts of its increased use in this single coating category.

To the extent that AQMD Staff believes that TBAC may pose a long term health risk due to occupational exposure of a few coating categories under rule 1113, Rule 110 requires Staff to justify limiting the exemption based on a realistic usage scenario and an estimated chronic risk, as was done for automotive refinishing facilities for rule 1151. If not, the AQMD could inadvertently be promoting the use of other low-VOC technologies with worse health and environmental impacts, higher cost and inferior performance.

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In summary, there is abundant evidence to conclude that TBAC has low toxicity and Staff's own analysis in Industrial Maintenance coatings confirms that exempting it will not pose any significant acute or chronic health risk. Lyondell requests that Staff either demonstrate that exempting TBAC in other coating categories would pose a risk under realistic use scenarios or expand the exemption to all coating categories in rule 1113. I thank you again for the opportunity to comment. Please feel free to contact me if you have any questions or comments about this letter.

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Best Regards,



Daniel B. Pourreau, Ph.D.

cc: Steve Smith, Lee Lockie, Laki Tisopulos, Jean Ospital, Dan Russell, Barry Wallerstein, Larry Bowen, Elaine Chang, Michael Antonovich, Jan Perry, Dr. William Burke.

COMMENT LETTER NO. 1
LYONDELL CHEMICAL COMPANY

Daniel B. Pourreau, Ph.D.

May 18, 2006

Response 1-1

SCAQMD staff understands that Lyondell believes their product, tertiary butyl acetate (TBAC) is a useful solvent that, if exempted as a volatile organic compound (VOC), will reduce ozone as it allows coating manufacturers to formulate with it and comply with stringent VOC content limits. The SCAQMD is also aware of the support for TBAC from both industrial maintenance (IM) and architectural coating manufacturers.

Response 1-2

The SCAQMD estimated the short-term acute risk associated with the use of TBAC where toxicity data were available. TBAC is known to metabolize into tert-butyl alcohol (TBA) whose potency factors have been established. Therefore, TBAC is used as a surrogate for TBAC to evaluate non-cancer health effects from exposure to IM coatings formulated with TBAC. The cancer potency factor (CPF) of TBA was used to calculate a CPF for TBAC assuming metabolism of TBAC to TBA and a certain molar conversion factor. The acute inhalation unit risk value for TBAC was then derived from the CPF value for TBAC by assuming a certain human breathing rate (Budroe, et. al, Acute Toxicity and Cancer Risk Assessment Values for Tert-Butyl Acetate, 2004). Chronic hazard index (HI) was not calculated because neither TBAC nor TBA have chronic Reference Exposure Levels (RELs) established for them.

SCAQMD is uncertain as to the 1953 acute inhalation study upon which the commentator claims was solely relied upon to determine the acute REL. According to Acute Toxicity and Cancer Risk Assessment Values for Tert-Butyl Acetate, (Budroe, et. al, 2004), the two TBAC acute inhalation toxicity studies available for use in deriving an acute REL were conducted by Industrial Biotest Laboratories, Inc (1958) and Stillmeadow, Inc. (1997). With regard to the Good Laboratory Practices studies, the SCAQMD does not dictate which studies Office of Environmental Health Hazard Assessment (OEHHA) chooses to reference when making toxic determinations. SCAQMD staff relies on and defers to OEHHA to provide cancer potency values for preparing a health risk assessment (HRA).

Response 1-3

A “worst-case” short-term exposure to an IM coating formulated with TBAC was analyzed by examining a large one-million gallon tank as a typical piece of equipment to be painted using IM coatings that contain TBAC. All assumptions and the methodology

for calculating the acute HI from TBAC exposure can be found in Appendix D of this Final Environmental Assessment (EA). The calculation concludes that a realistic “worst-case” scenario of coating four gallons per hour of IM coating formulated with TBAC will produce an acute HI of 0.4 which is less than the SCAQMD’s HI significance threshold of one.

Based on comments raised at the Public Workshop and in another commentator’s letter regarding the potential toxicity of TBAC, there exists a potential chronic health risks from TBAC reformulated in IM coatings applied at facilities that continuously paint throughout the year. The SCAQMD has identified facilities where IM coatings are continuously applied and considered these sources. To evaluate the potential impacts from these types of specific sources, the Draft EA included an analysis of potential cancer and noncancer risk if TBAC is formulated in IM coatings used at a sewage treatment plant, refinery, and a water/power facility. For CEQA purposes, the SCAQMD’s significance threshold for carcinogenic impacts is a MICR greater than or equal to 10 in one million (10×10^{-6}). Using a realistic “worst-case” TBAC emissions for usage limited to IM coatings, real downwind distance to sensitive receptors and meteorological data, the HRA analysis concluded that carcinogenic risk to be less than significant.

Response 1-4

The commentator suggests that the CEQA analysis should include the health benefits of TBAC with regard to key low-VOC technologies. The purpose of the CEQA document is to evaluate the impacts of the project, generally using worse-case scenarios, not promote one product over another. The benefits of the rule, i.e., VOC emission reductions are disclosed to provide the rational for the rule. Since VOC emissions are an ozone precursor, reducing VOC emissions generally results in reducing ozone formation. Economic benefits and impacts can be found in the socioeconomic assessment.

Response 1-5

The environmental assessment conducted in accordance with CEQA examines the potential impacts from formulations expected to be used to comply with the proposed project. Compliance with the 7/1/2006 VOC content limits for clear wood finishes, sanding sealers and other coating categories is not part of the current rule proposal and the impacts from these new formulations can be found in previous environmental analyses when those limits were proposed.

With regard to providing a broad exemption of TBAC as a VOC for all coating categories, the SCAQMD is proposing to limit the exemption to the IM coating category because a segment of that category, atmospheric IM coatings, has not been successfully reformulated at a lower future VOC content limit to meet the Metropolitan Water District rigorous criteria. Reformulating IM atmospheric coatings with TBAC has reportedly provided a satisfactory product that complies with the lower future VOC content limit of

100 grams per liter. Reducing VOC emissions, which is a precursor to ozone, has positive environmental and public health consequences. However, potential cancer risk and non-cancer health effects are also a major concern on public health, especially because there is little toxicity data for TBAC. U.S. Environmental Protection Agency (EPA), OEHHA and the California Air Resource Board (CARB) have expressed concerns regarding the potential toxicity of TBAC. The risk and health effects from reformulated IM coatings have been evaluated in the Draft EA and, although determined to be not significant, demonstrates that a limited exemption is warranted. However, broad usage of TBAC in all architectural coatings is unnecessary and has the potential to substantially increase cancer and noncancer health risks to the public. The limited exemption for TBAC as a VOC for IM coatings limits public exposure to these adverse toxic impacts while providing a solvent that will assist manufacturers with formulation coatings that would meet the most rigorous standards.

