

MARYLAND DEPARTMENT OF THE ENVIRONMENT

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Re:)
PROPOSED NEW REGULATIONS .01-.14)
UNDER A NEW CHAPTER COMAR 26.11.33)
ARCHITECTURAL COATINGS)

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The hearing in the above-entitled matter commenced on Wednesday, January 28, 2004, commencing at 10:34 a.m., at the Maryland Department of the Environment, Aqua Conference Room, 1800 Washington Boulevard, Baltimore, Maryland, 21230-1720.

Reported and Transcribed by: Deborah Turner, CVR

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C O N T E N T S

On Behalf of the Maryland Department of the Environment:

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P R O C E E D I N G S

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MS. RABIN: Good morning. On behalf of the Department of the Environment and the Air and Radiation Management Administration, I would like to welcome you to this public hearing.

My name is Deborah Rabin and I am the Regulations Coordinator for the Air and Radiation Management Administration. I will serve as hearing officer for today's hearing.

I would like to ask all of you in attendance today to please sign in, if you haven't already done so. This will help us to keep an accurate record of the people who participate in the hearing. Also, copies of our regulation proposal, support documents, and the Department's statement are available on the table for your information.

This hearing concerns air quality regulations found in the Code of Maryland Regulations, Title 26, Subtitle 11 Air Quality. The Secretary of the Department proposes to adopt new regulations .01 through .14 under a new chapter COMAR 26.11.33 Architectural Coatings.

The purpose of this hearing is to give you the

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1 opportunity to comment on this action. The opportunity for
2 public comment for this proposed action appeared in the
3 Maryland Register, Volume 30, Issue 26, Pages 1944 through
4 1954 on December 26th, 2003.

5 For the record, I'd like to make a change in the
6 close of the comment period. We will close the comment
7 period on Monday, February 2nd, close of business.

8 The hearing will proceed in the following order.
9 First, Mr. Parker Dean will make a statement on behalf of
10 the Air and Radiation Management Administration. After Mr.
11 Dean is finished, I will call on any elected official or
12 government official who wants to make a statement. Then, I
13 will call upon anyone else who indicated on the sign-in
14 sheet that he or she would like to make a statement.

15 When giving your statement, please come up front,
16 identify yourself and your affiliation and give your
17 statement loudly and clearly. Are there any questions? I
18 will now call on Parker Dean.

19 MR. DEAN: My name is Parker Dean. I am Chief of
20 the Regulation Development Division of the Air and
21 Radiation Management Administration, Department of the
22 Environment.

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1 This public hearing is being held pursuant to the
2 requirements of 40 CFR Section 51.102 and Sections 2-301 of
3 the Environment Article, Annotated Code of Maryland. It is
4 also being held in conformance with the State
5 Administrative Procedures Act under the State Government
6 Article, beginning at Section 10-101.

7 Notice of this hearing appeared in the Maryland
8 Register, the Baltimore Sun, St. Mary's Enterprise,
9 Cumberland Times-News, Frederick News-Post and Salisbury
10 Daily Times on December 26th, 2003 and the Washington Post
11 on December 18th, 2003. Copies of these notices were
12 submitted for the record.

13 Copies of the proposed new regulations and
14 supporting documents were submitted for review to the State
15 Clearinghouse and are also submitted at this time into the
16 hearing record. Copies of the proposed regulations and
17 supporting documents were made available for public
18 inspection at the Air and Radiation Management
19 Administration offices in Baltimore, Cumberland and
20 Salisbury, and at all local health departments or local air
21 quality control offices.

22 The purpose of today's hearing is to give the

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1 public an opportunity to comment on proposed new
2 regulations, .01 through .14 under a new chapter of COMAR
3 26.11.33 Architectural Coatings.

4 The purpose of this rule is to reduce volatile
5 organic compound emissions from architectural and
6 industrial coating products used in Maryland in order to
7 address shortfalls in achieving the one-hour ozone standard
8 by 2005.

9 In December 1999 the United States Environmental
10 Protection Agency informed Maryland and several other
11 Northeastern and Mid-Atlantic states of the Ozone Transport
12 Region that their air quality plans did not provide for
13 emission reductions sufficient to obtain the one-hour ozone
14 standard by 2005.

15 Maryland must promulgate measures that will
16 achieve reductions of at least 13 tons per day of volatile
17 organic compounds in the Baltimore nonattainment area. EPA
18 stated that it would grant additional time to implement new
19 measures if those states pursued regional strategies to
20 control ozone and its precursors. In response to this EPA
21 mandate the Ozone Transport Commission developed several
22 VOC reduction measures that were formerly supported by the

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1 OTC commissioners in March 2001.

2 Today's proposed action has been based on a
3 regionally developed model rule prepared by a state-led
4 workgroup of the OTC for AIM coatings, the cornerstone of
5 which was existing rules developed by the California Air
6 Resources Board.

7 In developing the OTC model the workgroup analyzed
8 and modified the CARB rule to address VOC reductions in the
9 OTR, the Ozone Transport Region. The workgroup conducted
10 an extensive review of both the CARB record and other
11 information and determined that the coating limits in the
12 OTC model rule were viable with compliant products already
13 on the market.

14 The Maryland Department of the Environment has
15 completed a state version of the rule based on the
16 provisions of the OTC model rule.

17 Additionally, in January 2003 EPA changed the
18 nonattainment status of the Washington nonattainment area.
19 Accordingly, this AIM proposal is also a necessary part of
20 the Washington area state implementation plan as the
21 nonattainment status changed from serious to severe.

22 The proposed rule sets specific VOC content limits

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1 in grams per liter for 46 AIM coating categories. It
2 require compliance with the limits by January 1st, 2005.
3 In most cases these limits are more stringent than existing
4 federal AIM rules adopted by EPA in 1998.

5 Compliance with these new limits would be achieved
6 through either reformulating products or substituting
7 products with complying coatings that exist on the market
8 today. It should be noted that a substantial number of
9 coatings exist that comply with the VOC content limits for
10 each proposed category.

11 Therefore, while some product manufacturers may
12 need to reformulate in order to comply with the VOC limits
13 the OTC model rule upon which the proposed rule is based
14 was developed at a level where a significant number of
15 compliant coatings already exist in the marketplace.

16 The regulation will not apply to one, an AIM
17 coating sold or manufactured for use outside the state or
18 for shipment to other manufacturers for reformulating or
19 repackaging; two, an AIM coating sold in a container with a
20 volume of one liter or less; three, an aerosol product; or
21 four, a coating manufactured before January 1st, 2005.

22 Manufacturers producing AIM coatings would be

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1 responsible for developing and distributing compliant
2 products for sale in the state at the wholesale level.

3 Painting contractors and government agencies
4 specifying coatings are also responsible parties. A person
5 who manufactures, blends, thins, supplies, sells, offers
6 for sale, repackages for sale, applies or solicits the
7 application of an AIM coating within the state may need to
8 take action in response to these regulations.

9 The proposed action also contains several
10 flexibility provisions which would facilitate compliance
11 with the limits. These include a sell-through provision
12 where products manufactured before the effective date of
13 the rule can still be sold, a higher allowable VOC content
14 for recycled coatings, an exemption for coatings sold in
15 containers of one liter or less, and provisions for an
16 opportunity for a person to request an alternative VOC
17 content of a coating.

18 It has been estimated that these regulations will
19 reduce VOCs in the Baltimore and Washington nonattainment
20 areas by approximately eight tons and six tons per day
21 respectively beginning in January 2005. The 1990 Baltimore
22 and Washington inventory of emissions from such products

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1 were estimated at 27 tons and 31 tons of VOC per day
2 respectively.

3 These new regulations upon adoption will be
4 submitted to the U.S. EPA as a revision to the Maryland
5 State Implementation Plan. The Department will consider
6 all comments before making a decision to adopt these
7 regulations.

8 MS. RABIN: Would anyone like to comment on this
9 proposed action?

10 MR. LUTZ: Yes.

11 MS. RABIN: Who would like to go first?

12 MR. LUTZ: Randall Lutz representing the Sherwin-
13 Williams Company. We appreciate very much the opportunity
14 to comment on these regulations. The Sherwin-Williams
15 Company just for some background has a major manufacturing
16 facility here in Baltimore City. As a matter of fact only
17 -- probably less than a mile away. It also has numerous
18 company stores around the state and employs over 700
19 Maryland citizens who work in those stores and the
20 facility.

