

# Implementation Status and Proposed Amendments to the Indoor Air Cleaner Regulation

California Air Resources Board  
Public Workshop and Webcast

June 12, 2009  
9:30 a.m.

Byron Sher Auditorium, 2<sup>nd</sup> floor  
Cal/EPA Building  
1001 I Street, Sacramento, CA

Welcome everyone to today's workshop on the IMPLEMENTATION STATUS AND PROPOSED AMENDMENTS TO THE INDOOR AIR CLEANER REGULATION.

(1) The general format for today's meeting will be a relatively short staff presentation, followed by questions from you and discussion of those questions. (2) Regarding your questions – you will be able to ask them over the phone if you've called in, or you can email your questions to **auditorium@calepa.ca.gov**.

For everyone, the slides being shown today are also posted on our web site.

# Outline

- **Introduction and workshop purpose**
- Regulation requirements
- Implementation
- Possible amendments
- Timeline
- How to submit comments
- Further information
- Questions and answers

Today I will cover the following information, including:

- (1) The requirements contained in the air cleaner regulation;
- (2) Implementation of the regulation thus far; and
- (3) Possible amendments we are considering.
- (4) Next, I'll outline the timeline leading to a public hearing later this year.
- (5) We're interested in your comments. I will touch on how best to submit your comments after this workshop;
- (6) I'll give you several sources for further information;
- (7) And finally, we'll discuss your questions and concerns.

## Introduction and workshop purpose

- Update on implementation status
- Obtain input on possible changes to the air cleaner regulation

The purpose of our meeting today is two-fold...(1) first, to update everyone on how the air cleaner regulation is being implemented and progress to date; and (2) second, to hear from everyone on their thoughts and input on possible changes to the regulation.

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Moving to the requirements contained in the current regulation...

## Regulation requirements

- Adopted Sept. 2007; effective Oct. 18, 2008
- Air cleaners sold in CA after Oct. 18, 2010 must be tested, certified and labeled
- Labeling and advertising
- Manufacturers must notify distributors, retailers and sellers by Oct. 18, 2009 and send contact information to ARB
- Recordkeeping

We're now on slide #5...The air cleaner regulation was adopted by the ARB in September 2007, and after two 15-day notices and responding to comments, the regulation became effective October 18, 2008.

In brief, the regulation requires that any portable indoor air cleaning device sold in California after October 18, 2010, must have been tested, certified and labeled. Mechanical air cleaners must be tested to the electrical safety requirements in ANSI/UL Standard 507; the testing can be done by any Nationally Recognized Testing Laboratory that is recognized for ANSI/UL Standard 507.

All other portable air cleaners must be tested to the ANSI/UL Standard 867 including the Section 37 ozone test which requires that devices cannot emit more than 0.05 ppm of ozone.

All indoor air cleaners must display on their product packaging an ozone emissions certification label. And, any indoor air cleaning device for non-industrial use that is advertised or sold via the Internet or by catalog, but has not been certified, must display an advisory stating: "Does not meet California requirements; cannot be shipped to California."

Notification – Within 12 months after the effective date of the regulation, i.e. by October 18<sup>th</sup> of this year, manufacturers must notify all their distributors, sellers and retailers about the regulation.

And finally, recordkeeping is required.

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How has the regulation been implemented so far, and what problems have we identified in the startup?

## Implementation

- Held workshop in December 2008 to discuss implementation steps
- Developed and posted certification application and procedures
- Translated regulation into Chinese and Korean (will be posted soon)
- Posted Q & As and we are responding to individual questions
- Audited two laboratories
- Posted list of certified air cleaners on web site

As shown here in slide #7, we've undertaken a series of steps to implement the air cleaner regulation.

We held a workshop in December 2008 to discuss implementation steps; A certification application and procedures were developed and posted to our web page;

We translated the regulation into Chinese and Korean (and these translations will be posted soon);

We've posted a number of questions and answers to our web page regarding the implementation of the regulation and we are continuing to respond to individual questions as they come up;

We audited two laboratories for conducting the Section 37 ozone emissions test; and

Finally, we have posted list of certified air cleaners on our web site.