Response 1-6

The SCAQMD acknowledges the studies conducted on the acute toxicity of TBAC and has used acute REL determined by OEHHA's in the HRA presented in the Draft EA, however the commentator's opinion that TBAC has been "extensively studied" is not completely accurate. Besides the need to use data on the known metabolite, TBA, for CPF and acute REL determination, the 90-day subchronic study mentioned is not finalized, and until those results are released, peer reviewed and confirmed, no data is available to assess chronic noncancer impacts from TBAC.

With regard to the toluene, xylene, etc. currently used to comply with the current requirements, these formulations are considered baseline and in most cases have been evaluated in previous environmental assessments with regard to their potential adverse impacts. If compliance with proposed lower VOC limits is achieved with the use of waterborne coatings and coatings formulated with VOC exempt solvents, then the evaluation will analyze impacts from those types of coatings. The evaluation will not compare what is currently used because the current coating formulations will not comply with the future standards.

Response 1-7

The commentator compares the availability of chronic studies for TBAC and parachlorobenzotrifluoride (PCBTF); however, PCBTF is currently exempt under Rule 102 so an exemption for PCBTF is not part of the proposed project. The SCAQMD originally exempted PCBTF from the definition of VOC in November 1995, and classified it as a Group II compound. A Final EA was prepared to address potential impacts from the proposed action. PCBTF was exempted from the definition of VOC based on the information available at that time, which indicated, "PCBTF is not absorbed into the body to any appreciable extent. Most of the material is either exhaled back or excreted. The small quantities that are assimilated are converted to non-toxic water

soluble products and excreted.” (Final EA for Proposed Amended Rule 102 – Definition of Terms, SCAQMD, October 1995).

PCBTF was moved from the Group II to the Group I list of exempt VOC compounds as part of amendments to Rule 102 adopted by the Governing Board on June 12, 1998. A Final Supplemental EA was prepared to address impacts from the proposed action. PCBTF was moved to the Group I list based on subchronic toxicity data evaluated by the OEHHA. After completing its review, OEHHA notified the SCAQMD in writing that there was an “absence of adverse health effects.” Based on this evaluation, the SCAQMD moved PCBTF from Group II to Group I.

Unlike TBAC’s metabolite TBA, no cancer potency values had been developed at that time for PCBTF or any of its metabolites. When OEHHA publishes toxicity values for chemicals, SCAQMD staff evaluates the health risk from these chemicals. Since cancer potency and acute noncarcinogenic values have been provided by OEHHA for use in evaluating health risk impacts from TBAC’s metabolite, TBA, SCAQMD staff used these values to estimate the potential increase health risk from the limited VOC exemption for TBAC in PAR 1113.

Response 1-8

Toxicity studies are complex considering a number of factors that could affect the outcome of the study. Regardless, the SCAQMD relies and defers to OEHHA to provide cancer, acute or chronic noncancer toxic determinations. Mice and rat studies are used to derive determinations of the effects to humans as humans are not used to test carcinogenicity. According to Acute Toxicity and Cancer Risk Assessment Values for Tert-Butyl Acetate, (Budroe, et. al, 2004), “TBAC should be considered to pose a potential cancer risk to humans because of the metabolic conversion to TBA.”

Response 1-9

The discussion under the Acute Health Effects section of the Final EA has been modified to reflect the use of the latest OEHHA evaluation, Acute Toxicity and Cancer Risk Assessment Values for Tert-Butyl Acetate, (Budroe, et. al, 2004) and suggestions made by the commentator have been clarified in the Final EA.

Response 1-10

While the commentator disagrees with Dr. Katy Wolf’s objection to the TBAC exemption, the comments do not specifically list what statements were incorrect. SCAQMD staff responded to her comment letter and those responses can be found in Appendix C of the Draft and Final EA.

Response 1-11

Based on the potential, but unknown toxicity of TBAC, the proposed limited exemption of TBAC is more health protective compared to the complete exemption while providing the coating manufacturers with flexibility in formulating compliant products with the future limits of PAR 1113 for IM coatings. IM coatings have exceptionally long durability, typically require personal protection equipment during application, and some are required to adhere to stringent MWD criteria. With regard to expanding the exemption to other coatings, according to 2001 CARB survey results as listed in Table 2 of the 2005 Annual Status report, some coatings have already recorded high sales data of coatings complying with the lower future VOC content limit. For example, 36 percent of the clear wood finishes had already achieved the future lower VOC content limit. Further, applicators of other coating categories do not typically wear personal protection equipment worn by professionals who apply IM coatings. Staff is opposed to allowing TBAC use in residential applications until final conclusions regarding the toxicity of TBAC have been concluded.

Response 1-12

SCAQMD staff proposed a limited exemption for TBAC in Rule 1151, in part, based on the HRA prepared to analyze cancer and noncancer health risks. An HRA to analyze cancer and noncancer health risks was prepared for PAR 1113 using the same methodology that was used for the Rule 1151 HRA. Similar assumptions were used including using TBA as a surrogate, the percent concentration, emission rates, etc. The main difference is that the PAR 1113 HRA used actual IM coating usage information for facilities in the district and used the actual meteorological data for the identified facilities. Similar to the results for Rule 1151, the HRA for PAR 1113 identified potential cancer and acute noncancer risks, but in neither case did the risks exceed applicable significance thresholds. See Chapter 4 and Appendix D for the results of the HRA.

Response 1-13

The HRA conducted and presented in the Draft EA concluded that facilities using IM coatings that could be reformulated with TBAC would not pose a significant cancer or acute noncancer risk. However, a chronic noncancer risk could not be determined as neither TBAC nor TBA have chronic RELs established for them. However, cancer and noncancer risk from exemption TBAC as a VOC in other coating categories were not analyzed as that is not part of the proposed project. However, there is concern the users of other coating categories would be consumers who do not typically wear personal protection equipment worn by professionals who apply IM coatings and due to the unknown toxicity of TBAC and lack of consensus with regards to cancer potency factors and RELs, the proposed limited exemption of TBAC in IM coatings is more health protective compared to the complete exemption from other coating categories.