21 I just want to note for the record before we begin
22 that the ice and snowstorm has kept people away from this

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1 hearing. I know of three who wanted to be here and testify
2 today but will not be here because of the weather. And I
3 appreciate the Department's keeping the record open for an
4 extra few days to accommodate them and have them supply
5 their written testimony.

6 I believe that their presence would have been more
7 impressive than their written testimony so I'm not sure
8 that just keeping the record open for a few days is really
9 sufficient to bring their point across. But it should also
10 be noted that 20 out of the 24 school districts in the
11 state are closed today. Many local governments are on
12 liberal leave and there are many other closings.

13 The secondary roads are a major problem according
14 to the announcements on the radio and I have to assume that
15 there are other people who probably would have been here
16 today if it were not for the weather. And so keeping the
17 record open, I think, is a good thing but I'm not sure it's
18 enough for those people who really wanted to be here and
19 testify.

20 The people who are here with me today from
21 Sherwin-Williams flew in from Cleveland the night before
22 last so they didn't have to deal with the weather and they

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1 stayed here last night.

2 Sherwin-Williams has electronically sent to the
3 hearing officer its comments but in the event there is any
4 problem with that submission I have a hard copy here that I
5 would like to have placed into the record. I will deliver
6 that to you now. (Handing documents.)

7 Sherwin-Williams has three witnesses who would
8 like to testify today: myself, Ms. Madelyn Harding and Mr.
9 Douglas Splitstone. We were planning on having another
10 witness, Mr. Daniel Forestiere, Director of Regulatory
11 Affairs of the Sherwin-Williams wood care group, but he
12 could not make it here because of the weather from New
13 Jersey.

14 As a general matter what I'd like to do is I'd
15 like to make a few introductory comments, have Ms. Harding
16 testify and then have Mr. Splitstone testify and I'd like
17 to conclude with some closing comments from Sherwin-
18 Williams comments.

19 As a general matter Sherwin-Williams objects to
20 the regulations as proposed because of a number of reasons
21 that are spelled out in our written comments but basically
22 we are talking about issues that involve flaws in the

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1 underlying rationale to the model rule based upon
2 unsupportable and unreliable data, which you will hear
3 about from both Ms. Harding and from Mr. Splitstone.

4 MDE has not conducted any independent assessment
5 of this regulation before its proposal. It relied entirely
6 on the Ozone Transportation Commission's analysis and their
7 consultant, Pechan, which has major flaws in it.

8 And we believe it will be harmful to the citizens
9 of Maryland overall if some relief is not given in some of
10 the product categories. As I said, there are other reasons
11 that are stated in our submittal that the Department should
12 take note of.

13 However, Sherwin-Williams does appreciate the
14 inclusion in the proposed rule of provision .01E that
15 permits a person subject to the rule to request an
16 alternative standard. And we intend to put information
17 into the record today, sufficient to support what we
18 believe is an alternative standard for several of the
19 products for which there is no suitable substitute if the
20 rule is adopted as proposed.

21 The modification we're requesting would amount to
22 a very insignificant reduction of the emissions savings

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1 from the rule and as you're going to hear today anyway the
2 calculations done by the OTC in calculating what the
3 emissions reduction was was grossly underestimated.

4 We believe that the true emissions reduction if
5 this rule is adopted is almost twice as much as what is
6 predicted by the Ozone Transportation Commission.

7 Madelyn Harding who's going to present next from
8 Sherwin-Williams is a corporate manager in product
9 compliance. She's out of the headquarters office in
10 Cleveland. She is going to first address two very
11 important flaws in the proposed rule. One is the problems
12 and flaws with the rule's statistical basis. She will
13 point those out and tell you why the underlying rationale
14 for the rule and the computations make no sense.

15 She will also propose an alternative way of
16 calculating emission reductions that demonstrates
17 considerably more emission reductions than predicted by the
18 OTC.

19 Then Ms. Harding will discuss the reasons why the
20 rule will, in effect, ban certain popular and useful
21 products for which there are no suitable substitutes and
22 explain that making different standards, alternative

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1 standards for these product will not subject Maryland to
2 any enforcement action by EPA. Ms. Harding.

3 MS. HARDING: Thank you. Good morning. I don't
4 know if you all were as cold as I was out there today. I
5 sure hope you get a warm spell soon.

6 Actually, Mr. Lutz described my procedures
7 slightly different than the way I have thought of it. I
8 had thought I would start with the technical issues then
9 consider the emission reduction calculations, both the ones
10 that the OTC have used and that Maryland is basing it on
11 and then an alternative emission reduction calculation and
12 then hand it back to Mr. Lutz.

13 There are five technical issues that I will
14 address very briefly. These are addressed more fully in
15 our comments. These are on floor coatings, exterior wood
16 primers, interior wood stains, those are clear and
17 semitransparent, wood varnishes containing sealers, and the
18 numbers you see on the slide are the VOC limits in grams
19 per liter that we are recommending.

20 Floor coatings, and these are specifically of
21 concern when you're dealing with exterior wood porches that
22 might be found, for example, in century homes and they're

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1 very prevalent here in the Northeast.

2 Typically one uses a solvent-borne product on
3 these porches because they penetrate and they are highly
4 durable. Penetration is really critical because when you
5 have many layers of old paint you need to tie them down to
6 the wood. And the waterborne systems don't have the
7 capability of penetrating very far compared to a solvent
8 one.

9 The OTC has relied heavily on studies out of
10 California and the model rule or suggested control measure
11 for CARB. The California Air Resources Board for floor
12 coatings depended on studies that were done in Southern
13 California by South Coast Air Quality Management District.

14 And those studies were only done on concrete so
15 the concept that one can find equal performance might apply
16 to concrete coatings for floors or for horizontal surfaces
17 but it certainly didn't apply to wood, at least it hasn't
18 been studied. So that's number one is the floor coatings.

19 The second issue is the exterior wood primer
20 issue. In looking over our data sheets over many years
21 what I have found is that for latex, exterior latex paints,
22 we generally recommend the use of an alkyd primer when you

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1 are applying to wood surfaces.

2 In addition, it's important to note that whenever
3 you have had a problem with peeling paint, for example, the
4 recommended procedure is to strip it down to bare wood and
5 prime with an alkyd primer. This rule eliminates that
6 ability for us to sell to those applications and for you
7 people to purchase those.

8 Both real wood and composition boards have
9 problems when you're talking with waterborne systems. We
10 have done studies comparing our commercial exterior alkyd
11 primer to our exterior waterborne primer on exposure and
12 have found that when you are on Cedar, for example, the
13 tannins will bleed through the wood and the general overall
14 appearance of the topcoat is significantly harmed when
15 you're using a latex undercoating.

16 When you're dealing with composition board it gets
17 much more serious because when you put water in contact
18 with composition boards you tend to have wax bleed through,
19 surfactive leaching and swelling of the wood particles.
20 And combined all of those activities on the part of the
21 water cause a harm actually to the composition board that
22 can be rather serious. The solution for those are also

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1 alkyd products.

2 Turning our attention to interior wood substrates,
3 I would like to start by discussing the issue of stains and
4 water. Typically, your proposal has a limit of 250 grams
5 per liter for stains. This limit causes or results in only
6 three possible technologies that will be available. One is
7 waterborne, one is very, extremely high solids, and the
8 third would be exempt solvent technologies.

9 Currently, there are no 250 grams per liter stains
10 on the market that will meet the requirements of all
11 applications. Waterborne stains cannot be applied to large
12 surfaces without causing lap marks.

13 I would like to introduce into evidence a
14 photograph of wood. This is a photograph of a wood panel.
15 Half of it has been stained with Duraseal's penetrating
16 finish which is a solvent-borne system and half has been
17 stained using a competitive product by a company known as
18 Fuhr. This is a waterborne wiping stain and is number 105.
19 It is the wiping stain that Fuhr has which from their data
20 sheets has the longest open time.