## Implementation – ozone testing and certification

- Testing facilities approved for ANSI/UL 867 ozone test
  - UL/AQS approved; Intertek audited, completion pending
  - 14 models from 7 companies tested
- Air cleaners certified
  - 36 models certified (34 mechanical and 2 ionizers)
  - Slower rate than anticipated

Moving to slide #8...

As I mentioned we've audited two testing facilities. As shown here, the UL/AQS testing facility was approved and is currently testing, and the Intertek facility is pending. The UL/AQS facility has so far tested 14 models from 7 companies.

In terms of actual certification, the ARB has certified 34 mechanical air cleaners and 2 ionizers for a total of 36 models. This is fewer than we expected at this point in time....but may be understandable in light of the weak economy and other problems we've identified, shown in the next slide.

## Problems identified

- Only one testing facility approved; however, it's not being fully utilized
- Several steps in ozone test protocol have lengthened the test time beyond expectations; testing costs higher than expected
- Economic downturn and lower consumer demand have resulted in higher than expected inventories of air cleaners
- More in-duct ozone generators marketed than previously recognized

Slide #9 lists several of the problems that we've observed and received information on...

- (1) First, we expected to have two testing facilities up and running relatively quickly. It has taken some additional time, but we expect to have a second testing facility available shortly, based on an audit conducted in May.
- (2) Second, several steps in the Section 37 testing protocol have affected the number of test runs required and the length of those test runs, thus lengthening the overall test times beyond what was expected. This and other factors have contributed to testing costs being higher than expected by the manufacturers.
- (3) The downturn in the economy and resulting lower consumer demand has led to slowed turnover and higher than expected inventories of air cleaners.
- (4) And finally, we've seen anecdotal evidence of increased use of in-duct devices, including intentional ozone generators, and elevated ozone emissions from them.

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Next, we've given some thought to how we might address the problems identified so far, including possible amendments to the air cleaner regulation...

## Possible amendments

- **Extend October 2010 compliance date**
- **Extend allowable date for use of adhesive sticker labels**
- **Increase allowable test facilities for mechanical air cleaner testing**
- **Clarify ANSI/UL 867 Section 37 ozone test protocol (with UL)**
- **Limit exemption for in-duct devices**

Here in slide #11 we've listed several possible amendments to the air cleaner regulation to address the problems observed...I'll list them and then cover them in a bit more detail in the following several slides...

We are considering:

- (1/2) extending the October 2010 compliance date, including the allowable date for using adhesive sticker labels to meet the labeling requirement;
- (3) increasing the numbers of test facilities allowed to conduct the electrical safety tests for mechanical air cleaners;
- (4) working with UL to clarify several steps in the Standard 867 Section 37 ozone test protocol; and lastly,
- (5) limiting the exemption for in-duct devices.

## **Extend October 2010 compliance date**

- **Extend compliance date by six months**
- **Rationale: extension requested by manufacturers due to delay in readiness of second testing laboratory and excess inventories due to economic downturn**

Here on slide #12....

The first suggestion is to consider extending the October 2010 compliance deadline for testing, certification and labeling; here we're suggesting 6 months because there has been about a 6 month delay in having a second test facility available, and manufacturers have requested an extension.

This extension would also apply to the labeling requirement in the regulation that allows the use of adhesive stickers on product packaging for air cleaners manufactured prior to April 1, 2011.

## **Increase allowable test facilities for mechanical air cleaner testing**

- **Allow NRTLs, recognized by OSHA to perform ANSI/UL Standard 507 testing, to accept testing under OSHA Programs 2, 3 and 4, subject to NRTL evaluation/approval**
- **Rationale: no ozone risk from mechanical devices; additional facilities can perform ANSI/UL Standard 507 electrical safety test**

The second suggestion, shown here on slide #13, is to increase the numbers of test facilities available for mechanical air cleaner testing.