May 19, 2006

Mr. Michael Krause
CEQA -- AIM Coatings Rule 1113
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

RE: Notice of Completion of a Draft Environmental Assessment; Proposed
Amendments to Rule 1113: Architectural and Industrial Maintenance
Coatings

Dear Mr. Krause:

The National Paint and Coatings Association (NPCA) is providing comments on the SCAQMD's Notice of Completion of a Draft Environmental Assessment relating to the proposed Amendments to Rule 1113 that would:

- define tertiary butyl acetate as a non-VOC for industrial maintenance coatings,
- lower the VOC limits for three existing coating categories (concrete-curing, dry-fog, and traffic coatings),
- differentiate nonflat high gloss from other nonflat coatings,
- and postpone the compliance date for nonflat high gloss coatings, quick-dry enamels and specialty primers by one year while requiring interim VOC content limits for quick-dry enamels and specialty primers.

Since members of NPCA manufacture and sell AIM coatings in the South Coast Air Management District, NPCA is very interested the proposed amendments.

NPCA is a voluntary, nonprofit trade association representing some 350 manufacturers of paints, coatings, adhesives, sealants, and caulks, raw materials suppliers to the industry, and product distributors. As the preeminent organization representing the coatings industry in the United States, NPCA's primary role is to serve as ally and advocate on legislative, regulatory and judicial issues at the federal, state, and local levels. In addition, NPCA provides members with such services as research and technical information, statistical

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management information, regulatory guidance, and community service project support.

It is important to note that our ability to provide specific comments on the proposed amendments is affected by NPCA's and SCAQMD's ongoing discussions on this matter as part of the Ad Hoc Paint and Coatings Committee that was established by Chairman Burke with Board Members Antonovich and Perry. The Committee's focus is to address industry concerns regarding various AIM coating VOC limits, and resolve current and potential future litigation arising from this issue.

So while NPCA provides these initial comments on the CEQA document, we recognize that there could well be additional information that may become available that affect the issues commented upon. Previous materials submitted to the SCAQMD in our ongoing discussions with SCAQMD also should be considered as part of this submission.

These include NPCA's December 21, 2005 Position Paper which sets out our current position in detail with respect to Rule 1113 as it now stands and our proposed amendments for it and the accompanying Table of Standards, as well as information provided by industry representatives at the February 13 and 14, 2006 meetings with Staff.

General Comments

As a general matter we note that the proposed amendments are an effort by SCAQMD to address concerns raised by industry relating to rule limits, definitions, etc. that will become effective July 1, 2006 and thereafter. While we welcome the proposed changes for providing at least some answer to our concerns, we still maintain that they are on the whole insufficient to answer all of our concerns over the technological feasibility of the limits at issue. Our specific comments follow.

Clear Wood Finishes Small Container Exemption and the Shortened Sell Through Period

The SCAQMD in January 2006 announced what it characterizes as an "interpretation" of the sell through provision of Rule 1113 which requires that in order for previously completely exempted material in small containers to qualify for the three year sell through, the material must meet the previously applicable VOC limit that had applied to nonexempt material in large containers.

As discussed in the attached letter from NPCA's counsel, Jeff Margulies, this interpretation is inconsistent with the understood meaning of the sell through provision at the time of its adoption and any subsequent amendments to it. Moreover, the proposed amendment to it that would allow a limited one year sell through instead of the authorized three year period is wholly inadequate to address the issue for which the provision is intended – the waste that would be associated with removing and disposing of products that are rendered non-

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complaint by a rule change. The proposed amendment in effect would be based upon a fundamental "alteration" in the provision of the rule that in fact has never been passed or adopted by the Board.

As originally crafted by the California Air Resources Board several years ago and as adopted by the various air districts, the provision has always and consistently meant an unlimited three year sell through provision so long as the material had been compliant with any rule requirements that applied to it at the time of a rule change that made it noncompliant. In the case of a VOC limit change, to be eligible the material must have met that previously existing limit. But by the very terms of the small container exemption, no VOC limits apply to the material in small containers.

Staff apparently realizing for the first time the impact of its "interpretation" attempts to ameliorate the effects of what is in fact a substantive rule change by offering a wholly inadequate one year sell through. Staff surely must see that one year is insufficient time to use up all of the product that has been and will be manufactured and shipped by July 2006 and the impossibility of locating all of the remaining product by July 1, 2007.

Further the elimination of the small container exemption and the reduction of the varnish limit to 275 g/L provides no air quality benefit when the ozone-forming potential per unit volume solids applied is considered. The failure of the CEQA analysis to adequately consider this is a deficiency.

Exemption of Tertiary Butyl Acetate (TBAC) Should be Expanded

NPCA has requested that TBAC be available for use in industrial coatings, industrial maintenance coatings, lacquers and varnishes. Prior to the January 6, 2006 Governing Board meeting, SCAQMD Staff stated it would look at exempting TBAC for certain industrial maintenance coatings. Recently, Staff has stated that it is not as concerned with the health affects of TBAC as previously because it has been shown that the earlier risk assessment had overstated the risk. In light of this development, we urge the SCAQMD to consider a broader use of the material in addition to the industrial maintenance coatings, lacquers and varnishes. In fact we believe that SCAQMD should exempt TBAC without usage restriction for all coatings as did the State of California, EPA and most other states. In support of the above we fully endorse the submission of Lyondell, the developer and manufacturer of TBAC, which demonstrates that the risks and benefits of a wider use of TBAC in AIM coatings have not been properly analyzed pursuant to CEQA requirements.

However, as we have previously informed Staff, even if TBAC is exempted tomorrow, the industry needs time to develop coatings and to complete performance and field testing of the reformulated products. Consequently, interim relief from the 2006 limits will still be required as coatings using the exempt material are reformulated and tested.

In response, SCAQMD Staff states that:

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- IM coatings manufacturers have worked with TBAC in their formulations;
- they have already been working to reformulate these coatings with other solvents;
- and discussions with raw materials and additive suppliers indicate that these products can be delivered in TBAC, if demanded by industry; and
- if additional time is needed for developing and testing - a variance from the rule compliance should be requested from the SCAQMD Hearing Board or the manufacturers should stockpile TBAC formulated products in the event it is delisted as a VOC.