21 And what you will see, what we have done here is
22 we have applied the stain to one strip and then waited

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1 several minutes, I think ten, and then continued staining
2 the next. Now, since stains are not done using rulers but
3 rather they are wiped on you don't end up on one clean
4 panel you end up around. And the overlap area will be
5 between the boards, between the strips.

6 And what you will see -- I can pass this around
7 and this is in fact for your record is that in the overlap
8 area the appearance is darker and that is called lap marks.
9 That occurs in the waterborne systems.

10 This is a particular problem on large surface
11 areas like floors when you have a room about this size. If
12 this was instead of being carpeted all wood and you went to
13 stain it obviously you could not get all of the stain out
14 and done in less than 10 minutes. You would be having
15 these lapped areas and unless the open time of the product
16 is extremely long without any drying occurring you will get
17 lap marks.

18 Solvent-borne systems don't dry as rapidly. They
19 certainly don't cure and you get to work in the second
20 layer into the first layer and thus it spreads it out which
21 is one of the reasons why you would not get lapping.

22 In addition, waterborne stains cannot be applied

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1 to many species of wood without causing grain raising.
2 Grain raising is where individual fibers of the wood have
3 swollen and popped up above the level of the surface.

4 When you are not using a film-building topcoat
5 that's a significant problem. I can talk from personal
6 experience. My home has all natural woodwork and the
7 moldings around the floors, the top molding and all around
8 the windows has all been stained with cherry.

9 However, we do not have a top coat over it. It
10 was simply stained. Had the stain been water-based stain
11 then when I would touch that I would have fibers that I
12 would feel. And you can't sand those down. The way you
13 normally would fix that would be putting a one, two or
14 three levels more above it of something like a varnish so
15 you'd get a top thick coating and that way you have
16 smoothed it out. If you try to sand something like that
17 you get a nonuniform appearance. But in my house we didn't
18 have varnish over it, we have just cherry-colored wood.

19 The third possible technology to solve the problem
20 with stains is high-solids technology. To reach a 250
21 grams per liter, the solids would need to be over 70
22 percent which is extremely high and which will create

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1 viscosity problems, dry time problems and application
2 problems.

3 The final technology available for stains would be
4 the use of exempt solvents. Currently, there are only two
5 solvents that are even marginally useful in coatings that
6 have been exempted by EPA. Those are acetone and PCBTF
7 also known as Oxxol 100.

8 The acetone has significant problems with
9 flammability. It has a very high vapor pressure and a very
10 low flashpoint which the combination is extremely
11 hazardous. And the PCBTF, the Oxxol 100 has increased
12 inhalation toxicity issues associated with it. It also has
13 a very bad odor that most customers would not like. So
14 that summarizes our concerns with stains.

15 In the area of varnishes you will find that the
16 records in other jurisdictions indicate apparent
17 disagreements about the performances and appearances of
18 waterborne varnishes compared to solvent-based clear wood
19 finishes.

20 And we have done a good illustrative data -- this
21 is real interesting. This was a study that we made of
22 commercial products. This study was performed four years

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1 ago so it had nothing to do with rule-making. This is one
2 of the many types of things we routinely do.

3 Dater School is an elementary school in Ramsey,
4 New Jersey where they actually have wood floors in their
5 hallways. We received permission to apply six coatings to
6 their wood floors and the children walked and did whatever
7 children do in an elementary school with wood floors.

8 And we evaluated the gloss every week for five
9 weeks. These six coatings, starting at the top which is an
10 easy distinction, these are all commercially available
11 coatings, half of them are commercially available from us.

12 The highest gloss retention coating was the oil-
13 modified solvent-borne varnish. This is the material that
14 we think it's important to maintain. The worst performing
15 were the waterborne lacquers. There were two varieties.
16 Those are the bottom.

17 And in the middle you find equivalent performance
18 amongst or pretty equivalent performance amongst three
19 products. One is an oil-modified waterborne varnish and
20 then the other two are aziridine crosslinked waterborne
21 varnishes. There are two of those. And those all have
22 essentially equivalent performance.

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1 Now, one of the things and what's critical about
2 this is that generally one recoats a floor not because the
3 film has disappeared, as in erosion, but because it's lost
4 its appearance. And one of those appearance
5 characteristics is the gloss.

6 At our house we have semigloss varnish on our
7 floors and that's what we want it to look like and when
8 they start getting dull looking we look at each other and
9 say, well, I guess it's time to get someone out here to
10 recoat the things. That's how you do it.

11 It's not that I'm going out there and saying oh,
12 my, we don't have that thickness anymore. It's that the
13 appearance has degraded. We're introducing this into
14 evidence as well.

15 The performance requirements for varnishes can
16 vary based on the application and the differences between
17 the chemistries as I have shown you there.

18 Also, when it's applied to raw wood, especially
19 darker species of wood, solvent-based varnishes will
20 provide a better depth and warmth of appearance. I really
21 wish I had real wood here to show you because it makes a
22 dramatic difference and it has better grain contrast than

1 waterborne finishes.

2 Interestingly enough, even BonaKemi, who is a
3 particularly vocal proponent of waterborne clear varnishes
4 for wood floors, recommends an oil-based clear stain before
5 applying a waterborne varnish for those darker type woods.

6 One of the other reasons why different people feel
7 differently and report different results on varnishes has
8 to do with the ways performance are measured and defined.

9 Lab tests are useful for screening but frequently
10 will fail to predict performance in actual use.

11 Frequently, people who use lab tests that have to do with
12 abrasion resistance, which have very poor reproducibility
13 according to ASTM, the percent reproducibility is very
14 poor. And they can be misleading especially when you're
15 looking at things that are highly cross-grained for
16 example. Under no circumstances can you substitute for
17 field testing like the Dater School test that we ran.

18 It's also important to note that the product we
19 studied there, two of those which are the aziridine
20 crosslinked waterbornes that we did we studied there and
21 also the isocyanate crosslinked products. Both of those
22 type of products really are only used by professionals.

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1 There are toxicity issues associated with them being used
2 by do-it-yourselfers.

3 The last subject in this technical section that I
4 would like to discuss is sanding sealers. We discuss this
5 fairly completely in our written testimony but just to
6 remind you waterborne sealers can lead to panelization of
7 wood flooring. This is where adjacent boards of a floor
8 get glued together so strongly that other sections have
9 cracks due to temperature and humidity changes.

10 Also, it's important to note that sealers when
11 you're dealing with waterborne sealers those are usually
12 thermoplastic. The term thermoplastic means it softens on
13 heating. When you sand it that friction causes the heat
14 and causes it so soften which means it gunks up and you
15 can't really sand it. You can mush but you can't sand.
16 It's essentially an oxymoron to say it is a thermoplastic
17 sanding sealer because you can't do it. Thus, in summary,
18 these are the limits that we are requesting and they are
19 also in our written comments.

20 What I'd like to do now is to have help from
21 Randy. All I need you to do is push the down arrow when I
22 say now or next slide.

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1 MR. LUTZ: That sounds simple enough.

2 MS. HARDING: Now, we're going to turn our
3 attention to the emission reduction calculations. The OTC
4 used a consultant named Pechan to do their emission
5 calculation cost effectiveness work. And what's really
6 scary is when we look at the data that Pechan was using
7 what we find is that in some cases an increase in the limit
8 surprisingly causes an increase in reductions.

9 This is contrary to what one would expect. You
10 would expect you would increase the limit, you decrease the
11 reductions. And I'm going to show you some very specific
12 examples of that.

13 The other issue is that in some cases from this
14 data the VOC limits will cause a negative emission
15 reduction. That is that you introduce a limit and you now
16 increased emissions, which is nonsensical. It makes no
17 sense. For this reason, I sometimes think of it as it
18 doesn't pass the laugh test. Next slide.

19 Here are some examples. I'm just giving you a few
20 examples from the data. It's scary. First off, let's
21 explain to you the columns. Here are the coating
22 categories. This specific slide is sanding sealers. Here

1 is the technology, is it solvent-based or solvent-borne
2 that would be SB, or waterborne that would be a WB.

