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AIR RESOURCES BOARD

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CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

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Ms. Doreene D'Adamo

Mr. Hector De La Torre

Dr. Daniel Sperling

Mr. Ken Yeager

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Mr. James Goldstene, Executive Officer

Mr. Tom Cackette, Chief Deputy Executive Officer

Mr. Bob Fletcher, Deputy Executive Officer

Ms. Lynn Terry, Deputy Executive Officer

Ms. Mary Alice Morency, Board Clerk

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Mr. Rodney Hill, Staff Air Pollution Specialist, Process Evaluation Section, Stationary Source Division

ALSO PRESENT

Mr. Thomas Babineau, Rypos

Mr. Arthur Boone

Mr. Peter Bransfield, Rypos

APPEARANCES CONTINUED

ALSO PRESENT

Dr. Rasto Brezny, MECA

Ms. Kara Bush, California Grocers Association

Ms. Brenda Coleman, CA Chamber of Commerce

Mr. Tim Coyle, Apt. Association of LA, San Diego, and Santa Barbara

Mr. Jon Cramer, Certified Freight Logistics, Inc.

Mr. Evan Edgar, California Refuse Recycling Council

Mr. Frank Farrel, Greater Stockton Chamber of Commerce

Ms. Bonnie Holmes-Gen, American Lung Association

Ms. Crystal Jack, KSC

Mr. Mark Leary, Acting Director, CalRecycle

Mr. Howard Levenson, CalRecycle

Mr. Bryan Long, Foster Farms and TRU Industry

Mr. James Lyons, Sierra Research and California Trucking Association

Mr. Dan Miller, Save Mart

Ms. Cara Morgan, CalRecycle

Ms. Jennifer Svec, CA Association of Realtors

Mr. Chris Shimoda, California Trucking Association

Mr. Mike Shumake, CVTR and CTA

Ms. Brenda Smyth, CalRecycle

Mr. Patrick Smith, Harris Ranch

Mr. Mike Tunnell, American Trucking Association

Ms. Kathleen Yip, NRDC

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PROCEEDINGS

CHAIRPERSON NICHOLS: Good morning, ladies and gentlemen. Welcome to the October 21st public meeting of the Air Resources Board. The Board will come to order.

But before we begin our normal order of business, it's my great pleasure to welcome a new Board member to the Air Resources Board, just appointed by Governor Jerry Brown. Hector de la Torre comes to us from South Gate, California.

I've had the great pleasure of knowing him for quite a few years now before and during his term of service. He served three terms in the California Assembly before going off into the private sector. He is a person who had a reputation and still does as a bright young star when he was in the Legislature, one of those people who took on tough environmental issues. And so I got to know him in part over our work on rail yards, which has been of great interest in the reduction in the rail yard communities. But he's worked on a lot of other issues as well.

He is somebody who has shown a great talent for bridging gaps between different communities and different areas, which is a skill that we are all in need of here on this Board, and a commitment to working on issues of air quality. So we're thrilled to have him.

And I'm going to ask him to come stand with me and I will administer the Oath of Office, which is the official act that we have to do before he can actually serve. You've done this a time or two before. Please raise your hand and repeat after me.

(Whereupon the Oath of Office was administered to Hector de la Torre by Chairperson Nichols.)

CHAIRPERSON NICHOLS: Thank you so much.

(Applause)

CHAIRPERSON NICHOLS: Now before we call the roll, we will all rise and say the Pledge of Allegiance.

(Thereupon the Pledge of Allegiance was Recited in unison.)

CHAIRPERSON NICHOLS: Madam Clerk, would you please call the roll?

BOARD CLERK MORENCY: Dr. Balmes?

BOARD MEMBER BALMES: Here.

BOARD CLERK MORENCY: Ms. Berg?

BOARD MEMBER BERG: Here.

BOARD CLERK MORENCY: Ms. D'Adamo?

BOARD MEMBER D'ADAMO: Here.

BOARD CLERK MORENCY: Mr. Hector de la Torre?

BOARD MEMBER DE LA TORRE: Here.

BOARD CLERK MORENCY: Mayor Loveridge?

Mrs. Riordan?

BOARD MEMBER RIORDAN: Here.

BOARD CLERK MORENCY: Supervisor Roberts?

Professor Sperling?

Supervisor Yeager?

BOARD MEMBER YEAGER: Here.

BOARD CLERK MORENCY: Chairman Nichols?

CHAIRPERSON NICHOLS: Here.

BOARD CLERK MORENCY: Madam Chairman, we have a quorum.

CHAIRPERSON NICHOLS: Thank you.

I have a couple of announcements before we get started this morning.

First, I want to call to your attention there is a change in the order on today's agenda for Item 11-8-3, the update on mandatory commercial waste recycling. This item is going to be heard after Item 11-8-5, the amendments to the California reformulated gasoline regulation. So the report will not come until the end.

Anyone who wishes to testify and has not signed up on line should fill out a request to speak card. They're available in the lobby outside the auditorium. Please turn it in to the Clerk of the Board, and you have the option to include your name.

If you already signed up on line, you don't have to sign up again, but we do ask you to check in with the

Clerk here just to make sure that your name is on the speakers' list. Otherwise, it might be removed.

We will be imposing the usual three-minute time limit on testimony, and we ask speakers to summarize their comments and not read their written testimony because the written testimony will be entered into the record.

I also need to point out the emergency exits at the rear of the auditorium and up here on the podium. In the event that there is an alarm, we're required to exit the building promptly by stairs and to gather outside until we get the all-clear signal. And I think that is it as far as mandatory announcements are concerned. Welcome to all of you. We had a big day yesterday. We have a lot of important things to do today as well. We're pleased to have you here.

The first item on our agenda for this morning is amendments to the airborne toxic control measure for transport refrigeration units, which will be known as TRUs at the rest of this meeting. Staff has proposed some amendments in response to issues that have arisen the implementation of this regulation. And I'd like to turn the program over at this time to Mr. Goldstene.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman Nichols.

Today, we're proposing four additional amendments

to the transport refrigeration unit regulation. These amendments are based on our experience with implementing the regulation.

In addition, we'll also address our findings related to extending the amount of time that certain trucks must operate before they're replaced -- TRUs must operate before they're replaced. As you recall, we committed to evaluate this issue when we amended the regulation last December.

The amendments today are designed to improve compliance and enforceability, restore fairness to complying businesses, and clarify existing requirements.

The proposed amendments also add documentation and labeling requirements to assist TRU owners in registering their units.

As staff will discuss, we're not proposing to extend the operational life for certain TRUs because of concern about the public health impacts associated with changing the current seven-year operational life.

Even under the current regulation, a significant number of facilities are likely to have off-site potential cancer risk levels greater than ten per million and some greater than 100 per million. Many of these facilities are near residential areas.

Rod Hill from our Stationary Source Division will

present the amendments today. Rod.

(Thereupon an overhead presentation was presented as follows.)

STAFF AIR POLLUTION SPECIALIST HILL: Thank you, Mr. Goldstene, Chairman Nichols, and members of the Board.