NPCA has previously that the new limit for IM will eliminate “maintenance” IM products that can simply be applied via roll or brush without the need for substantial surface preparation (with loss of substrate since the substrate has to be sandblasted down to white metal for water based and multi-component products). SCAQMD mentions that 11% of IM products already meet the 100 g/l limit without breaking out the types of coatings or applications these represent. NPCA believes that these are waterborne and multi-component coatings that would require extensive and expensive surface preparation.

Manufacturers do not have a TBAC “drop-in” substitute for “maintenance” IM coatings that will be lost as a result of the 100 g/l VOC limit – manufacturers have been working on solutions to this problem but generally to no avail. TBAC offers a possible solution but it is not the “cure all” substitute. Further, performance testing has not been completed – the raw material suppliers have not ramped up to supply TBAC compliant raw materials because TBAC has not been delisted. Further, it does not make business sense to invest substantial R&D funds into TBAC products until the specific uses for TBAC is exempted are established by the SCAQMD. It especially does not make sense to gamble and stockpile products before TBAC is so exempted. Finally, NPCA has also spoken to the raw material suppliers. They need time to ramp up production to provide TBAC products, and they agree that formulators need a minimum of one year to develop and scale up TBAC products and additional time to conduct performance testing and obtain approvals from organizations like the National Sanitation Foundation.

SCAQMD must realize that industrial maintenance coatings are primarily protective of vital infrastructure, including bridges, water pipes/tanks, chemical and oil storage tanks, etc. If these coatings fail, catastrophic releases could result. Consequently, field exposure testing beyond lab testing is essential for these coatings. NPCA again requests SCAQMD to extend the limit for all industrial maintenance coatings for the time required to develop and test effective

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(con't)

products. The failure to fully analyze these issues is a flaw in the CEQA analysis.

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(con't)

Lowering VOC Limits from Specific Coating Categories

SCAQMD is proposing to lower the VOC content of concrete curing compounds (except for those used for roadways, bridges and bridge decks), dry-fog coatings, and traffic coatings by July 1, 2007.

SCAQMD proposed lowering these categories without adequate discussion with NPCA,

Further while NPCA agrees that concrete curing compounds used for roadways, bridges and bridge decks should be held at the current VOC limit, the associated proposed labeling requirements are impossible to meet. Assuming this proposal is approved in June - manufacturers cannot change labels in one month to comply with this proposal.

2-4

At the February 14-15, 2006 meeting NPCA members detailed the fact that there is an important subset of dry-fog coatings that will be eliminated if the VOC limit is lowered for this category – non-surface preparation dry-fogs which are primarily oil based.

While waterborne dry-fogs work well with clean surfaces associated with new construction, existing structures, and structures with dirt and grease would need to be cleaned at great cost if waterborne coatings were to be used. The non-surface preparation dry-fogs which are primarily oil based are needed for these substrates.

NPCA requests a new category to recognize the useful benefits of these essential higher VOC dry-fog products.

Elimination of Fire-Retardant Coatings

We strongly believe that this coating category should be maintained with an appropriate VOC limit that ensures continued effective coatings to retard flame. It cannot be emphasize too strongly that the SCAQMD is an area experiences numerous brush fires every year. This in addition to the other fire hazards of the area require effective fire-retardant coatings. It is our understanding that the category is being eliminated in major part because one company was thought to be abusing it. There is no evidence that this coating is being widely used for purposes other than for what it is intended, fire protection. Moreover, the additional expense incurred to develop and make such a coating so that it meets the fire retardant standards prevents it from being sold or used as a general house paint. In this connection you should again discuss the information provided by Dunn Edwards concerning its efforts to develop fire retardant coatings. Additionally, it is our understanding that one of the coatings referred to

2-5

as being tested to meet the fire retardant standard is an industrial maintenance flat coating which cannot under the terms of the rule be used on residences. The two lower VOC coatings also were flat coatings. These were compared to the higher VOC Dunn Edwards non-flat coatings with the implication that the performance characteristics of the low VOC flat latex coatings would match those of the higher VOC non-flat coatings. This ignores the need for higher VOC content non-flat coatings for its specific performance requirement of a harder surface in high impact areas such as doors, door trim, and in kitchens, etc. For such an important coatings category related to fire safety, it would seem prudent to evaluate the efficacy of the coatings within the coatings performance needs of their specific categories before it is eliminated. One factor along these lines that seemed to merit at least some discussion was the much greater protection against smoke density provided by the higher VOC product. Another one was the importance of effective non-flat fire retardant coatings that are applied in areas more susceptible to fires, such as kitchens, and are the apertures from where fires spread and are fed by oxygen –doors and windows.

2-5
(con't)

NPCA Did Not Agree that Certain Low Volume Specialty Coatings Could be Eliminated to Make Up for Increased VOC Emissions for Certain Raised Limits

SCAQMD states that, based largely on NPCA suggestions, Staff is proposing to amend Rule 1113 by lowering the VOC limits for several categories of low-volume specialty coatings (Concrete Curing Compounds, Dry Fog Coatings, Fire Retardant Coatings, and Traffic Coatings).

NPCA had indeed mentioned, at the August 10, 2005 meeting, several options that might be considered for additional reductions - including subdividing the Industrial Maintenance category and the Limit-to-Limit over compliance concept, as well as possibly lowering the limits for various categories where feasible. But all of this was in the context that further discussions would ensue before final decisions would be made. However, Staff recommendations for these newly proposed limits were simply announced at the January 26th public workshop without additional consultation with industry.

2-6

It is also important to note the reason why SCAQMD is proposing to lower limits for these coatings categories. It is because SCAQMD is unwilling to adjust any emission reduction goals even when they have been premised on technology-forcing VOC limits which were to be evaluated before they become effective. Despite this Staff now requires industry to find a way to render any changes in the limits that are needed due to their technological infeasibility to be absolutely "emissions neutral" by requiring additional VOC emissions from other coatings categories.

As a result, to maintain the emissions neutral goal, Staff has cut limits in other categories without *checking if these limit reductions are technically feasible*. In short, Staff has taken the mandate for the Annual Report and the mission of the Ad Hoc Committee (to realistically evaluate the technological feasibility of

coatings limits before they become effective) to mean only if it suits its previous expectations for emissions reductions. Such an approach renders both exercises meaningless.