3 Here is the VOC range for the data. The data is
4 from an Industry Insights survey from the early '90s and
5 the data was accumulated into ranges. So, for example, if
6 a product had a VOC of 660 it would have been put into this
7 range.

8 The upper limit of the range is, I think, pretty
9 self-evident. This is simply the largest number so if a
10 product is at 600 it would be in the range 551 to 600 and
11 the upper limit is 600. A product at 601 would have been
12 bumped into the next group with an upper limit of 650.

13 Then there are two assumptions broadly of which
14 they are two sub-assumptions that are made in these
15 calculations. These are attempting to calculate the
16 emission reduction achieved by introducing a limit of 350,
17 400, 500, et cetera.

18 One is a constant gallons assumption. This
19 assumes that all of the gallons that are above the limit an
20 equivalent number are then put down to the limit which
21 means at limit or that those gallons are spread over the
22 curve, that is if the distribution of sales that there was

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1 a bell curve and your limit was right at the top of the
2 bell, then the distribution would be some of the products
3 would be at the high point all the way down to the low
4 point, essentially, the concept being that all of those
5 gallons that were above the limit died, been discontinued
6 and their sales were then picked up by all the other
7 products that did comply. That's the concept of over the
8 curve.

9 The concept of constant solids assumption is when
10 instead of saying the gallons stay constant for all those
11 gallons that were above the limit what you do is you say
12 that the solids content stayed constant and you make the
13 adjustment again at the limit or over the curve.

14 The black heavy mark around in this case the
15 sanding sealers with an upper limit of 350 I have used to
16 note that is the limit that is in the rule that is being
17 proposed.

18 What is interesting is the yellow highlighted area
19 where what you will see is that if you set the limit at 350
20 the emissions reduction would be at constant solids at the
21 limit would be 671,000 pounds, approximately. However, if
22 you set it at 400 grams per liter you get 2 million pounds

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1 reduction.

2 Now, this goes contrary to what you would expect.
3 You would expect that if you set the limit at a higher
4 number you would get lower reductions. And the reason I'm
5 highlighting this is that in fact the proposed limit is 350
6 and you can safely go, based on this data, to 400 and have
7 even more reductions. Next slide, please.

8 Again, the format is the same so I'm not going to
9 go through it again. This is again a solvent-based
10 product. This is the general category known as primers.
11 They are generally lumped as primers, sealers and
12 undercoaters but there's not enough room to put all those
13 words there.

14 MR. LUTZ: Madelyn?

15 MS. HARDING: Yes?

16 MR. LUTZ: All these numbers are from the Insight
17 survey?

18 MS. HARDING: This is all from the Industry
19 Insights database and this is the data that we believe
20 Pechan has used to do his calculation of emission
21 reductions.

22 I have again circled in big fat bold the limit

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1 that is in the proposed rule. That limit is 200 grams per
2 liter. You will see that constant solids at the limit the
3 report suggests just a little bit shy of 10 million pounds
4 will be the emission reduction.

5 However, if the limit was at 250 they would be an
6 18 million pound emission reduction. This has me real
7 concerned. I think we're having problems not laughing.

8 The next slide then addresses the other issue
9 which is that introducing a VOC limit produces a negative
10 emission reduction. The category is quick-dry primers.
11 It's again solvent-borne. The data extends from an upper
12 limit of 300 to 750 grams per liter.

13 You will notice I have circled the top line. That
14 would be the line that would have been used for the quick-
15 dry primer category because that's the lowest data point
16 they have and the limit actually in the proposal was 200
17 grams per liter but in the quick-dry primers the lowest
18 point here is 300 grams per liter.

19 And what you'll notice is the constant solids at
20 the limit you have an increase in VOCs of six million odd
21 pounds, about six and a half million pounds actually which
22 means it's costing you something to introduce VOC limits,

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1 which makes no sense, folks.

2 I forgot to highlight also, there's a number there
3 and there's also a number there, there's no way you can get
4 a negative number by introducing a limit, not in practice.
5 This doesn't make sense. This just doesn't make sense.
6 Next slide.

7 Again, in my blue highlights some of the negative
8 ones, not all of them, notice I highlighted a few more,
9 these are opaque stains. These are waterborne opaque
10 stains. The limit in the proposal is 250 grams per liter
11 which results in constant solids, which is the way Pechan
12 was doing it, with minus 10,000 pounds.

13 So you get a minus reduction which means you are
14 increasing emissions by setting limits which makes no sense
15 because, again, keep in mind that it is only that which is
16 above the limit that one is adjusting. The assumption is
17 that all products that were below the limits stay as they
18 were in all these calculations. You will also notice that
19 going to a 50 grams per liter you have an increase of
20 emissions of 250,000 pounds which is really scary.

21 And finally, in the category known as sealers we
22 have got all the problems illustrated all at once. What

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1 you've got -- these are waterborne sealers. The range of
2 VOCs are from 50 to 350. What you will find is if you were
3 to have set the limits in the rule at 50 you would have, if
4 you consider just constant gallons at the limit, have taken
5 approximately 60,000 pound emission reduction but if you
6 decided instead of 50 to go to 100 you would have had an
7 emission reduction of a quarter of a million approximately,
8 249,000 in round numbers.

9 You, however, in the proposal have set the limit
10 at 200 and in the constant solids number you will see that
11 that produces a minus 100,000 pound reduction meaning you
12 have now increased emissions by a 100,000 pounds according
13 to this data.

14 It's for all of these reasons that we are real
15 uncomfortable using the Pechan analysis to determine
16 emission reductions. As some of you know in earlier
17 comments I had said that there were some problems because
18 the Pechan analysis only resulted, according to his
19 calculation, in a 31 percent reduction from the national
20 rule which doesn't make sense because California has
21 claimed 20 percent and they were starting not at the
22 national rule but with limits already in place. They had

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1 already taken a lot of reductions.

2 So it didn't make sense and it hasn't. And this
3 is why the result came out the way it did. You've got
4 inconsistent numbers. You've got numbers that are not
5 making sense. But when we use the spreadsheet that Dan
6 Brinsko of New York had supplied to us we do get the 31
7 percent -- it's just sometimes he chooses zero.

8 In this case he would say there would be no
9 reduction. He doesn't say it actually goes up. He simply
10 says there's no reduction.

11 But this is a real problem. So what we decided is
12 to look for a better data source with data that maybe will
13 produce some results that are closer to reality. Next
14 slide, please.

15 What we did is we looked at the California survey
16 which was actually a good starting point since the OTC
17 model rule is based on the California suggested control
18 measure and in the report for the suggested control measure
19 is where the State of California, the Air Resources Board
20 says that they're going to get 20 percent reduction. So it
21 is a good starting point.

22 I am, however, here using a more recent survey.

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1 These are the results from the 2000 survey rather than the
2 1996 survey that California had had to use for the staff
3 report because they were doing that prior to the completion
4 of the year 2000.

5 This is somewhat of an overview slide. The
6 emissions from that survey on a tons per day with thinning
7 was 137. Tons per year is 50,000 approximately tons per
8 year. The population is over 33 million which comes out to
9 a per capita figure of 2.95.

10 After the emission reduction and this is after
11 some adjustments we have to make to it and I'll discuss
12 those in a minute the reduction would only be 14 tons per
13 day, which would result in a 123 ton per day emission; tons
14 per year around 45,000. Same population, 2.65 on a per
15 capita basis.

16 Using the post-national rule emission factor which
17 is 5.36 which is from Pechan and which he got from starting
18 with the national recommendation for a starting baseline
19 and then took 20 percent off of that. So this is not based
20 on any kind of survey data. This was based on the EPA
21 proposal for that statement that that was how much he was
22 going to have. So it's 5.36.

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1 If you compare the 2.65 with the 5.36 you have a
2 51 percent reduction. That's starting to sound like a
3 normal number. And now I can show you the details of this
4 on the next slide.

5 Here are the adjustments I have made. And this
6 was at the request of MDE where it's not just the specific
7 categories or concerns of the Sherwin-Williams Company. We
8 have incorporated the categories that we understood NPCA
9 was concerned with. Here are, on the left, the limits that
10 either we and/or NPCA were recommending with the exception
11 of industrial maintenance where that 340 grams per liter is
12 the difference between the OTC model rule and your proposal
13 and the California Air Resource Board suggested control
14 measure. That is something that the OTC changed. And that
15 needed an adjustment as well.