Today, we're proposing amendments to the transport refrigeration unit airborne toxic control measure, otherwise known as the TRU ATCM.

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STAFF AIR POLLUTION SPECIALIST HILL: This slide is an overview of today's presentation.

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STAFF AIR POLLUTION SPECIALIST HILL: In 1998, the Board identified diesel particulate matter, or PM, as a toxic air contaminant.

In the October 2000, the Board adopted the Diesel Risk Reduction Plan, which included a provision for a transport refrigeration unit control measure, because TRUs congregate in large numbers at distribution centers and expose nearby residents to toxic air contaminant emissions. Risks of over 100 in a million are common near these centers.

The TRU regulation was adopted in February 2004 and became effective in December 2004.

In March 2005, we requested U.S. EPA

authorization to implement the TRU ATCM. It was approved January 16th, 2009. Since this approval came after the first in-use compliance deadline, we delayed its enforcement for model year 2001 and earlier until December 31st, 2009.

The Board adopted time critical amendments in November 2010 and provided direction to staff to evaluate the impacts of providing additional time for TRUs to comply and to report back to the Board with recommendations. We have completed the evaluation and are recommending providing some additional flexibility. But due to the high-near source risks, we are not recommending any near-term across-the-board compliance extensions.

I will discuss our assessment and recommendations later in the presentation.

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STAFF AIR POLLUTION SPECIALIST HILL: TRUs are refrigeration systems that are powered by integral diesel engines used to control the environment of temperature sensitive products that are transported in trucks, semi-trailers, rail cars, and shipping containers.

Pictures of these types are shown here.

The engines in the truck TRUs shown in the lower right picture are generally rated at less than 25 horsepower. The engines in trailer, rail car, and

shipping containers TRUs are generally rated in the 25 to 50 horsepower category.

TRU gensets, which are not shown here, provide electric power to refrigerated ship containers powered by electric motors and are also affected by this regulation.

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STAFF AIR POLLUTION SPECIALIST HILL: The primary requirements of the existing TRU ATCM are listed here. All California-based TRUs are required to be registered in ARBOR, ARB's web based equipment registration system.

All California terminals are required to submit an operator report that provides information on terminal location and TRUs assigned to the terminal.

And all TRUs that operate in California, including those based out of state, are required to meet the TRU ATCM's in-use performance standards on a phased compliance schedule based on how old the equipment is.

Once a TRU engine reaches its seventh year of operational life, it must come into compliance with the in-use standards or be replaced. All TRUs must eventually meet the most stringent in use standard.

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STAFF AIR POLLUTION SPECIALIST HILL: The TRU ATCM has two levels of stringency for diesel PM emission reductions. The first level is called the low emission

TRU in-use standard, or LE TRU. The meet LE TRU, PM emissions have to be reduced at least 50 percent compared to uncontrolled TRU engines.

The more stringent in-use standard is called the ultra low emission TRU in-use performance standard. To meet the ULE TRU standard, PM emissions have to be reduced at least 85 percent. The overall goal of the ATCM is to have all TRU engines eventually meet the ULE TRU standard.

In general, the options available to meet these standards include replacing the engine, retrofitting the engine with a verified diesel particulate filter, or using an electric standby system. All these compliance options are available now for model year 2004.

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STAFF AIR POLLUTION SPECIALIST HILL: The in-use compliance schedule is based on a seven-year operational life for the engine. This means that the owner must meet an in-use standard seven years after the engine model year.

Model year 2003 and older engines are allowed to meet the low emission TRU or the ultra low emission TRU standard at the end of the seventh year after the engine model year. If the owner chooses to meet the LE TRU standard at the seventh year, they must meet UL TRU by the end of the 14th year after the engine model year.

Newer engines, model year 2004 and newer, are required to meet ULE TRU standard by the end of the seventh year after the engine model year. Once the engine meets the ultra low emission TRU in-use standard, they are done. And there are no further in-use standard requirements.

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STAFF AIR POLLUTION SPECIALIST HILL: Since the TRU ATCM became effective, staff has conducted outreach training and provided compliance assistance to affected TRU owners and operators. We have also met regularly with stakeholders on various compliance issues.

As a result, we have developed regulatory advisories to clarify the requirements and explain ARB's policies to provide flexible compliance solutions.

Staff has also worked with compliance technology providers to assist their development efforts toward verification of retrofit systems.

We have also conducted and participated in compliance technology forums.

ARB's web-based equipment registration system, or ARBER, has registered over 100,000 units.

Finally, we maintain a toll-free help line to answer questions about the control measure and provide registration assistance.

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STAFF AIR POLLUTION SPECIALIST HILL: Enforcement began in August 2009 for registration requirements and in January 2010 for the in-use requirements. ARB has been inspecting TRUs at a wide variety of locations, as shown in this slide.

Compliance rates have been unacceptably low. And because of that, we are proposing several amendments that will be discussed later.

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STAFF AIR POLLUTION SPECIALIST HILL: ARB staff has been actively involved in compliance assistance, including providing notification of approaching compliance dates and compliance status updates to TRU owners.

We are developing a 100 percent compliant fleet list that will serve as a tool for freight brokers, shippers, and receivers to help them hire carriers with compliant equipment.

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STAFF AIR POLLUTION SPECIALIST HILL: In November 2010, the Board adopted three time critical amendments listed in this slide.

The Board also directed staff to evaluate industry's request for extending the operational life for model year 2004 and newer engines beyond the current seven

years to eight, nine, or ten years. In order to complete this evaluation, staff updated both the emission inventory and the economic analysis or impacts of the original regulation using actual costs of compliance.

Also, the information from the updated emissions inventory was used to update the health risk assessment at distribution centers.

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STAFF AIR POLLUTION SPECIALIST HILL: The key issue for today is staff's re-evaluation of the ATCM's seven-year operational life and the impacts if we were to extend it to eight, nine, or ten years.

Based on the results of the updated emissions inventory, economic impacts and health impacts analyses, staff is not recommending a change in the operational life of TRUs. However, later in the presentation, we do have some recommendations that provide further flexibility and that recognize actions taken to date.

With respect to extending the operational life for model year 2004 and newer engines, our evaluation showed that the estimated potential cancer risk near many distribution centers is still a concern at the existing seven-year requirement. Increasing the operational life one, two, or three years would erode cancer risk reductions by 11, 23, and 42 percent.

The following slides provide additional information that provides a basis for our recommendation.

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STAFF AIR POLLUTION SPECIALIST HILL: As previously mentioned, staff updated the risk analysis for a typical distribution center using the current seven-year operational life and assuming 100 percent in-use compliance. Computer modeling was used to estimate diesel PM concentrations and risk. The estimated potential cancer risk is shown in this table.

For a facility with TRU engine operations of 100 hours per week, which is about 40 loads per week or eight trucks per day, staff estimated a near source cancer health risk greater than ten in a million. At 1,000 engine hours per week, which is about 400 loads per week, the cancer health risk is greater than 100 in a million.

In 2006, as part of the facility reporting requirements of the original regulation, facilities were required to report TRU activity. The results showed that TRU engine operations at many large facilities are well above these levels. The average activity for large facilities was close to 2,000 hours per week. The highest facility's activity was over 8,000 hours per week.