In light of the acknowledged technology forcing nature of the limits at issue here in Rule 1113, it is vital that SCAQMD complete technical assessments for the coatings selected for VOC limit reduction. In adopting the 1999 amendments to Rule 1113, the Board established an annual review process to determine whether sufficient progress in coatings technology was being made to allow for the effective implementation of lower VOC limits. A Technical Advisory Committee also was established to assist in designing the various tests and measures to help track this process and advise Staff accordingly.

In addition, CARB will have results of the AIM survey later this year, which should provide additional information on the availability and sales of products in these categories. Depending upon the CARB survey data, SCAQMD should either pull back the limit changes or extend the compliance dates for these categories.

SCAQMD's CEQA analysis is deficient for failing to fully analyze the costs and benefits of the proposed amended limits for these coatings, which includes a failure to determine whether the limits are technologically feasible for all of the coatings' applications.

2-6
(con't)

Differentiation of Non-flat High-Gloss from Other Non-flat Coatings

NPCA supports the SCAQMD differentiation of the Non-flat High Gloss category. It disagrees, however, with the lower limit it continues to mandate for general non-flat coatings. As has been demonstrated by industry in several meetings and workshops on this issue, the resin technologies SCAQMD is relying on for this lower limit continue to have performance problems, including dirt pickup. The failure to take this into account is a deficiency in the CEQA analysis.

Further NPCA has asked SCAQMD to adjust the definition of High Gloss to include those coatings that register a gloss of 60 (instead of cutting it off at 70). A gloss of 60 better captures the gloss products that are most impacted by the current lower VOC resin technology problems. SCAQMD Staff said that CARB would need to be consulted if this change were to be made. CARB has informed NPCA that it is receptive to this change.

2-7

Postponement of the Compliance Date for Non-flat High Gloss Coatings and Quick-Dry Enamels by One Year

2-8

NPCA supports the SCAQMD proposed postponement of the implementation date of the non-flat high-gloss limits and quick dry coatings categories to allow coatings formulators to develop compliant coatings. SCAQMD also should be prepared to provide additional postponements of implementation dates if they are required to produce technologically feasible coatings for these two categories. However, NPCA believes that the quick dry coatings limit should stay at the current 250 g/l limit. The CEQA analysis fails to properly analyze the consequences of lowering the limit for quick dry coatings which we believe is a technologically infeasible for a number of the coatings' applications.

2-8
(con't)

Specialty Primers

SCAQMD proposes an interim limit of 250 g/l for specialty primers that would become effective upon adoption and delay the effective date of 100 g/l VOC limit one year from July 1, 2006 to July 1, 2007. NPCA believes that the 250 g/l limit may help somewhat but NPCA maintains that the current 350 g/l limit should not be lowered.

2-9

As we have stated previously, specialty primers are required for certain extreme environmental and substrate conditions, including smoke damage and water soluble tannin bleed through which by their very nature are incompatible with water based coatings. See the December 21 Position Paper

Interior/Exterior

As we stated in our December 21 Position Paper, we believe that it would be highly useful to subdivide a number of the coatings categories into their "exterior" and "interior" uses. The worry Staff has expressed over the materials being misused with exterior coatings being used for interior applications we believe is misplaced. Consumers of the coatings have been able to draw distinctions between the two uses long before there were regulations in place and will continue to do so because exterior coatings do not lend themselves to interior applications. This is one instruction on the can that long practice has demonstrated to be religiously followed by end users.

2-10

NPCA Alternative Amendments to Rule 1113

One of the key goals of the Ad Hoc Committee is to resolve current and potential future litigation arising over Rule 1113. Over the past seven months, NPCA has provided the SCAQMD Staff with numerous proposals to amend Rule 1113 in ways that would resolve the current litigation. In addition, NPCA proposals would achieve substantial emission reductions while maintaining products that meet important performance standards, including critical safety requirements necessary to maintain Southern California's infrastructure.

2-11

NPCA has now offered four proposals to SCAQMD and NPCA continues to work with Staff since we believe that Rule 1113 could be amended in a manner that will result in a cessation of the litigation as well as provide a rule that is technologically feasible and delivers substantial emissions reductions. See previously submitted December 21 Position Paper and Table of Standards.

2-11
(con't)

February 14 and 15, 2006 Rule 1113 Technical Meeting

Based on Technical Meetings held with SCAQMD Staff on February 14 and 15, 2006, it appears that there are continuing technology issues with Rule 1113. Please see the NPCA letter to Executive Officer Wallerstein, identifying action items for key coatings categories discussed at the meetings. Our concerns include but are not limited to the following coating categories: Anti-graffiti, Water Proof Concrete Masonry Sealers, Water Proof Sealers, Specialty Primers, Nonflats, Floor Coatings, Stains and industrial Maintenance coating categories.

PROSOCO an NPCA member which attended the meeting has supplied specific comments for this submission on issues it raised at the meetings and provided additional information on after the meetings.

Based on its PROSOCO'S information NPCA disagrees with Staff's contention that Staff identified future compliant anti-graffiti products that meet the specific needs of the full range of common architectural concrete and masonry substrates and installations. PROSOCO has commented to Staff on specific performance criteria, field application issues and specific coating and graffiti protection failure mechanisms. NPCA believes that SCAQMD should develop a high end concrete and masonry anti-graffiti sealer category to allow for niche products with adequate performance characteristics.

2-12

NPCA disagrees with Staff's assertion that it identified adequate, future compliant products for calcareous stone; including, but not limited to limestone, dolomite and travertine. PROSOCO has responded to the list of products and product data sheets provided by Staff but it has not received a response from Staff. PROSOCO has identified specific performance issues encountered in field applications and documented that these substrates are used prominently in the District. No technical assessment of the ability of the lower VOC products to meet the performance requirements of these substrates exists at SCAQMD other than a list of products Staff has gleaned from the Internet.

PROSOCO has commented to Staff on specific concrete and masonry coating performance issues, including but not limited to: application over previously coated substrates, application on dense and admixture modified concrete, application on dense substrates such as glazed tile and terra cotta, and performance and longevity issues with water-carried oil and stain repellents versus their currently compliant counterparts. Staff has yet to responded to these specific comments on these specific issues. Based on POSOCO's

information and data NPCA believes that SCAQMD should develop a concrete and masonry subcategory that allows for niche products for problematic applications.