In the regulation we allow NRTLs (recognized by OSHA) to use Program #2 facilities to conduct the Standard 867 ozone testing, but we did not specifically allow such facilities to conduct Standard 507 testing for mechanical air cleaners. This proposed amendment would make it clear that NRTLs can utilize Program #2 facilities and also Program 3 and 4 facilities to conduct the Standard 507 testing.

This action is appropriate because there is no real ozone risk from mechanical air cleaners, and Program 2, 3 and 4 facilities are well suited to conduct the electrical safety testing with oversight from NRTLs.

## Clarify ozone test protocol - I

- **UL to clarify criteria for stopping ozone tests at 8 hours vs. 24 hours**
  - **Concern:** Too restrictive as implemented; penalizes low-emitting devices
  - **Solution:** *Revise definition of steady state at hour 7-8*
- **Streamline chamber performance tests**
  - **Concern:** Sec. 37.2.3 requirements take more than two days of testing
  - **Solution:** *Verify ozone half-life once before each model group test; conduct other tests biannually*

The next two slides describe several concerns that have arisen regarding the revised Section 37 ozone testing protocol in Standard 867. To address these concerns, several suggested clarifications have been discussed and are being considered by UL. If incorporated, these clarifications would be published by UL as Certification Requirement Decisions, or “CRDs”.

The Section 37 ozone protocol allows the ozone test to be stopped after 8 hours if the ozone levels have reached a steady state in hour 7-8 and are well below the 0.050 ppm limit. In practice, the strict definition of “steady state” used in the protocol has penalized low-emitting devices and inadvertently required those tests to go a full 24 hours, thus lengthening the test unnecessarily with no benefit. UL is considering refining the definition of “steady-state” so that the test can be ended after 8 hours if it is clear that the device would not reach 0.050 ppm ozone emissions.

A second clarification would streamline the routine chamber performance tests, which require days (as opposed to hours) to complete. Currently, Section 37.2.3, which specifies the chamber performance tests, can be interpreted in several ways. The CRD would clarify that only the ozone half-life test is required before each model test. The other tests would only be required twice a year and after any chamber renovations or maintenance activities, not in-between each model test.

## Clarify ozone test protocol - II

- Streamline filter tests
  - Concern: Multiple types of filters are sometimes shipped and all must be tested
  - *Solution: Require testing of the least reactive (worst-case) alternate filter media, using the fan setting that produces the most ozone*
- Specify VOC and PM limits
  - Concern: Chamber filtration are required, but only ozone background limits are specified
  - *Solution: Specify maximum supply air concentrations of VOCs and PM, too*

On this second slide about clarifying the ozone test protocol...

UL is planning to streamline the tests of different filter installations. Some devices being tested are marketed with multiple types of filters, and under the existing test protocol each filter requires a separate **and complete** test run. The proposed clarification **under consideration** would be to select the anticipated least reactive, or “worst-case” filter, and **require that that filter be tested using only the fan setting identified as the worst case ozone condition in previous portions of the test.**

Finally, we need to specify the chamber limits for reactive pollutants other than ozone. The current test protocol requires chamber filtration to remove ozone, reactive volatile organic chemicals, or VOCs, and particulate matter, or PM, from the air stream. However, only ozone background limits are specified, so it is unclear when the air is sufficiently cleaned by the filters. The proposed solution is to specify the allowable levels of VOCs and particulate matter **in the supply air stream as well.** The suggested levels are those from the industry full scale chamber test method, ASTM 6670-01.

## Address in-duct devices

- **Concern:** more in-duct devices being marketed, and anecdotal reports of elevated ozone emissions
- **Solution:** *Consider ban on in-duct technologies designed to intentionally produce ozone*
- **Looking for data on ozone emissions from in-duct air cleaners**

The last amendment we are considering arises out of our concern about the use of in-duct ozone-generating air cleaners. It appears more of them are being marketed, and we have received anecdotal information about elevated ozone levels being observed.

We are considering an approach that would effectively ban the use of in-duct technologies that are designed to intentionally produce ozone. However, we are still gathering information and data about such devices and we are actively seeking data that anyone has on ozone emissions from in-duct air cleaning devices.