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STAFF AIR POLLUTION SPECIALIST HILL: The 2006

facility report also showed that of the 56 facilities reporting, 51 had at least 100 engine hours of operation per week. As shown in the prior slide, this level of TRU activity would correspond to the potential cancer risk over ten per million. Of these 56 facilities, 33 had at least 1,000 engine hours of operation per week, corresponding to potential cancer risk over 100 in a million.

Staff used the existing ARBER data to estimate the number of distribution facilities capable of handling at least 40 loads per week. Using the same ratio as identified in the 2006 facility reports, we estimated that there would be at least 400 facilities with the potential cancer risk above ten in a million.

We did not have sufficient data to estimate the number of these facilities that are likely to have a potential cancer risk greater than 100 in a million. However, we believe that the number of facilities operating TRU engines greater than 1,000 hours per week is significant.

Staff also looked at aerial photos for a subset of these facilities and found that at least 50 percent of them are located near residences, schools, hospitals, convalescent homes, daycare centers, or commercial zones where off-site health impacts could occur.

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STAFF AIR POLLUTION SPECIALIST HILL: Staff also conducted a thorough and comprehensive review of the inputs to the TRU inventory. We reviewed the data and received input from industry stakeholders through a public process. All the information and modeling used for this inventory is consistent with the types of data and methods we've used for previous rule-makings, including the truck and bus and off-road rules. These new data led to a significant improvement to the inventory.

This slide shows the inventory inputs and the data sources used to estimate those inputs. Those that had the most significant impact on the inventory were population, activity, and growth.

Through the public process, staff has taken into consideration all the comments and concerns of stakeholders. Staff has made a significant effort to research each issue, but have not found any additional data that would lead to change the inventory presented here.

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STAFF AIR POLLUTION SPECIALIST HILL: As a result of this improved data, the emissions inventory is generally lower. This slide shows, for the same inputs discussed in the previous slide, a quantitative comparison

of the changes to the emissions inventory since 2003. As you can see, most of the input factors were lower than what was used in the 2003, except for engine activity.

In consideration of new information, staff reduced the growth factor, which more closely follows human population growth. If you recall, we've had lots of discussion on the impact of the recession on various industries in California. While some transport sectors were impacted significantly by the recession, the refrigerated goods transport sector was not hit as hard.

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STAFF AIR POLLUTION SPECIALIST HILL: As a result of the changes to the inputs discussed on the previous slide, the current improved base line emissions for PM is shown here.

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STAFF AIR POLLUTION SPECIALIST HILL: The solid orange line shows PM emissions for the adopted TRU ATCM using the new inventory.

As you can see, the ATCM started reducing emissions in 2009 and will continue to do so as the program is implemented.

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STAFF AIR POLLUTION SPECIALIST HILL: In response to the Board's direction to update compliance cost, staff

gathered new data on actual equipment and operating and maintenance costs. Both costs were significantly higher than originally estimated.

In 2003, we estimated that about 50 percent would comply by repower and 50 percent would comply by retrofit. What has actually been the preferred compliance option is the repower, despite being 45 percent more costly.

Cost effectiveness using this updated information cost analysis is $83 per pound of PM reduced compared to the original estimate of $10 to $20 per pound. And while this is significantly higher than originally estimated, it is below the cost effective value for other diesel measures approved by the Board, including public fleets rule and ocean going vessels rule.

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STAFF AIR POLLUTION SPECIALIST HILL: The next few slides briefly describe the proposed 2011 amendments. These proposed amendments address a number of issues that arose during implementation, such as providing a one-year ULE TRU extension for some model year 2003 and older engines, providing flexibility, improving enforceability and compliance rates, and clarifying existing requirements.

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STAFF AIR POLLUTION SPECIALIST HILL: Staff is

also proposing an amendment which extends the operational life for model year 2003 and older TRUs that met the LE TRU requirements. If compliance with the LE TRU occurred by the ATCM deadlines, we are proposing to extend the ULE TRU compliance date one year. This amendment would provide some economic relief to TRU owners who made purchases during the height of the recession.

Another amendment is designed to restore competitive fairness by extending the operational life for some older TRU engines by one year. It applies to model year 2001 and older TRUs that met the LE TRU standard by the original compliance date, which was December 31st, 2008. These owners complied by the original 2008 compliance date, which was later extended to December 31, due to delays in U.S. EPA's authorization approval.

The low emission TRU compliance was achieved by the end of 2008. Then the ultra low emission TRU compliance date would be extended -- let's back up.

If the low emission compliance date was achieved by the end of 2008, then the ULE TRU compliance date would be extended an additional year. We believe this would restore a measure of competitive fairness to those owners that complied the meet the original intent of the ATCM.

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STAFF AIR POLLUTION SPECIALIST HILL: Two

amendments are being proposed to address equipment availability issues.

First would allow the Executive Officer to extend the compliance date by up to one year if the applicant can demonstrate no suitable filter or replacement engine is available.

The second amendment would allow the Executive Officer to extend a compliance date by up to four months if there are delivery or installation delays beyond the owner's control.

Both of these extensions would be considered on a case-by-case basis. We see these amendments as providing flexibility to TRU owners that choose to install Level III retrofit systems, should there be any availability issues, particularly for model year 2004 engines.

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STAFF AIR POLLUTION SPECIALIST HILL: Staff is proposing two amendments to provide additional flexibility. One amendment would allow the use of TRU manufacture year instead of the engine model year to determine compliance requirements and deadlines. This amendment provides cost savings because it effectively extends the operational life up to one year.

Another amendment we are proposing would allow an owner to use an alternative unique equipment

identification number on the equipment housing instead of the ARB identification number.

Staff is proposing to add language to clarify two existing exemptions and add one new one. These amendments include clarifying the exemption for obviously non-operational TRUs, clarifying that refrigeration systems that are not powered by a diesel engine are exempt from this regulation, and proposing an exemption for TRUs used to support emergency workers, such as fire fighters responding to a wild fire.

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STAFF AIR POLLUTION SPECIALIST HILL: Staff is proposing several amendments designed to improve enforceability. TRUs that are equipped with electric stand-by or hybrid electric are powered by a diesel engine or an electric motor when plugged into a power source.

Staff is proposing to modify the recordkeeping requirements to transition from manual recordkeeping to electronic recordkeeping. Automated electronic tracking and reporting would be phased in. This change is needed to improve enforceability of the regulation.

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STAFF AIR POLLUTION SPECIALIST HILL: Staff is proposing several amendments to improve compliance. This proposed amendment would add requirements for freight

brokers, shippers, and receivers if they arrange the transport of perishable goods on California highways.

These entities would be required to notify carriers of the ARB compliant requirements and include contract language in their agreements requiring ARB compliant TRUs. They would not be required to inspect TRUs.

This amendment is needed because compliance rates are unacceptably low. For TRUs that have passed an in-use compliance deadline, that would be the model year 2003 and older, the compliance rate is 66 percent overall and much lower, about 30 percent, for model year 2003 engines.