With regard to the Environmental Assessment, NPCA believes that Staff did not adequately address significant environmental effects. Exterior use coatings and protective treatments define the aesthetic appearance of a structure and, in the case of historic and landmarks architecture, help to preserve the building fabric. Staff has dismissed such concerns from any further impact and impact mitigation study. We believe that Staff comments in the areas of Aesthetics and Cultural Resources have not met the mandate and intent of CEQA.

The premise behind this Staff proposed project is that AIM category limits slated to go in effect July 1, 2006 are adequate with the exception of the specific proposed revisions. NPCA and its member companies brought up a number of issues at the February 14 and 15 2006 meetings with Staff; many of which have not been resolved or adequately addressed by Staff since. Said issues have a direct impact on both Aesthetics and Cultural Resources.

Designated historic and landmark structures are explicitly protected at the state, local and federal level. They qualify as Cultural Resources as defined by CEQA: "A historical resource includes an object, building, structure, site, area, place, record, or manuscript that has been determined eligible for listing on the California Register or Historic Resources and/or a local register or historical resources...".

The demonstrated future unavailability of high quality, durable products designed to protect historic buildings from water, atmospheric pollutants and graffiti should be a baseline consideration of the Environmental Assessment. Specifically, after July 1, 2006, effective water repellents for historic terra cotta and marble structures will be unavailable in the SCAQMD. Conservator proven consolidation treatments for degraded concrete and masonry structures have already been eliminated in previous revisions of Rule 1113, along with proven chemistries that afford decades of protection for limestone, dolomite and travertine structures.

On the subject of Aesthetics, Staff states that "The purpose of AIM coatings is to improve the visual character and protect the surface of the substrate upon which the coating is applied." Staff further states that defects in appearance of low VOC coating which could be less aesthetically pleasing are not expected. Conversely, NPCA members presented Staff with information on the technology limits of future compliant coatings, their typical failure mechanisms and the aesthetic and substrate degradation that occurs upon failure. These issues have not been adequately addressed by Staff since the February, 2006 meeting or in the Environmental Assessment.

2-12
(con't)

NPCA member companies have provided specific examples of projects completed in the District with current and past compliant coatings products and pointed out the unavailability of adequate future compliant coatings to recoat them in the future. There are projects on the books for future construction for which adequate coatings will be unavailable. The net effect will be a substantially degraded civic environment as prominent and historic suffer aesthetic damage due to moisture, biological and atmospheric soiling, substrate degradation and graffiti.

Staff discussion also posits that work practices would not be altered by the proposed amendments by for example causing work to be done at night because lower materials would be more susceptible to being adversely impacted by sunlight and day time temperatures. Staff, however, has not completed any comprehensive study regarding substrate and ambient air temperature ranges for the hundreds of coatings products impacted by the rulemaking.

In advance, thank you for the opportunity to comment. Please contact us with any questions you might have concerning our comments.

Sincerely,

/s/

David F. Darling, P.E.
Director, Environmental Affairs
Affairs

/s/

Jim Sell, Esq.
Senior Counsel, Government

2-12
(con't)

COMMENT LETTER NO. 2
NATIONAL PAINT AND COATING ASSOCIATION

David F. Darling, P.E. / Jim Sell, Esq.
May 19, 2006

Response 2-1

The National Paint and Coatings Association (NPCA) has worked with the SCAQMD on past amendments to Rule 1113 and has contributed valuable information and input during this latest Rule 1113 amendment proposal process. The SCAQMD appreciates the participation of the NPCA at the Ad Hoc Board Committee meetings to address industry concerns regarding architectural coatings and staff will consider any material submitted by the public in crafting the rule amendments as well as evaluating environmental impacts from these amendments. The issues outlined in this comment are discussed in further detail in the following responses.

Response 2-2

The three year sell-through provision, as currently written, is only available to coatings in small containers provided they were manufactured prior to the July 1, 2006 effective date and meet the VOC limit of 350 g/l in the Table of Standards. The three year sell-through provision is not available for all other products with a VOC content exceeding that of the Table of Standards. In an effort to assist manufacturers with the transition and alleviate the need for a product variance, staff is proposing a one year sell-through provision for coatings in small containers above the current VOC limit of 350 g/l to allow time for the products to be sold and used after the exemption expires on July 1, 2006. That one year sell-through was to apply to clear wood finishes in small containers that were manufactured and distributed before July 1, 2006, provided certain records were maintained. Further, staff has amended the proposal to change the applicability for these coatings from manufacture and distribution prior to the expiration of the exemption to simply manufacture prior to the date of expiration of the exemption. In addition, the recordkeeping and reporting requirements have been amended to require the same reporting requirements for the one year sell-through that has been required of manufacturers to maintain their small container exemption.

Staff does not agree that the small container exemption provides no air quality benefit. The elimination of the small container exemption was promulgated in 2003 and is not part of the current rule amendments. According to the staff report prepared for the 2003 amendments to Rule 1113, the elimination of the small container exemption would result in a VOC emission reduction of 1,660 pounds per day. After more data refinement and further survey of the small container products, the VOC emission reductions were updated to 1,820 pounds per day. The same 2003 staff report also reported that 420 pounds per day of VOC emissions would be reduced when clear wood varnishes comply with the lower VOC content limit of 275 grams per liter on July 1, 2006.

Response 2-3

Based on the potential, but unknown toxicity of TBAC, the proposed limited exemption of TBAC is more health protective compared to the complete exemption while providing the coating manufacturers with flexibility in formulating compliant products with the future limits of PAR 1113 for IM coatings. IM coatings have exceptionally long durability, typically require personal protection equipment during application, and some are required to adhere to stringent MWD criteria. With regard to expanding the exemption to other coatings, according to 2001 CARB survey results as listed in Table 2 of the 2005 Annual Status report, some coatings have already recorded high sales data of coatings complying with the lower future VOC content limit. For example, 36 percent of the clear wood finishes had already achieved the future lower VOC content limit. Further, applicators of other coating categories do not typically wear personal protection equipment worn by professionals who apply IM coatings. Staff is opposed to allowing TBAC use in residential applications until final conclusions regarding the toxicity of TBAC have been concluded.