16 You sum these all up, what you find is that we
17 have an emission adjustment needed of eight tons per day.
18 And so originally what that ends up being is originally it
19 would have been approximately 22 tons per day but we lose
20 eight of it and so after the reduction we have a 14 ton per
21 day reduction in California if the Maryland rule was to be
22 used in California. Hopefully that made sense.

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1 Applying those to Maryland we are starting out
2 here with the 51 percent that the California rule would
3 give us after we made the adjustments we need to it.
4 Maryland population is 5.3 million based on the post-
5 national emission factor of 5.36 times the population you
6 get tons per year of a little bit more than 14,000. That
7 is currently what your emissions would be.

8 Pechan, his post-rule ends up with a factor of
9 3.70 on a per capita basis. So Pechan's emissions after
10 his analysis would have been a little bit less than 10,000.
11 However, we believe it is much more accurate, the 2.65
12 emission factor, post rule which would result in only 7,000
13 tons per year emissions.

14 The difference between these two is about 2800
15 tons per year or 7.6 tons per day. That's the increase in
16 emission reductions that you're getting over what Pechan
17 suggests in his report. That's the 51 percent. I believe
18 that might be my last slide. Yes, that's my last slide.
19 We don't need this.

20 In summary, in the area of emission reduction
21 calculations I think that you are doing yourselves an
22 injustice and doing the industry an injustice by depending

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1 on data that is laughable. It doesn't make sense. And
2 those were just selected because -- those specifics were
3 selected because in fact the problem was right where your
4 limits were.

5 But there are numerous examples if you go through
6 that data over and over again of negative numbers appearing
7 or of numbers where you get a larger reduction when you
8 have a higher limit. And this makes no sense. That data
9 should not be used in determining what your emission
10 reductions are. Thank you.

11 MR. LUTZ: Thank you Ms. Harding.

12 MS. RABIN: Do you have these materials in hard
13 copy to present?

14 MS. HARDING: Yes.

15 MS. RABIN: Okay.

16 MR. LUTZ: They are in our submittal I believe at
17 Exhibit 6 and 7.

18 MS. HARDING: Or, if you want, I can give you
19 copies of the slides as well.

20 MS. RABIN: That would be great.

21 MS. HARDING: The format is slightly different
22 between the two.

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1 MR. LUTZ: Now, when Ms. Harding came up with and
2 recognized and saw these flaws in the spreadsheet and went
3 over and over it again, and went over it with their
4 attorneys and interior corporate people we decided that it
5 would be best to have somebody independent take a look at
6 this and see whether or not our conclusions about the data
7 was, in fact, correct, that there were fatal flaws, et
8 cetera.

9 Sherwin-Williams hired Mr. Douglas Splitstone who
10 is an independent consulting statistician to conduct this
11 independent assessment of the statistical base for the OTC
12 model rule upon which the proposed regulation is based.

13 The reason we chose Mr. Splitstone is because of
14 his impeccable outstanding credentials. He has more than
15 35 years of experience in the application of statistical
16 tools to the solution of environmental problems.

17 One of the primary credentials that we relied upon
18 was the fact that Mr. Splitstone is a consultant to the
19 U.S. EPA's Science Advisory Board and having served on the
20 Air Toxics Monitoring Subcommittee, the Contaminated
21 Sediment Science Plant Review Panel and the Environmental
22 Engineering Committee's Quality Management and Secondary

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1 Data Use Subcommittee.

2 He also is a member of the task group on
3 epidemiology and statistical methodology for the U.S. EPA's
4 Center for Environmental Epidemiology at the University of
5 Pittsburgh's graduate school. He's a member of the adjunct
6 faculty at Penn State University and Indiana University of
7 Pennsylvania. And he has received a distinguished
8 achievement medal from the American Statistical Association
9 for his work on statistics and the environment.

10 And I'd like to have Mr. Splitstone now comment on
11 his review and assessment of the underlying data and
12 rationale in the Pechan report and the OTC's rationale.

13 MR. SPLITSTONE: First, I'd like to thank Mr. Lutz
14 for the kind introduction and it's going to be a large one
15 to live up to. When I was asked to take a look at the
16 calculations and data behind the Pechan report I thought
17 first of the Data Quality Objectives Act and subsequent OMB
18 guidelines that apply to the dissemination of information
19 in the environmental arena as well as elsewhere in the
20 government. In fact, it applies to everybody who is
21 subject to the Paperwork Reduction Act.

22 And particularly in regard to the dissemination of

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1 influential information which means that it is information
2 that will have a clear and substantial impact on important
3 public policies or important private sector decisions.

4 The OMB, Office of Management and Budget, in 2001
5 set forth some guidelines that one needs to consider, three
6 of which I will mention today. One is the utility of the
7 information. The other is reproducibility and the other
8 that I will talk about is whether the calculations and
9 logic are transparent to a reasonably educated individual.

10 It's my understanding that the Ozone Transport
11 Commission's model rule for the architectural and
12 maintenance coatings, it's found in the report mentioned
13 before by Pechan and Associates, and the Pechan analysis is
14 allegedly supported by survey data.

15 In fact, two surveys are mentioned in their
16 report, one being the survey performed for the National
17 Paints and Coating Association by Insights, Industry
18 Insights, Inc. And in fact that is mentioned in the Pechan
19 report as the basis for their emission reduction
20 calculation.

21 Another survey was conducted by Pechan to assess
22 the market impact of the proposed rule. This was a survey

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1 of much smaller in scope. They chose I believe 32
2 companies from the list of companies mentioned in the
3 California Air Resources Board surveys, added to that some
4 companies that were regional with the cooperation of the
5 National Paints and Coating Association and surveyed, sent
6 out 32 surveys. Unfortunately, only 18 responded to the
7 volunteer survey. And these 18 that responded are
8 representative of mostly the larger companies, larger
9 manufacturing companies in the Ozone Transport Region.

10 Given the low response and the fact that these
11 larger companies are likely to manufacture lower emitting
12 products one has to give some serious consideration as to
13 whether the market impact analysis is really representative
14 of all the companies that are selling products in the Ozone
15 Transport Region.

16 Going back more to the point in terms of emission
17 reduction calculations and looking at the Insights survey
18 which initially approached 950 or identified 950 companies
19 and sent out surveys to these companies, 173 responded
20 which is only about an 18 percent response rate. And of
21 those 114 admitted to manufacturing AIM products in 1990.
22 This was the basis of the emission inventory that Pechan

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1 used in attempting to estimate emission reductions.

2 Again, those companies responding are likely to be
3 the major companies. This again was a voluntary survey and
4 again would be companies that manufactured, perhaps
5 manufactured, lower emitting products.

6 Now, it is well recognized in survey analysis that
7 small responses are likely to produce biases in the results
8 as well. So we have to consider that aspect according to
9 accepted statistical practice the bias towards those
10 responding companies and what share of the market they
11 represent would again bring into question whether these
12 companies are truly representative of those selling in the
13 Ozone Transport Region, and are really representative of
14 the whole market.

15 Given that one really has to wonder then whether
16 this data is truly useful in determining emission
17 reductions. We have to question then the utility. More
18 serious, I think, is the fact that the information
19 available from the Insights survey due to confidentiality
20 considerations is incomplete so that to reproduce the
21 classification that was shown in Ms. Harding's slides is
22 not possible from the data available on the Insight survey.

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1 I've had a couple of discussions with the National
2 Paint and Coatings Association as well as Sherwin-Williams
3 as to whether the raw information is available somewhere
4 and apparently it is not.

5 So we are left with the hard copy of the survey
6 with the confidentiality data gaps in it which does not
7 then permit us to reproduce the distributions according to
8 the categories in grams per liter that were shown on Ms.
9 Harding's slides.

10 MR. SELL: Can I just interject here so it's clear
11 to people how that came about? The NPCA did not conduct
12 this survey. It sponsored it. So we hired as we always do
13 in these sorts of things so we don't get a vision or an
14 understanding of our own customers' market circumstances.