By requiring brokers, shippers, and receivers to hire only compliant carriers, staff believes that unfair competition can be minimized and compliance rates improved.

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STAFF AIR POLLUTION SPECIALIST HILL: Several other amendments are also designed to improve compliance rates. TRU manufacturers and engine rebuilders would be required to provide additional documentation and supplemental labels to new units and new and rebuilt engines.

Dealers and repair shops would be required to pass registration information documents to the ultimate

purchaser.

TRU manufacturers using flexibility engines would need to notify ARB, provide supplemental engine labels, and provide written disclosure to the end user so they know the effective model year of the engine and the ULE TRU compliance date.

Similar disclosure would be required if the TRU manufacturer supplies a prior tier replacement engine.

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STAFF AIR POLLUTION SPECIALIST HILL: Finally, staff is proposing several amendments to provide clarifications. These proposed amendments include:

Clarifying that the effective model year will be used to determine the future compliance date if the engine does not meet the current new engine standards.

Providing greater flexibility for TRU dealers related to non-compliant unit sales and service.

Adding disclosure requirements to prospective buyers on non-compliant units that cannot be legally operated in California.

Clarifying lessor and lessee requirements and requiring engine rebuilders to rebuild to a cleaner emissions configuration than the engine being replaced.

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STAFF AIR POLLUTION SPECIALIST HILL: This table

shows the costs and savings associated with the proposed amendments.

Overall, the proposed 2011 amendments will generate a net cost savings of approximately $13 million from now through 2029.

Of note is the cost savings for using electronic recordkeeping for electric stand-by units instead of manual recordkeeping, of about $3.9 million.

Also of note is the cost savings of about $21 million for allowing the use of the TRU model year rather than the engine model year to determine compliance dates.

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STAFF AIR POLLUTION SPECIALIST HILL: This chart shows the emissions impacts of the proposed amendments. Under the existing rule, the emissions of diesel PM will continue to decrease each year between 2011 and 2020 as shown by the solid line on this chart. The dashed line shows the emission reductions with the proposed amendments.

The impact on emission reduction of the proposed amendments is to defer very small amounts of emission reductions from now through 2018. Three amendments contribute to these deferred emission reductions: Extending the second compliance date for model year 2003 and older TRUs; exempting catering services serving

emergency responders; and allowing the use of unit manufacturer year to be used instead of the engine model year.

As you can see, the level of stringency see of the proposed amended regulations has changed very little compared to the original 2004 regulation.

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STAFF AIR POLLUTION SPECIALIST HILL: The combined emissions impacts from all of the proposed amendments would defer a total of .21 tons per day of diesel PM emissions reductions between 2009 and 2018 and maintains the downward trend in emissions and risk reductions established in the 2004 rule.

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STAFF AIR POLLUTION SPECIALIST HILL: There are several compliance options for complying with the standards that are readily available, such as repowering with a replacement engine or a unit replacement. In fact, registration data shows that engine and unit replacements have been the dominant compliance methods used by TRU owners about 80 percent of the time.

Registration data also indicates that retrofitting with a VDECS has only been the chosen compliance option 20 percent of the time.

Owners and their trade associations have

expressed concerns whether Level 3 VDECS will be sufficiently available on the market in time for model year 2004 to meet the December 31, 2011, ultra low emission TRU compliance deadline.

Staff has been closely monitoring the development of these retrofit devices. Currently, one Level 3 VDECS is fully verified and has been on the market for well over a year. A second Level 3 VDECS is currently under review by staff and verification action is likely to occur this fall.

Given that one level 3 VDECS is currently on the market, another is expected to be on the market this fall, and there is ample supply of replacement engines, staff believes sufficient compliance options are available to meet the December 31st, 2011, deadline.

As discussed earlier, two amendments are being proposed that will allow the Executive Officer to extend compliance deadlines, should there be issues with respect to availability of suitable compliance options or delays in delivery and installation. We would plan to administratively implement these provisions, if necessary.

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STAFF AIR POLLUTION SPECIALIST HILL: Staff is suggesting several additional modifications to the proposed amendments that would include a 15-day change.

These modifications provide OEMs, or original equipment manufacturers, some additional flexibility with regards to disclosures to end users related to the use of flexibility engines. Dealers would have a role in making sure the end user receives this disclosure.

Another change would allow the original equipment manufacturer to propose alternatives to providing a registration information document in each unit, providing the alternative is equally effective in assisting the end user with registration in ARBER.

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STAFF AIR POLLUTION SPECIALIST HILL: Staff recommends the Board approve the proposed amendments. Staff also recommends the Board direct staff to continue outreach and implementation assistance efforts, including working with brokers, shippers, and receivers to develop implementation guidance and compliance assistance tools.

On this point, staff has been in discussion with ag product shippers and railroads to develop approaches that recognize the need for sector-specific flexibility. We believe that there is sufficient flexibility in the rule to make these adjustments but would propose 15-day changes, if necessary.

As mentioned earlier, we recommend implementing the proposed Executive Officer extension authority for

model year 2004 on a case-by-case basis, if necessary.

Staff also recommends that the Board direct staff to continue to work with electronic tracking system suppliers to ensure they are market ready by the phased in compliance dates and to evaluate alternatives to enable less than 25 horsepower TRUs to meet the ultra low emissions TRU in-use standard in the future.

This concludes staff's presentation of the proposed amendments. Thank you.

CHAIRPERSON NICHOLS: Any concluding remarks? Just recommending that we pass these?

EXECUTIVE OFFICER GOLDSTENE: We think what we're proposing will improve compliance and clean up some of the implementation issues.

CHAIRPERSON NICHOLS: Okay. Board members have any questions?

Yes, Ms. Berg.

BOARD MEMBER BERG: Good morning. I had a couple of questions.

First on that health risk assessment, it's surprising me that we have such a high risk at 100 in a million. And I was wondering on those facilities both with ten in a million and 100 in a million, what are we doing to identify them? And are those strictly TRUs? Or are those distribution centers including other trucks,

non-TRU, but diesel trucks obviously?

PROCESS EVALUATION SECTION MANAGER BOYD: Yes. The health risk assessment included only TRUs. We didn't count other emissions.

We do have some information based on the registration data we have received and people reporting other terminal locations to us. So we do have the ability to identify some of those facilities. And certainly as we collect more data, we can identify more.

BOARD MEMBER BERG: Are we planning on doing any additional work on that health risk assessment to bring additional information either to the districts or -- because that is a very high risk. I mean, that risk is as high as some of the rail yards.

STATIONARY SOURCE DIVISION CHIEF COREY: That's right on point. And consistent with an overall rate strategy, goods movement strategy that we're looking at as an organization are going to conceptually be bringing back to the Board next year to discuss looking at the high risk areas, both distribution centers, warehouses, and ports that where there are additional opportunities to get further reductions in the sense that compliment roles like this regulation and others, because our sense is the same that some of these sites have considerably high risk. And that concept would be where the opportunities get further

reduction, where there are opportunities to go to zero, near zero, electrification, so on.

This is a discussion we've been having with the districts. Particularly, South Coast is coordinating with us on this rate strategy. It's something that we think is going to be an important compliment to the overall program.