There has been a wide debate among interested parties whether TBAC is considered a “drop in” substitute or whether a complex reformulation needs to take place. If TBAC is a “drop in” substitution, then extending the compliance date for IM coatings to meet the lower VOC content limit is not necessary. The strong desire to use TBAC to comply with the lower VOC content limit requirement for IM coatings implies that TBAC has been already tested and has proven to assist IM coatings in successfully complying with the lower VOC content limit requirement. Current availability of future compliant IM coatings is evident according to a web search compiled in Table 4 of the 2005 Annual Status report, and according to the store sales data in the 2001 CARB survey as listed in Table 2 of the Annual Status report, 11 percent market penetration of IM coatings meeting the 100 grams per liter VOC content limit has already occurred. The current percentage of IM coatings complying with 100 grams per liter is expected to have increased over the five years since the survey revealed 11 percent market penetration. The Essential Public Service Agency’s technology assessment included satisfactory performance from number compliant IM coatings that did not use TBAC, but also highlighted the need for TBAC for coatings with exceptionally long service life. The recently completed UMR study also found superior performing IM coating systems that meet future lower VOC limits. Discussions with new material suppliers indicate that resins and additives can be delivered in exempt solvents, like TBAC, if demanded by the OEMS. Finally, IM coating manufacturers can use the three-year sell-through provision, product averaging and variance if they need additional time to reformulate.

Response 2-4

The rule proposals are based on information exchanged during the rule development process. At the July 8, 2005 Ad Hoc Committee Meeting with SCAQMD Governing Board and Los Angeles County Supervisor Michael Antonovich, Councilwoman Jan

Perry, NPCA President Andy Doyle agreed, in response to a question from SCAQMD Executive Officer Barry Wallerstein, that the industry (rule) proposal would be “emissions neutral.” This dialogue was noted in both the July 8, 2005, meeting minute notes as well as in the Annual Status Report on Rule 1113 submitted to the SCAQMD Governing Board on February 3, 2006. Thus, it appeared that both the SCAQMD and NPCA recognize the extreme air quality needs of the region by suggesting rule proposals that would achieve the same overall VOC emission reductions while providing the industry flexibility to meet future limits. Subsequently, at both the August 10, 2005, and September 14, 2005, subcommittee meetings, the NPCA proposed subdividing five coating categories into interior and exterior applications and moving the compliance date up for the interiors at the current final VOC content limit. The exteriors would presumably be allowed to stay at a higher VOC content limit creating permanent forgone emission reductions. Implementation and enforcement concerns have been raised with regard to properly classifying interior and exterior coatings so this suggestion has not been included as part of the current proposed amendments to Rule 1113. At those same meetings, NPCA suggested additional reductions by lowering the VOC content limit for concrete curing compounds, dry fog coatings, and traffic coatings. Being a feasible suggestion and a proposal that will reduce emissions, the SCAQMD has included this suggestion as part of the proposed project.

Waterborne acrylic dry-fog coatings are an environmentally acceptable alternative to traditional solvent-based ceiling coatings. They emit a very low odor during application, and have a low flash point. Waterborne acrylic dry-fog coatings are especially well suited for spaces with pre-cast concrete or steel beam ceilings. They can save time and make application easier in an occupied space. After staff contacted and met with manufacturers of dry-fog coatings, the main issues discussed were potential slower dry times associated with low-VOC coatings especially during high humidity conditions and adherence of the coating to dirty surfaces. It was generally agreed that low-VOC dry-fog coatings might require more substrate preparation than a solventborne coating.

Response 2-5

Fire-retardant coatings retard ignition and flame spread. The coating has to be fire tested and rated by a testing agency approved by building code officials for use in bringing building and construction materials into compliance with federal, state, and local building code requirements. The fire-retardant coating and the testing agency must be approved by building code officials. The coating must be tested in accordance with ASTM Test Method E-89 or listed by Underwriter’s Laboratories, Inc. as a fire-retardant coating with a flame spread index of less than 25. Staff has identified several low-VOC fire-retardant coatings with comparable performance to their higher VOC counterpart. Additionally, staff was contacted by several coating manufacturers expressing concern regarding the abuse of this category due to significantly high VOC limits. Their concern was confirmed by SCAQMD compliance staff through a recent enforcement action.

To determine if the fire-retardant low-VOC products performed as well as high-VOC products, AQMD contracted with SGS U.S. Testing Company, Inc. to perform ASTM Test Method E-84 – Standard Test Method for Surface Burning Characteristics of Building Materials on four fire-retardant coating systems. Refer to the Staff Report for PAR 1113 for details of that study and the conclusions.

Response 2-6

As explained in Response 2-4, NPCA did mention at both the August 10, 2005, meeting and the September 14, 2005, meeting several rule proposal options which were later included in the current rule proposal. There were reasons why certain suggestions were included and why others were not. With regard to commentator's opinion that further additional consultation with industry before the January 26, 2006, public workshop, the SCAQMD staff did meet and discuss the proposed limits with the coating manufacturers after reviewing market penetration and availability of compliant products. The public workshop rule proposal relied on NPCA's suggestions as an expert opinion which could be seriously considered as feasible rule proposal options.

Both the SCAQMD and NPCA discussed the importance of proposing an "emission neutral" rule amendment early in the rule development process. In this spirit of cooperation and negotiation, NPCA proposed the lowering of limits of certain coating categories which the SCAQMD has incorporated into the current rule proposal. The NPCA has changed their stance regarding an emission neutral proposal and the SCAQMD has determined that coatings complying with future lower VOC content limits for certain coatings are commercially available. Thus, based on the technical data and commercial availability, the SCAQMD is proposing to lower the VOC content limit for certain coatings.

The SCAQMD has a responsibility to the public, legislative decision-makers as well as the affected industry to set goals and reach those targets. The SCAQMD has adjusted emission reductions goals for a number of rules, including Rule 1113, in the past and it is unfounded that SCAQMD is not being willing to adjust our goals. By allowing the delay of compliance dates causes a delay in emission reductions which adjusts our emission reductions goals. Compliance dates have been adjusted a number of times during the 23 amendments to Rule 1113 since its adoption in 1977. The proposed lowering of the VOC content limits affect coatings that currently comply with the future proposed VOC content limits.