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What is our planned timeline for considering these proposed amendments?

## Timeline

- **June 12, 2009 – workshop**
- **July 3, 2009 – deadline for comments (requested by June 26, 2009)**
- **September 4, 2009 – staff report released**
- **October 22-23, 2009 – Board update and public hearing on possible amendments**
- **Final steps: 15-day notice if needed; submittal to Office of Administrative Law**

The timeline for preparing for a public hearing by our Board this coming October is shown here in Slide #18. Following today's workshop, we are requesting that you submit any written comments you may have by June 26, to allow us time to fully consider them. The firm deadline for submittal is July 3<sup>rd</sup>. This is a relatively short timeline for comments, the reason being that in order to meet the legal requirements for a public hearing by our Board in October, a staff report must be released to the public by September 4, 2009, and we have many internal deadlines leading up to that date.

At the public hearing on October 22 (or the 23<sup>rd</sup> if the hearing carries over to a second day), the Board will make a decision. If the Board approves measures that differ from the staff proposal, there would be an additional 15-day public comment period on those changed measures. The final approved amendments to the regulation and the associated reports and paperwork would then be submitted to the State's Office of Administrative Law for its review and approval.

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We'd appreciate your comments on these proposals.

## How to submit comments

- Written comments requested by June 26, 2009
- Written comments required by July 3, 2009
- Send electronically to:  
**[aircleaners@listserv.arb.ca.gov](mailto:aircleaners@listserv.arb.ca.gov)**
- Send hard copies to:

**Peggy Jenkins**  
**Research Division, 5th floor**  
**California Air Resources Board**  
**1001 I Street**  
**P.O. Box 2815**  
**Sacramento, CA 95812**

We're asking for your comments as soon as possible in order to give them full consideration, by June 26<sup>th</sup> if you can, but no later than July 3<sup>rd</sup>. Please note that, because of our tight deadlines for the October Board items, July 3<sup>rd</sup> is a firm deadline.

Please send them electronically to: [aircleaners@listserv.arb.ca.gov](mailto:aircleaners@listserv.arb.ca.gov)

Comments may also be sent by U.S. mail to: Ms. Peggy Jenkins at the address shown on the slide and in the public notice about this workshop that is accessible from our web page.

## Further information

- Air cleaner regulation web page:  
<http://www.arb.ca.gov/research/indoor/aircleaners/aircleaners.htm>
- Certification application:  
<http://www.arb.ca.gov/research/indoor/aircleaners/certification.htm>
- Please sign up for email list serve updates:  
<http://www.arb.ca.gov/listserv/listserv.php>
- Staff contacts:
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Ryan Johnson 916-323-2190 [rjohnson@arb.ca.gov](mailto:rjohnson@arb.ca.gov)
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Jim Behrmann 916-322-8278 [jbehrman@arb.ca.gov](mailto:jbehrman@arb.ca.gov)

Thank you for joining us today.

We'll take questions in just a moment, but if you have questions or need assistance after this workshop today, please visit the web pages shown on this slide, or contact us directly. For questions on the certification and testing process, please contact Ryan Johnson, and for questions on other aspects of the regulation such as the notification or labeling requirements, you can contact me, Jim Behrmann.

I especially encourage you to read over the regulation in its entirety, to be sure you are aware of all of the specific provisions. Also, we have prepared some Frequently Asked Questions that are posted on the regulation website; those cover the major aspects of the regulation.

So now I'll turn the microphone back over to Peggy for the question and answer period.

Peggy...

## Questions and answers

- Ways to submit questions – email to: **auditorium@calepa.ca.gov**
- Phone in to: **1-877-784-3238, Passcode 29039, Leader's name: Peggy Jenkins**
- Thank you for your participation!

Thank you Jim...

Now we want to hear from you...

If you are on the telephone, we'll ask for your questions and comments in just a few minutes. If you are on the webcast, you can submit your questions and comments to "auditorium@calepa.ca.gov"

Those of you in the auditorium can simply raise your hands. We'll start with those here in the audience – are there any questions or comments?

At the end: Thank you all for participating.