15 We had an outside group do this and as a result
16 when they finish a survey like it is customary for them to
17 have confidentiality concerns as well and to get rid of the
18 data. So it wasn't that people deep-sixed this
19 information. It was just in the normal course of what's
20 done. Thanks.

21 MS. RABIN: I'm sorry. Can you give your name for
22 the court reporter?

1 MR. SELL: I'm Jim Sell with the National Paint
2 and Coating Association. Thank you.

3 MR. SPLITSTONE: I wonder if we could put us just
4 one of your slides?

5 MS. HARDING: Give me one minute.

6 MR. SPLITSTONE: Any one. I just want to get the
7 feeling of the spreadsheet.

8 MS. RABIN: Do you want to hold up one of these
9 and pass it around or something?

10 MS. HARDING: I just turned it off. It's starting
11 up.

12 MR. SPLITSTONE: We can go on if we can imagine
13 the slide and there is --

14 MS. RABIN: We can pass these hard copies around
15 and then just give it back to me again.

16 MS. HARDING: I don't know if you can remember
17 what they look like. Which one did you want to see?

18 MR. SPLITSTONE: Any one. I just want to look at
19 the form of the spreadsheet. We can just go with the hard
20 copy. Pechan in their report clearly indicates that the
21 basis for their emission reduction calculation was data
22 from the Insights report. I already talked about the

1 difficulty and the impossibility of reproducing their
2 classifications in terms of gallons pounds. The original
3 spreadsheet which came from New York --

4 MS. HARDING: Yeah, Dan Brinsko.

5 MR. SPLITSTONE: Has a couple of other columns in
6 it one of which contains at the bottom for each coating and
7 base category a total emissions in pounds which is
8 consistent with what is reported in the Insight survey.

9 Given that misstatement in the report one would be
10 led to believe that the total emissions that could be
11 reduced should be the total emissions from the Insights
12 survey. Indeed, it's only that way in one case and that is
13 bituminous coatings. Now --

14 MR. LUTZ: How many are not?

15 MR. SPLITSTONE: How many are not? All the rest,
16 however many they have in there. But there's only one case
17 where this top line which should be if you reduce
18 everything should be the total emissions. Most of the time
19 these values here are greater than the total emissions
20 reported in the Insights survey.

21 So I set about trying to ascertain, ferret out the
22 logic behind Pechan's distribution to these categories.

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1 Based on the total gallons produced and making some
2 assumptions I could at least attempt it for the exterior
3 flats. Given a couple of tables in the Insight survey I
4 was able to reconstruct by and large the distribution of
5 gallons sold for the exterior flats category.

6 I then tried to by several means reproduce their
7 calculations and their estimates of emissions reductions.
8 And I found it was impossible to do through any accepted
9 statistical calculations to reproduce the values that they
10 have there.

11 I then inquired at the National Paints and Coating
12 Association and with Ms. Harding as to whether they knew
13 what the formulae were that were used for this and was told
14 no. So we have a situation where certainly the estimation
15 of emissions reductions is anything but transparent and
16 apparently there is no one around or can be identified who
17 actually did it and can describe the logic behind it.

18 Therefore, I conclude that the calculations
19 presented in the Pechan report with regard to the coatings
20 are of doubtful utility, certainly not reproducible and
21 certainly not transparent and therefore do not meet the OMB
22 guidelines for the dissemination of information for the

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1 adoption of regulation.

2 Now, I have also reviewed the California Air
3 Resources Board survey results, not all seven years or
4 seven surveys but the last three and find that they have
5 taken pains to reduce their nonresponse rate according to
6 accepted methodology, have gone out and followed up on
7 survey results. Therefore, any bias that might be
8 introduced by nonresponse can at least be objectively
9 looked at.

10 The calculations, although the reports still have
11 the confidentiality problems, any of the calculations or
12 data, because of a permanent staff existing at the Air
13 Resources Board can be overcome. I'm sure that they can
14 all be reproduced and I have looked at the calculations
15 that Ms. Harding has performed and certainly can follow the
16 logic and they are transparent.

17 So it's my conclusion that the Pechan report and
18 subsequent estimation of emissions would not meet the OMB
19 guidelines. The industry calculation is based on the
20 California data would indeed meet the OMB guidelines.

21 MR. LUTZ: Thank you, Mr. Splitstone. I would
22 like to introduce into the record four documents.

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1 Actually, one of them is Mr. Splitstone's report which
2 explains what he said is attached at Exhibit Number 5 to
3 our submittal and I have here with me a copy of the
4 guidelines for ensuring and maximizing the quality,
5 objectivity, utility and integrity of information
6 disseminated by the Environmental Protection Agency. I
7 will give that to the hearing officer.

8 I also have the Federal Register dated February
9 22nd, 2003 which are the OMB guidelines that are to be
10 followed by each federal agency in adopting regulations and
11 a notice of Public Law 106554 which is the law that
12 requires the Office of Management and Budget to adopt these
13 regulations.

14 I would like to make a few closing remarks on
15 behalf of Sherwin-Williams and point out one thing. I
16 think the most important point anything the department
17 should get out of Ms. Harding and Mr. Splitstone's
18 testimony is that there is probably going to be as a result
19 of this regulation not a 31 percent reduction in emissions
20 of VOCs but a 51 percent reduction in emission of VOCs.
21 Even if relief is given to the 12 categories that we have
22 requested it's going to be around 50 percent not 31

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1 percent.

2 That gives the Department considerably more leeway
3 and flexibility with meeting its SIP requirements for the
4 Baltimore and Washington metropolitan areas which is
5 extremely important obviously. I'd also like to point out
6 two more things that I don't think the Department has
7 considered and should.

8 This basically has to do with what is going to
9 happen to the citizens of the state of Maryland if this
10 regulation goes into effect. Ms. Harding testified about
11 the performance problems and the fact that there are no
12 suitable substitutes and waterborne products just don't
13 perform to the satisfaction of the customers and the
14 applicers.

15 No consideration has been given to the thousand or
16 more jobs in Maryland who are now being occupied by folks
17 in the state of Maryland who install hardwood floors, sand
18 them, stain them and finish them. No consideration has
19 been given. And it may be more than a thousand. I mean,
20 the three people who are not here who were going to testify
21 were going to testify exactly about this. They were going
22 to -- and the comments should be coming in -- were going to

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1 confirm Ms. Harding's conclusions that waterborne
2 substitutes are not suitable for doing floor staining and
3 other uses that Pechan said there was no problem.

4 And there are a lot of people in this state. I
5 mean, not only do they install the floors and stain them
6 and finish them but as you all know, hardwood floors are
7 becoming more and more popular. The finish on those
8 hardwood floors do not last forever and people, citizens of
9 the state of Maryland, will be demanding that they get
10 refinished.

11 And if this regulation goes into effect no one
12 will be able to refinish these floors basically even with
13 the small quantity exemption that's in there. It's
14 practically impossible. You're not going to use liter
15 containers to do this. These are professional people who
16 have jobs, who go about finishing and installing and
17 staining and finishing floors.

18 So I expect that there will be written comments by
19 those folks who were going to testify today. And of
20 course, no consideration has really been given to the
21 owners of the homes who want hardwood floors and want to
22 have them refinished, want to have them installed, et

1 cetera. I did that myself very recently, had that done.
2 And that should be something that should be taken into
3 consideration because they will not be able to be repaired,
4 maintained and refinished properly if this rule goes into
5 effect.

6 In summary, we do not believe that the agency has
7 done what it really needs to do, conduct its own
8 independent analysis of this rule to see how it will affect
9 the citizens of this state.

10 The Department has basically taken a model rule
11 that was supposed to be utilized for all the states in the
12 Northeast but there are vast differences between what
13 happens in the Northeast in terms of temperature, humidity,
14 et cetera, and what the weather and everything else is like
15 in California, which is one of the bases for the SCM. It's
16 California's SCM but things in California are a lot
17 different than they are in the northeast United States.