BOARD MEMBER BERG: I did notice in your presentation that you were talking about modeling. Is there also any monitoring happening that it confirms the modeling?

PROCESS EVALUATION SECTION MANAGER BOYD: This is Rich Boyd.

The exercise we did was strictly a computer modeling. We have not yet done ambient monitoring around these facilities.

BOARD MEMBER BERG: I do certainly think that's an important strategy, given that this is so high and we would certainly hope that our modeling figures are on point. So I would recommend that we follow up on that.

Also I also notice on slide 14 that we're using 2006 data. That probably was at the height of the market. And I was wondering what update we might have that more fairly represents what's happening post --

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: Dan

Donohoue.

Ms. Berg, the issue here, it does represent 2006 data. However, if you go back and you look at the other tables what we ended up finding is the activity level overall even during the recession period didn't change. So we believe that the numbers from 2006 updated with the actual activity levels at these facilities is representative of what has happened during that time period.

It's interesting that in even talking in some of the workshops, the anecdotal thing is that while the overall economic -- there was an overall economic impact within the sector. The overall activity of moving refrigerated goods did not see that type of decrease. In fact, remained fairly constant. And that may well be that what happened is different sectors of where that food was going may have changed high-end restaurants and all that and increase in other areas. So we do believe these numbers do take into consideration the economic downturn and that the activity levels are accurate.

BOARD MEMBER BERG: And so if we then go to slide 18, I'm kind of curious as to if you look at the reduction in emissions, which I believe is the orange line, is that correct? Do I understand this chart correctly, that we see a reduction?

PROCESS EVALUATION SECTION MANAGER BOYD: That's correct.

BOARD MEMBER BERG: So if we don't have -- if we aren't severely hit by the recessions, we can't say that the reduction is because of the recession and we have low compliance. I'm curious as to where we feel that reduction is coming from.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: Could I have either Nichole Dolney or Todd Sax of the Planning and Support Division respond to that, and we'll follow up based upon their initial explanation.

MS. DOLNEY: So during the time of the original 2003 regulation, we reviewed the inputs and just found in general that the original inventory growth rate was based on a number that was a little bit too high to begin with. So we analyzed between 1990 and 2010 engine sales. And while we saw a decrease in engine sales as a result of the recession, we also found that the overall growth rate from these engine sales data indicate a lower growth than what we were originally projecting, around one to two percent, which closely follows human population growth.

So just to add to the comment about engine activity, per engine, the activity remained pretty constant through the recession. But what we did see is a drop in engine sales.

CHAIRPERSON NICHOLS: So just to put this in maybe plainer English, there was a lot of -- there was a continued rate of activity of people delivering refrigerated produce or meats or whatever into California but they weren't buying newer engines; is that what you're saying?

MS. DONLEY: Right.

CHAIRPERSON NICHOLS: But people were still eating as much of the stuff as they would have been otherwise.

BOARD MEMBER BALMES: That's not the answer to Ms. Berg's question.

CHAIRPERSON NICHOLS: What is the question?

BOARD MEMBER BALMES: She can restate it.

CHAIRPERSON NICHOLS: Your question is why is there a drop-off in emissions from the emissions inventory.

BOARD MEMBER BERG: So if we have older engines and we have the same level of activity --

CHAIRPERSON NICHOLS: I was rephrasing that. That gets us to what the question is. So on slide 18 there is this big drop-off.

MS. DOLNEY: Oh, okay. So as the engines turn over naturally to newer equipment, you'll still see emissions dropping considerably. So essentially, normal

turnover is happening at a rate that exceeded the increase in emissions from the recession from the recession.

CHAIRPERSON NICHOLS: Doesn't make sense. Let's try this again.

PROCESS EVALUATION SECTION MANAGER BOYD: Ms. Nichols and Ms. Berg, this is Rich Boyd. Let me take a crack at this.

What the orange line is attempting to capture is the affect of the current ATCM that we have right now. And what you're seeing is we have compliance dates that are triggered where folks are being moved to cleaner equipment. And this orange line is projecting the improvement in that reduction profile as we move forward. So that's what this orange line is.

PROCESS EVALUATION SECTION MANAGER BOYD: This is Richard Corey. I'm going to make another run at your question.

The orange line show represents 100 percent compliance. So the actually observed --

CHAIRPERSON NICHOLS: What would be if we were getting 100 percent compliance.

PROCESS EVALUATION SECTION MANAGER BOYD: That's correct. I think that's what you're going at.

BOARD MEMBER BERG: That's correct.

CHAIRPERSON NICHOLS: So --

PROCESS EVALUATION SECTION MANAGER BOYD: Basically, it's compliance with the standard in the reductions we would get if there was that compliance. But it does underscore and something we'll be talking about later the importance of the enforcement of the overall program to get these reductions.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: These reductions are rules. They are not activity.

And the only thing that might be a little confusing where that line starts to drop is actually at the end of 2009. So that represents the compliance that came in in the ones that complied by the end of 2008 and everybody came in 2009.

And since that was all 2002 and before, there were a lot of engines that were in the late 1990 time frame so that the number of engines coming in were fairly big and the emissions levels for those were pretty high. So there was a big slug that came in that actually by December 31st, 2009. And that's what that initial drop represents.

BOARD MEMBER BERG: Thank you very much for that explanation. I really appreciate that.

And then leading then to the compliance rate, we have -- could you just go over the model years and the rates of compliance, because I believe the lower rate of

compliance would have been the compliance date of 2010 is at 33 percent.

STAFF AIR POLLUTION SPECIALIST HILL: That 30 percent number does reflect for the model year 2003 engines that would have complied by the end of 2010.

BOARD MEMBER BERG: How about the 2002 and older? How are we doing on those?

STAFF AIR POLLUTION SPECIALIST HILL: 2002 was about 40 percent compliant. And the 2001 and older, those were --

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: Eighty.

STAFF AIR POLLUTION SPECIALIST HILL: Eighty percent compliant.

BOARD MEMBER BERG: And just to clarify, the LE TRU and the ULE TRU, engines that are older than 2004 were required to be LE TRU. Starting in 2004, we went to ULE TRU.

PROCESS EVALUATION SECTION MANAGER BOYD: That's correct.

BOARD MEMBER BERG: So December 2011 would be the first year for a ULE TRU.

STAFF AIR POLLUTION SPECIALIST HILL: That is correct.

BOARD MEMBER BERG: Are there engines available

for ULE TRU purchasing new?

STAFF AIR POLLUTION SPECIALIST HILL: You cannot buy a new replacement engine at this point in time that meets the ultra low emissions standard. You would have to retrofit with a Level 3 diesel particulate filter.

BOARD MEMBER BERG: Okay. And does that one filter work on every 2004 engine?

STAFF AIR POLLUTION SPECIALIST HILL: No.

BOARD MEMBER BERG: Can you repower to ULE TRU?

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: No, you cannot repower to ULE TRU, but you can repower to LE TRU and get seven years of life on the engine. So you do have an option still of repowering. It just doesn't get you totally finished with the program. You've got seven years out that you're going to have to then move it to ULE TRU. So you get a repower; you get a seven-year delay in having to go to ULE TRU.