As long as there are commercially available coatings that meet the lower VOC content limits, the proposed rule amendment to lower the VOC content limit does not constitute "technology forcing." After the NPCA first identified potential coating categories with lower VOC coatings, staff researched and found that many coatings with VOC content limits below the proposed limits are currently available on the market. The staff report for proposed amended Rule 1113 shows that the lower VOC limits for the five affected coating categories are "potential cost-effective means of offsetting the VOC emissions

foregone due to the delay in implementation.” This observation does not directly contradict the nature of technology forcing limits since the staff conducted a comprehensive technology assessment, which demonstrated that coatings meeting the future VOC limits were commercially available. Further, a list of coating categories showing that lower VOC content limits are feasible was provided by NPCA. Staff conducted a preliminary evaluation of the emission inventory and available VOC technology for these five categories which strongly indicates potential significant cost-effective emission reductions.

Response 2-7

The SCAQMD recognizes there are technical hurdles to overcome to develop a successful coating product when reformulating to achieve a lower VOC content limit, including dirt pickup. The one year extension for the high gloss category is being proposed to allow manufacturers to take advantage of the latest resin and additive technologies in overcoming the performance challenges identified and transition to the new limits. The gloss of 70 in the definition of high gloss was based on CARB’s SCM so in order to maintain consistency in regulating and enforcing that definition is not proposed to be changed.

Response 2-8

The decision to propose the extension of compliance dates is based on the technology assessment and Annual Report to the SCAQMD Governing Board. According to the market penetration data in Tables 2 and 4 of the Annual Status report, compliant coatings that already meet the lower VOC content are commercially available and being sold in local stores. Given an additional year to achieve compliance, the remaining quick dry enamels will also achieve compliance with the lower VOC content limit.

Further, the SCAQMD is fully aware of the characteristics the coatings are expected to demonstrate in order to be successful and be a marketable product. Field exposure testing beyond lab testing is essential and if a manufacturer needs additional time to test and research, a variance from rule compliance should be requested from the SCAQMD Hearing Board. The consequences for failure are not considered a potential adverse impact since it is not expected that coatings manufacturers will produce and market a coating that will knowingly fail. If it is unknown whether or not a coating will fail, the analysis would be speculative.

Response 2-9

The rule defines this category as coatings intended to seal fire, smoke or water damage, or to condition excessively chalky surfaces. Many of the coatings that fall within other categories, such as primer, sealer, undercoaters (PSUs), have characteristics similar to

requirements for specialty primers, such as the need to condition excessively chalky surfaces. A review of the available specialty primer products are listed under PSUs and the associated characteristics in Appendix A of the current Annual Status Report indicates a vast amount of coatings available that meet those needs. One of the major manufacturers of coatings in this category met with staff several times and explained that the waterbased technology to develop a usable specialty primer at 100 g/l limit which can seal fire and smoke damage, as well as severe water-soluble stains was not currently possible but the technology is moving in the right direction and would soon be achievable. The manufacturer is currently working with exempt solvents and major alkyd resin suppliers to reduce the VOC in their alkyd primers as well as partnering with a major university to develop new coating formulations which will meet or be below the 100 g/l limit in the rule. After reviewing the available technology and several manufacturer recommendations, staff is proposing to establish an interim VOC limit of 250 g/l effective July 1, 2006 and delay the 100 g/l limit by one year for this category.

Response 2-10

As noted in Response 2-4, the NPCA proposed subdividing five coating categories into interior and exterior applications and moving the compliance date up for the interiors at the current final VOC content limit. The exteriors would presumably be allowed to stay at a higher VOC content limit creating permanent forgone emission reductions. Implementation and enforcement concerns have been raised with regard to properly classifying interior and exterior coatings so this suggestion has not been included as part of the current proposed amendments to Rule 1113.

Response 2-11

Please refer to Response to 2-1 with regard to the mission and goals set forth by the Ad Hoc Committee. SCAQMD staff has carefully considered NPCA proposals. However, SCAQMD cannot simply adopt whatever industry proposes merely because it would avoid litigation. SCAQMD would like to eliminate unnecessary litigation, but also remains committed to obtaining feasible emission reductions and obtaining substantial public health benefits.

The SCAQMD does not agree that the NPCA proposals would achieve substantial emission reductions when lower VOC content limits are not reached. This would generate a permanent emission reduction foregone backsliding from the goals of Rule 1113, the AQMP, and attainment with the state and federal ambient air quality standards. The four proposals offered by the NPCA were not “emissions neutral” but did provide elements used in crafting the current amendments to Rule 1113. Federal consent decree permits the SCAQMD to support proposals that delay emission reductions by more than two years and not be offset.

Response 2-12

Anti-graffiti coatings are a subset of the IM coatings and are generally divided into sacrificial or non-sacrificial coatings. Sacrificial coatings are usually water based modified wax emulsions while non-sacrificial coatings are usually based on acrylic and polyurethane resins. Sacrificial coatings are removed from the substrate along with the graffiti. Anti-graffiti coatings are primarily non-penetrating forming a film to protect the substrate to prevent penetration of spray paint, marking pens, chemical attacks, crayons, etc. Most of the anti-graffiti coatings require the substrate to be sealed, usually with penetrating sealers, prior to application to prevent moisture from being trapped inside. During meetings with manufacturers comments were made that anti-graffiti coatings at 100 g/l or less VOC can not be produced that are penetrating and breathable. Staff has identified both types of anti-graffiti coatings at 100 g/l or less that are breathable allowing water vapor transmission.

Coatings subject to PAR 1113 for use on an architectural structure is anticipated to improve the aesthetic view of that structure, improve the visual character and protect the surface of the substrate upon which the coating is applied. With regard to aesthetics, the baseline assumption is that a coating product will properly perform a function or the product will not be used. In addition, an anti-graffiti coating is not the cause of the aesthetic issue but rather the graffiti itself which is not being generated by PAR 1113.

There are no components in PAR 1113 that would alter existing work practices, or require coating activities at night. Therefore, PAR 1113 is not expected to create a new source of substantial light or glare that would adversely affect day or nighttime views in an area.

PAR 1113 is not expected to affect archeological or cultural sites because reformulation of architectural coatings won't require major construction activities such as grading, trenching, etc. The application of architectural coatings typically occurs after site preparation and construction of structures has been completed. As a result, it is expected that archaeological resources would have already been assessed or if the new structure is at an existing residential, commercial or industrial site, then they have already been disturbed or protected. The proposed revisions to Rule 1113 are, therefore, not anticipated to result in any activities, or promote any programs that could have a significant adverse impact on cultural resources in the district.