18 We think the much better approach is to look at
19 the reliable data that Mr. Splitstone testified to and
20 extrapolate what the real emissions savings are going to be
21 as a result of using the reliable data and we think the
22 State will find that its emissions savings are considerably

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1 more than what was predicted by OTCs consultant, Pechan.
2 If there any questions we'd be happy to answer them. If
3 there are no questions, thank you, very much.

4 MS. RABIN: Thank you, very much. Would anyone
5 else like to comment?

6 MR. SELL: I would. Hearing officer, my name is
7 James Sell. I'm senior counsel with the National Paint and
8 Coatings Association and I want to provide some background
9 information about a number of the coatings that are at
10 issue here this afternoon. I endorse what Sherwin-Williams
11 said. They are members of the NPCA and we work closely
12 with them throughout this process. Just by way of
13 background information NPCA is comprised of approximately
14 400 member companies throughout the United States and also
15 internationally.

16 And a number of these coatings manufacturers
17 manufacture consumer paint products and industrial
18 maintenance coatings. Also, we have members who provide
19 the raw materials for these coatings. So we have a fairly
20 good handle on how these coatings are made, their
21 performance characteristics and the technology necessary to
22 have them perform adequately.

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1 Also, we have a great interest in the proposed
2 rule obviously. As the preeminent organization
3 representing the coatings industry in the United States,
4 NPC has been extensively involved in the development of
5 environmental regulations affecting the industry.

6 Over the last 20 years this involvement has
7 increasingly included clean air issues. It would be a
8 mistake however to assume that the industry had been idle
9 in this connection prior to the establishment of the clean
10 air regulatory developments. Its efforts to reduce solvent
11 materials from coatings long predate the federal and state
12 clean air regulatory requirements.

13 Beginning with the end of World War II this
14 industry began to introduce latex and waterborne coatings.
15 The coatings now represent over 80 percent, over 80 percent
16 of the architectural or residential coatings applied today
17 in the United States.

18 Additionally, waterborne coatings are finding
19 their way increasingly into industrial and commercial and
20 OEM coatings applications. In other words, the technology
21 has made great strides since the end of World War II and
22 moreover it is expected to continue to improve in the

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1 future.

2 There are very simple economic reasons for this
3 movement aside from regulatory demands for lower solvent
4 paint. First and foremost our customers prefer to use it
5 for among other reasons of low odor and also its ease of
6 cleanup.

7 Secondly, our members prefer to make it. Water
8 costs less than solvent and you don't have the flammability
9 issues in your plants when you're using water as opposed to
10 solvent material. So even without the Clean Air Act
11 requirements these advances would have occurred.

12 More importantly, this industry's R and D is a
13 constant exercise to improve a coating's acceptability and
14 competitiveness in the market. Our industry is
15 intentionally competitive with relative low margins and
16 with the overall demand for coatings strictly tied for the
17 most part to population growth. Reduced solvent content is
18 a major needs for achieving product performance in this
19 very tough market so long as it does not compromise
20 coatings performance.

21 Ms. Harding has given you a number of examples of
22 where the VOC limits in this proposed rule, in fact,

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1 compromise coatings performance. There are other examples
2 which she did not allude to because she was concentrating
3 on a particular sector, the Sherwin-Williams coatings
4 market, but the issues that she is raising for those
5 particular coatings also apply to a number of other
6 coatings in the rule.

7 This last point about compromising product
8 performance is an extremely important one and it is
9 important not only from the perspective of product
10 warranties but also from the perspective of improving clean
11 air itself. It stands to reason that if a coating must be
12 applied more often or does not last as long -- all
13 performance characteristics Ms. Harding alluded to and
14 pointed out -- there will be more recoating.

15 Even if this is with a lower VOC coating the net
16 result will be an actual increase in VOC emissions because
17 more of the coating is being used.

18 The expectations of regulations can sometimes
19 exceed the realistic possibilities of a coating's
20 technology where too low of a VOC limit can actually
21 eliminate better performing, viable low VOC waterborne
22 coatings.

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1 We believe the proposed AIM rule does this,
2 sacrifices key performance characteristics of coatings in
3 the pursuit of lower VOC coatings that will not, in fact,
4 deliver a net reduction in VOC emissions. Instead they
5 will increase VOC emissions and simultaneously impose
6 higher costs on the end users and the public.

7 Let me give you an example in addition to the ones
8 that Madelyn provided. one of our coatings manufacturers
9 has developed a material that was identified in July 2002
10 Consumer Reports as being excellent in all categories of
11 performance including toughness and hiding.

12 These two features mean that this particular
13 coating has fewer VOC emissions both in the application of
14 the coating because of the high coverage capability and
15 also in the recoating because it is more durable. These
16 coatings cannot be made at the VOC limit specified in the
17 Maryland proposed rule.

18 I'm concentrating on waterborne coatings in this
19 discussion because this is the technology through which
20 most of the VOC emissions reductions have and will continue
21 to be achieved by our industry. But the performance
22 problems that the low VOC limits specified in the Maryland

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1 rule demonstrate that there are limits as to how far the
2 waterborne technology can be pursued or pushed.

3 Included in our materials is an excellent article
4 written by a manager from Rohm & Haas which is an
5 international supplier of paint raw materials. And this
6 particular company has taken an extremely aggressive
7 development posture with respect to developing waterborne
8 resins and materials to make these coatings.

9 Besides being a very good basic primer on the ways
10 and wonders of waterborne technology it also contains a
11 very honest assessment of the performance trade-offs that
12 will occur with the technology as it exists today and for
13 the foreseeable future.

14 He discusses, for example, the soft binders
15 required of low solvent waterborne coatings and states that
16 in contrast when you formulate with a waterborne softer
17 binders it forces low solvent paint makers to make some
18 very difficult choices. These choices can be as between to
19 obtain good hardness and block resistance low temperature
20 film formation may not be possible.

21 And that's an important statement. In order to
22 get the durability factors low temperature film formation

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1 may not be possible. What he's talking about there is the
2 ability to apply that coating in a relatively cooler
3 environment in your late fall periods and in your early
4 spring periods.

5 That has a direct impact on ozone formation
6 because as we all know ozone only gets formed in the hot
7 months during the summer. So what he's trying to indicate
8 here is that some of these coatings if you push them too
9 far will not be able to be used in these low temperature
10 months and are now going to be crowded into the high
11 temperature months where, in fact, there is ozone
12 formation.

13 He also talked about some of the detrimental
14 effect on scrub resistance which is crucial in kitchens and
15 children's rooms and the like. He also notes that the
16 absence of other solvents such as glycol makes freeze-thaw
17 stability highly problematic. That's a central issue in
18 this part of the country because freeze-thaw of waterborne
19 coatings if they're exposed to weather conditions below
20 freezing and they don't have sufficient solvent in them
21 they will actually go south in such a way that you cannot
22 use the material at all.

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1 Now, there have been companies within our
2 membership and elsewhere that have made a determination
3 that they're going to, to some degree, jettison some of
4 their freeze-thaw stability in order to preserve these
5 other crucial aspects of the coatings because the materials
6 in the VOC levels that are being specified by these rules
7 are forcing those kinds of hard choices.

8 We have raised that issue but it's never been
9 examined in terms of what is the impact upon the energy
10 consumption and the energy usage where you now have to heat
11 trucks more often when they're traveling in the winter.
12 You have to heat your warehouses more often.

13 Those kinds of things we think would have been
14 examined in a well-thought-out rule that evaluated all of
15 the costs and the consequences of going to some of these
16 lower VOC materials but unfortunately that did not occur in
17 the CARB survey. It did not occur at the OTC level and it
18 didn't occur here in Maryland.

19 Another important aspect of this article and I
20 really recommend that you read it the manager concludes
21 that progress over time will be made into performance gap
22 between conventional and low solvent chemistry will

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1 diminish. The term he uses is diminish. I think that's a
2 very interesting choice of words. Here is a knowledgeable
3 individual with every economic incentive -- his company
4 after all is making these materials -- to want to really
5 push them.

6 And he has every economic incentive to say that
7 this difference will in fact disappear completely but still
8 because he's an honest broker of information says they're
9 going to diminish over time. So these differences are
10 going to stay with us between waterborne and solvent-borne
11 technologies.