BOARD MEMBER BERG: And are there retrofits are available for the LE TRU on the 2004 engines?

PROCESS EVALUATION SECTION MANAGER BOYD: Well, you would apply the retrofit for 2003 and older. And those are available.

BOARD MEMBER BERG: So then there would be an opportunity also to put on a retrofit on 2004s and have seven years?

PROCESS EVALUATION SECTION MANAGER BOYD: Well, if you put a Level 2 on there, that only gets you to LE TRU. You have that ULE TRU to compliance to worry about seven years later.

BOARD MEMBER BERG: That would be TRU no matter what, because there's only one device. If that device doesn't fit your 2004 engine for whatever reason, LE TRU is the option.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: The question here -- I don't know the answer to it -- is would the reg allow somebody to put a Level 2 on a 4I engine or -- I'm sorry. Not a 4I. Would it allow you to put a Level 2 on and extend the compliance date?

PROCESS EVALUATION SECTION MANAGER BOYD: I don't think so.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: I don't think so under the way it's structured. Your options would be to repower -- would be basically the option that you have. And out seven years, then you make the option at that point in time to decide whether you go with a new Tier 4F engine or you put a particulate filter on at that point in time that would be a Level 3 that would make that engine be ULE TRU.

STATIONARY SOURCE DIVISION CHIEF COREY: I just want to add to this, because I think this is getting

confusing. I'll try to be as clear as I can about '04. We're talking about model year '04 and the current compliance date at the end of this year.

There's two options. One: They can go to ULE TRU with the verified retrofit that's currently available. We talked about one that's moving through the process. But as of today, that'd be one.

The other one is to repower that engine with the 4I that resets the seven-year clock. Those are options available today for the '04.

BOARD MEMBER BERG: Thank you very much.

CHAIRPERSON NICHOLS: DeeDee.

BOARD MEMBER D'ADAMO: I think Ms. Berg's questions highlight sort of the challenge that we're facing. When this first came before us, we believed that we had three options; two that were practical in terms of resetting the clock, and then an ultimate solution of getting a whole new engine.

And one of the concerns that I have is with the retrofit. And I'm going to be very careful about what I say here, because I think that we have a retrofit strategy, and across the various sectors and diesel, it has been very successful. But I think that in this particular application, I've been notified of a number of problems, and I just want to make sure we're being honest

about the situation and there is only one that's certified. There's going to be another one coming up. I think some of the witnesses will be talking, and I'll let them decide what they should or shouldn't say on the record, because I think some of these were test applications.

But I want to just register my concerns in that it really doesn't appear that we have the options that we originally set out to have when we started on this whole route.

Also, because of some maintenance concerns with the retrofit technology, the costs have increased once you account for maintenance and also fuel costs. So to me, it's no surprise there's only 20 percent compliance with retrofit.

CHAIRPERSON NICHOLS: That is actually commendable that the staff is being as honest as they are about the level of compliance. As you saw from the chart, we usually put out information that assumes everybody is complying with the rules, even though we know there is no such thing as 100 percent compliance. But the fact is the rate of non-compliance is exceptionally high.

BOARD MEMBER D'ADAMO: I agree. I agree.

So as far as questions to staff, what I'd like to see is some way to hone in on the emissions inventory,

because I do still think that we need to -- first of all, the public health data is very troubling. I was one at the last hearing that pushed for an extension of the useful life. But once that data came in, I'm convinced that's not really an appropriate course to take at this time.

But what I'd like to see is honing in a little bit more on that emissions inventory, 50 percent at distribution centers where there are sensitive receptors. What about the other 50 percent? What can we do to determine where those facilities are located and whether or not some flexibility could be afforded with respect to use at those facilities? I don't know if it's going to be more complex than it's worth. But it's worth looking into.

And then on the eight mode versus four mode, this is a cycle that is used to determine emissions. I don't want to get into a lot of detail here, because I have talked with staff about this, and I understand the reason why you've used the method that you have.

But there are a lot of engines out there that have not been tested with eight mode versus four. Again, maybe there is an opportunity to hone in on the emissions inventory so that we could determine at a later time whether or not we could provide some additional

flexibility.

And then also in terms of once the engine is touched with a repower, if repower is selected, is there some flexibility that can be afforded for those that select that repower? In other words, not putting off the decision at this point. But once the decision is made, can some flexibility provided on the back end.

CHAIRPERSON NICHOLS: I think I'm going to jump in at some point before I recognize anybody else and just say I want to pick up on both the last comment and also Sandy's comment and say that when I was briefed on this issue recently, it just jumped out at me as a glaring fact that whether we were more flexible or less flexible, we weren't actually going to be solving the health problem related to these units.

And so my direction and the direction that I want to see us heading here is, regardless of what we do today -- and I think we probably need to do what the staff is proposing -- to make a commitment that we're going to come back sooner rather than later with some other tools in our toolbox that don't just focus on this one group of vehicles and engines where we're doing our best to push things along.

But given the state of the economy and the diversity of the industry, et cetera, we got some problems

and we do need to try to be flexible. But flexibility, although it's a virtue, is not really the end of the game when it comes to actually trying to meet our goals, which is to make really significant levels of risk reduction for the communities that actually breathe in the stuff around these distribution terminals.

So I think we need to broaden our thinking and to approach this problem from that kind of a public health perspective, taking advantage of new legal authority that -- well, legal authority that we now know that we have in the area of indirect source review between us and the local districts. We have the ability to focus on these centers as what they are, which is sources when the trucks are there, and come up with more comprehensive emissions control programs that focus on whatever we can learn about the timing of operations, the plug-in opportunities at the sites themselves, so forth. Because that's what this is all about. And I feel like in a way we're tinkering around the margins at this point.

So any other questions or comments?

Dr. Balmes.

BOARD MEMBER BALMES: I was just going to pick up on your comment and what Mr. Corey hinted at. This is all part of a surface goods movement, you know, economic system that we have.

And I give lectures on air pollution and health effects. I show photos going from the container vessels at the ports through the intermodal yards, rail and truck and then to the distribution centers where the containers are unpacked. And they're truck farms. So it's not just the TRUs. And so we do, in fact, have to have a strategy, as you said, that captures all the sources of emissions, not just focus on the TRUs.

CHAIRPERSON NICHOLS: Okay. Well, with that, that sort of set the stage for the testimony. And we have 13 witnesses. We'll just get started with Kathleen Yip followed by Dr. Brezny and Chris Shimoda.

MS. YIP: Good morning, Chairman Nichols members of the Board and staff.

My name is Kathleen Yip. I'm representing the Natural Resources Defense Council in strong support of the TRU regulation and staff proposed amendments that are before you today.

We are very concerned about the industry efforts to lengthen equipment lifetimes that lead to compliance delays and greatly diminish health and air quality benefits of this important regulation.

As you know, diesel pollution from TRUs and other sources contributes to serious health impacts, including increased risk of emergency room visits, hospital

emissions, asthma attacks, cardiovascular disease, respiratory disease, adverse birth outcomes, cancer and premature death.

This is a major health concern, particularly in communities with concentrated freight activities where TRUs are frequently used, including warehouses, rail yards, port terminals, and other transportation services.

I wanted to show you one example if you look at the slide. The dull berth and container storage area are on the other side of the terminal from Cesar Chavez Park. However, additional trucks and TRUs are parking and idling in the lot immediately adjacent to the park.

This park is used -- if you want to flip to the next slide.

This park is used a lot for soccer games by the community. Warm places in the grass near the fence and trucks are an indication of how close the TRUs are to where kids play.

Many yards facilities are in close proximity to homes, schools, and other sensitive sites. Even with the current regulation in place, TRU activity at these large facilities poses very high cancer risks above 100 per million residents living within a thousand feet through 2016.

Without the industry proposed delay, this

regulation can provide important air quality and public health benefits with an economic boost of $2.6 billion through 370 lives saved, 125 hospitalizations avoided, 5,600 cases of asthma, and other lower respiratory systems averted and 470 cases of acute bronchitis prevented.

We strongly urge you to preserve these benefits by adopting the carefully crafted staff proposed amendments. We have seen great progress with 2003 and older TRUs cleaning up. We need the 2004 and newer TRUs cleaned up as well.

There are many compliance pathways available for 2004 TRUs, as staff have presented. We urge you to adopt the staff proposed amendments without any further delays, lengthen equipment lifetimes or weaken compliance obligations that would prolong exposure to emissions from TRUs.

We thank the staff for their hard work on this regulation and consideration of health implications of the various amendment options.

CHAIRPERSON NICHOLS: Thank you.

Dr. Brezny.

DR. BREZNY: Good morning, Chairman Nichols and members of the Board. I'm Rasto Brezny with the Manufacturers of Emission Controls Association.

MECA represents the leading manufacturers of

emission control technologies for internal combustion engines, including TRU applications.

I will start out by thanking staff for their hard work and bringing this proposal forward to you. And we support the recommendations.

MECA member companies have invested significant resources in developing, verifying, and commercializing emission control technologies for TRU applications, and also to ensure that there is an effective plan in place to bring additional Level 3 devices to the market through the verification process.

In order for manufacturers to continue to make these investments, they need to see some level of stability in the implementation time line and also in the enforcement of the regulation.

Our members estimate that less than 40 percent of the TRUs that have been impacted by this regulation are in compliance. And that's why we urge the Board to continue to support the enforcement program to ensure that those that have chosen to comply are not financially disadvantaged in the marketplace.

Also, we urge the Board to continue to support the resource verification process in order to ensure that these Level 3 devices that are in the pipeline get through as fast as possible.

TRU retrofit devices are a proven technology based on the same types of filter designs as have been commercialized in other off-road and on-road applications. And currently, there are over 5,000 LE TRU devices out in the field demonstrating excellent results.

The latest versions of ULE TRU demonstration units have accumulated thousands of hours and also with very good reliability and fuel consumption impacts of less than about five percent. Although early designs of these technologies have identified some issues, these were easily addressed through redesigns. And currently, our members' experience with TRU retrofits has been excellent and consistent with what we've seen with other retrofit devices in that fleets that have comprehensive maintenance programs for their engines and their devices do get excellent performance from their retrofit units.

Finally, to summarize, we believe that any further delays in the implementation of this rule is going to be counterproductive to both ARB's PM reduction goals, but also going to stifle further technology development in efforts to bring additional technologies to the marketplace, these Level 3 ULE TRU devices.

Once again, I want to thank you for your time. And I'll be happy to address any questions you might have.

CHAIRPERSON NICHOLS: Thank you.

Chris Shimoda.

MR. SHIMODA: Madam chair, members of the Board. Thank you for the opportunity to speak today.

My name is Chris Shimoda, Manager of Environmental Policy for the California Trucking Association. I have a few slides here today.

I'd first like to speak the staff's revised cost estimates associated with the TRU rule. As you can see from the first slide, the cost of the rule is now four to eight times higher than originally forecasted in 2003. We've got from about a 10 to $20 per pound reduced estimate in the original ISOR to an estimate of $88 per pound reduced as expressed in 2011 dollars in this current ISOR.

So what was originally estimated to be a very cost effective rule now looks much less so, with the TRU rule being almost twice as expensive as the truck and bus rule on a per pound basis.

If you look at the cost effectiveness using the EPA form of test cycles for TRUs, which Jim Lyons from Sierra Research will be giving further testimony on today, the cost of the rule gets closer to the 120 to $222 per pound reduced range, which would make this one of the, if not to the, expensive rule ever considered by the Board. And we believe that's a pretty conservative estimate.

Next slide.

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MR. SHIMODA: Staff was directed by the Board last fall to consider several amendments, including extending the operational life of TRUs. Cost effectiveness associated with those amendments are expressed here in this slide. As you can see, there is a significant cost savings associated with extending operational life. Should be noted that any TRU operational life between seven and nine years will achieve the emission reduction goals you had originally set out to achieve in 2003. A seven-year operational life as recommended by staff actually to achieves a significantly higher reduction, albeit at a significantly higher cost.

CTA recommends considering a nine year operational life for TRUs. A nine year operational life still achieves a higher emission reduction than you set out to achieve in 2003 and would save businesses who utilize TRUs $430 million between now and 2029. Those are staff's figures.

It is important to remember these businesses are often located in some of the areas of the state hardest hit by the recession. You will be hearing testimony later from a major employer in Merced County which currently has a 17-and-a-half percent unemployment rate. A $430 million

cost savings translates directly into a significant number of jobs created and a lot of local services purchased.

Next slide, please.

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MR. SHIMODA: We believe a nine-year operational life for TRUs is a fair compromise which achieves environmental and economic balance and can fix many of the issues we've been dealing with since this rule was first introduced almost a decade ago. It would allow one-and-done OEM ULE TRU compliance option come to market so these carriers would no longer have to spend money on repowering and retrofitting down the road. And it would allow fleets who do choose to retrofit additional time to assess available ULE TRU retrofit options for cost effectiveness and the kind of reliability necessary when dealing with temperature-sensitive food products sensitive to contamination.

So I'd like to just thank the Board and staff for their hard work on this rule and please consider directing staff to look at the nine-year operational life. Thank you.

CHAIRPERSON NICHOLS: Thank you.

BOARD MEMBER BALMES: Just a question to the staff and maybe also to the witness.

So the cost effectiveness figure changing is

primarily because the operators have chosen to repower as opposed to retrofit; am I correct on that?

PROCESS EVALUATION SECTION MANAGER BOYD: That's part of -- the revised cost effectiveness takes into account the actual compliance options that have been chosen, which is driven by the repower.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: And it also takes into consideration at the time when we originally made the estimates, there are additional operation and maintenance costs associated with the retrofits. We've updated. We've updated that. So basically, you know, we were crystal balling it back then the best we could, and now we have the real data on it.

This has proved to be a harder application than any of us originally anticipated, partly because of the way these engines are operated and partly because, you know, of the importance of these systems operating properly because of food safety and food cost issues and ice cream, too.