12 Moving to the very low waterborne technology in
13 the manner of the proposed rule of Maryland carries with it
14 the potential acceptance of a number of these trade-offs of
15 the type described and discussed in the Rohm & Haas article
16 and also the type that Madelyn mentioned.

17 None of these real world consequences were
18 examined in the Maryland rule-making. Instead they are
19 ignored or assumed away. And they are assumed away largely
20 on the basis of an uncritical adoption of limits in a rule
21 that was adopted in California, a state with much more
22 benign weather than Maryland, a state in which freeze-thaw

1 is not an issue in its most populated areas, a state in
2 which cold temperature applications and durability of
3 coating under the yearly extreme temperature swings in this
4 state are not an issue.

5 In the high population centers of California, its
6 coastline area and nonmountainous areas, there are no
7 freeze cycles at all. Last year there were none. In
8 contrast Maryland had over a hundred.

9 Also, it's noteworthy that Rohm & Haas maintains
10 two separate field testing and exposure stations in these
11 areas, one in California and one in the Northeast precisely
12 because of the radical different climatic conditions.

13 The Maryland rule-making reflects its reliance on
14 the fact findings of the underlying California rule-makings
15 including the cost associated with the rule's limits.

16 But surely even if one wishes to emphasize that
17 indeed California does have cold winters in its mountainous
18 areas and thus could affect coatings there a common sense
19 evaluation of the relative impacts on the coatings because
20 of weather conditions between Maryland and California would
21 have to take into account that most of these coatings are
22 being applied in an area where they have no freeze

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1 temperatures at all, would have to recognize the very large
2 relative difference, a difference that matters, a
3 difference that has tremendous implications for the cost of
4 these coatings and also for the clean air that's going to
5 result.

6 This was not done in the rule-making.
7 Consequently, we think it is fatally flawed in its
8 evaluations of costs on industry, the consumer, small
9 businesses and its evaluation of environmental consequences
10 for the state.

11 Additionally, the reliance on California's
12 assessment of the availability of coatings at the low VOC
13 level also ignores the fact that even in California there
14 is substantial amount of product that are bought at the
15 higher VOC levels that are not reflected in the rule and
16 this results because they have exemptions and they have
17 averaging programs out there.

18 The averaging program is not allowed under the
19 Maryland rule. Nowhere in the record is there any
20 examination of why such products in California are still
21 used and demanded if, in fact, the coatings at the lower
22 VOC levels meet all of the performance requirements that

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1 are needed.

2 This is even more puzzling in the face of the
3 widely recognized fact that all things being equal,
4 consumers greatly prefer using lower VOC products,
5 primarily waterborne.

6 Also uncritically accepted in the Maryland record
7 is the so-called performance testing that was conducted in
8 California for some of these coatings. We will have more
9 to say about this in our written comments but suffice it to
10 say for now that these tests were poorly conducted and the
11 conclusions reached on the basis of them were not supported
12 by the facts and in our view in many cases were
13 preordained.

14 They wanted to find the lower VOC coatings worked
15 in fact. They conducted tests in a way that a coatings
16 manufacturer would not conduct a test and bring a coating
17 to market under those circumstances. And frankly, if you
18 take a look at the conclusions that were reached they
19 cherry-picked in many of these instances.

20 In addition to that, never have they ever
21 performed through any of the tests one of the most crucial
22 tests a coatings manufacturer will do in bringing a coating

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1 to market and that is to actually take the coating and
2 apply it field conditions. That's essential, particularly
3 for outside coatings applications. And as Madelyn pointed
4 out, too, they actually have a school where inside
5 applications in which there was a field test.

6 The reason it is important that the coating be
7 applied in the environmental conditions that it is going to
8 be used under is that those environmental conditions can
9 drastically affect the performance of the coating. If they
10 take it out and they apply it in a certain day where
11 there's a lot of humidity in the air and it's a waterborne
12 coating that can have an impact on dry times. It can have
13 an impact on the adhesion of the coating and the like.

14 If you simply take an apply a coating under the
15 pristine conditions of a lab, which is what they did, and
16 allow those lab -- those boards to cure for six months and
17 then take it outside and expose it to the elements that's
18 not what a paint manufacturer would do. And they certainly
19 wouldn't make 10,000 gallons and go to the public with that
20 kind of test behind it.

21 The National Paint and Coatings Association has
22 developed an alternative table of standards that also

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1 incorporates waterborne technology for many important large
2 volume coatings such as flat and nonflat coatings but our
3 suggested table of standards minimizes these trade-offs
4 while securing additional VOC emissions reductions beyond
5 those achieved by the National AIM Coatings VOC rule.

6 Additionally, our proposal would continue the use
7 of solvent-borne materials for stains and certain primers
8 and Cedars. Our limits we estimate would secure in excess
9 of the emissions purportedly secured by the Maryland rule
10 even under the assumptions used by Maryland.

11 In considering this issue we ask that you read the
12 submission made by Sherwin-Williams and the information
13 that was provided to you today in which the issue of the
14 Pechan report has come up and upon which the OTC in
15 Maryland has relied to estimate the VOC emission reductions
16 it expects from the OTC model rule.

17 I think Sherwin-Williams has convincingly
18 demonstrated that the emission reductions calculated in the
19 Pechan report upon which Maryland relies for the efficacy
20 of its proposed rule understates the actual emissions that
21 will be achieved.

22 The data if properly calculated supports

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1 acceptance of our table of standards and suggests that the
2 emissions reductions resulting from the implementation of
3 our table of standards will definitely exceed the 70
4 percent plus figure we have provided.

5 It has been suggested that the VOC limits of the
6 Maryland rule are now going into effect in California and
7 if there are problems with these coatings they will surface
8 in sufficient time to make any needed corrections in the
9 Maryland rule which will go into effect in 2005.

10 This is a false insurance policy. First, as
11 noted, the impact of California weather is radically
12 different. Second, the performance problems with which we
13 are concerned, such things as durability, take more than
14 two years to manifest themselves.

15 And finally, many of the higher VOC coatings as I
16 mentioned earlier will still be allowed through exemptions
17 and averaging programs that will allow the sale of the
18 higher VOC noncompliant coatings, an averaging program
19 which I again emphasize is not permitted under the Maryland
20 rule.

21 So in point of fact this so-called experiment or
22 real test of these lower VOC coatings will not be performed

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1 adequately in California. It will occur in the hothouse
2 environment of California. Instead it's going to be
3 conducted here in Maryland in 2005 with all the potential
4 problems no longer hypothetical but real and current.

5 For those reasons we would ask Maryland to
6 reconsider its proposal and to go back to the drawing
7 board, incorporate some of the suggestions we have made,
8 our table of standards, evaluate them realistically in
9 light of the kind of information that has been provided by
10 Sherwin-Williams concerning the calculation of the VOC
11 emission reductions and essentially give this more time and
12 take a closer look at it and really evaluate it truly in
13 the context of a coating from California, limits that are
14 going to be applied here in Maryland as opposed to limits
15 that were established in California. That concludes my
16 remarks. I'll be glad to take any questions.

17 MS. RABIN: Thank you very, Mr. Sell.

18 MR. SELL: Thank you.

19 MS. RABIN: If those present would like the
20 Department could reconvene this meeting, this public
21 hearing this Friday, January 28th at 10:00 a.m. to
22 accommodate those who were not able to attend today.

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1 MR. LUTZ: Can I get back to you later this
2 afternoon on whether or not at least the people that I was
3 told are willing to attend? Randy Lutz for the record.

4 MS. RABIN: Let the record reflect that we will be
5 trying to reconvene on Friday January 28th at 10:00 a.m.

6 MR. LUTZ: It would nice if the Department could
7 post on their web site or somewhere some notice of that
8 because I may not -- the people who contacted me may not be
9 the only people who wanted to be here and those who
10 otherwise may have wanted to be here I think would look to
11 see whether or not there are additional opportunities. I
12 appreciate that.

13 MS. RABIN: I'm sorry. Friday the 30th.
14 Correction. This portion of this meeting is now concluded.

15 **(Whereupon, the hearing was**
16 **adjourned at 12:13 p.m.)**

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CERTIFICATE OF REPORTER

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