CHAIRPERSON NICHOLS: Ice cream. That's the important thing.

BOARD MEMBER D'ADAMO: And actually, isn't it true that the retrofit, once you account for increased maintenance cost and fuel costs, it ends up being pretty close to what a repower would cost.

PROCESS EVALUATION SECTION MANAGER BOYD: That's correct.

BOARD MEMBER BALMES: That is why most people are using the repower to comply. I understand.

CHAIRPERSON NICHOLS: Okay. Jim Lyons.

Mr. LYONS: Thank you, Madam Chairman and members of the Board.

I'm going to talk just for a couple of minutes about the eight mode versus four mode test.

Second slide, please.

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Mr. LYONS: First thing I want to address is where it came from. This is not a new issue. It was first raised in the ISOR. EPA developed a test cycle for certification of engines that are used only for TRU purposes. I'll talk about more in a minute. It's four modes versus eight modes. The reason why it's four is there are four modes that TRUs never operate on.

The staff looked at this initially, concluded that it could adjust the PM emission inventory by reducing it 25 to 60 percent. There could be an increase of NOx. They were going to look at it further and they indicated support for this four mode cycle as being characteristic of the way TRUs operate.

Next slide, please.

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Mr. LYONS: Every engine is certified on the eight mode test gets tested over eight modes. You weight them up and get a number.

To do the four mode calculation, you don't need a new test. You throw away half of the eight mode data, simply recalculate it, and come up with a different weighted emission number. This is the Tier 3, 33 horsepower indirect injection diesel engine, like that used in TRU applications.

For this particular engine, going from four modes to eight modes increases NOx emission factor by ten percent and reduces the PM emission factor by 58 percent, almost right on what staff said in 2004. I don't have data for every engine. Otherwise, I would do this calculation and give you a final answer.

Next slide, please.

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Mr. LYONS: If you look in the existing TRU regulation, there is a definition for something called certification emissions data. It's exactly what's needed in order to perform this calculation on every engine that's used for TRU applications. That definition has been in the regulation since it was originally adopted. All of this information has to be generated by each

emission factor and underlies the new engine certification process. All of this data should be readily available to CARB staff.

I would recommend that you direct staff to obtain this mode certification from the engine manufacturers, use it to revise the inventory, and then to reanalyze the regulatory options. Obviously, having an accurate inventory is vital to assessing the regulatory impacts of any regulation, as well as the cost effectiveness of those regulatory options. Thank you.

CHAIRPERSON NICHOLS: Okay. Bryan Long.

MR. LONG: Good morning, Chairman Nichols and esteemed Board members.

My name is Bryan Long. I'm here today representing the 12,000-plus employees of Foster Poultry Farms. My title is Vice President of Purchasing, and I'm responsible for almost everything we buy.

We are a privately held business owned by the Foster family. We do not make our financial results public, but I can state we have not made a profit in 2011, like many California companies.

In 2010, Foster Farms invested approximately $900,000 in filters to retrofit our refrigerated trailers to gain compliance with California regulations. The shame is that our competition, which comes from out of state,

did not have to make the same investment because they could simply divert newer units to California.

After working through a number of installation issues with our LE TRU filters, we thought we were good for the next seven years. Not so fast. During the past 11 months, we've experienced 41 fuel pump failures of our 200 filter units. Our current failure rate of fuel pumps on non-filter units is approximately two percent. In addition, we have experienced an increase in fuel consumption, which we attribute to the filters.

And equipment failure to a refrigerated carrier can be one of their worst nightmares. The loads are often valued at over $100,000. If failure happens while in transit, the TRU shuts down and our customers could reject the load. Worse, we are now dealing with a food safety issue that is our number one concern.

We have 71 days to gain compliance with the ULE TRU standards at this time. We believe we only have one viable option, and that is to repower. The ULE TRU filter will not be a viable option due to total operating cost, filter product reliability, and importantly, food safety.

Staff has left us with only one TRU option at a cost close to 400 percent higher than the original estimate.

I can go on, but I simply ask that you accept the

fact that we are ahead of the curve in cleaning the air and allow us to improve our cash flow by granting us the extra years of useful life. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Mike Shumake.

MR. SHUMAKE: Madam Chair, I'm Mike Shumake, President of Central Valley Trailer Repair and also Chair of the CTA Refrigerated Carriers Conference. And I had prepared remarks today, and I'm going to go completely off the reservation, I think.

One thing I'd like to discuss is the compliance rate, which was presented last November or December, whenever we met on this last. It somewhere around 90 percent. And that 90 percent came from actual check points, you know, on the road. And now all of a sudden, it's being presented as 60 percent. I think if you look at the numbers, that 60 percent is for all effected vehicles, which includes out-of-state carriers and the number of units involved.

I believe that the actual California compliance for those people that are operating in California is much, much higher than that and could be -- you know, with a little analysis could easily be proved.

Options, you've heard it. We've got one ULE TRU option. In 2004, we were told -- in 2003, we were told

that we had to meet ULE TRU by 2004. Actually, 2003; we moved it up. And there was going to be plenty of technology available. There isn't. There is no way to change our engine and comply with the ULE TRU component. As we've been told today, you have to go to a LE TRU engine.

The other thing that has come into conversation today is the health risk. And that health risk is pretty much a direct result of the facilities report. And if you look at the facilities report very closely, obviously it shows that originally I think 80-something facilities reported; 30 of them didn't -- the information was garbage. They had to throw it out. They came down to 56 that they used.

And just a cursory glance last night, I looked and noticed there's 218 trailer fleet reported three times. It's pretty obvious it's the same fleet because it's the same number of hours each time. It probably is three different facilities, but the same trailer. So we're getting impacted by those hours, which are on the same trailer. So all the numbers aren't quite adding up, and that's what's killing our industry and forcing us to have to not get the extended life that we really need because of the cost that we're having to incur.

Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

John Cramer.

Mr. CRAMER: Good morning. I'm John Cramer. I'm one of the owners of Certified Freight Logistics. We operate 300 TRUs up and down the west coast of the United States.

Out of those three, originally when the rule came into effect, we retrofitted with filters 100 trailers. We replaced 50 total trailers and TRUs at the cost of about $3.5 million. In the offset since that time, we've also retrofitted probably 25 trailers at the cost of $100,000. So we've spent the money to become compliant.

Originally, we went on a ten-year turn on our trading equipment in TRUs to replace. By this rule, we've had to relook at that and extend ourselves out. Of course, we haven't met that 14-year period yet. Don't know exactly when that's going to go to. But we'll have to consider going that far with our equipment.

With this today, we're 100 percent compliant as of today with the rule.

Going forward, we're concerned with this retrofit device that is approved today. Our customers -- this device requires a shut down of equipment once every eight hours. We're not understanding the time that is at this point. We're thinking 30 to 40 minutes.

Also it's putting a strain on that piece of equipment because of the electronic side of it. We're concerned because of our customer base today is very concerned about the coal chain and these viruses and other things that are coming out, as we just saw with cantaloupes. And what happens is they put a tattle-tail device in the trailer to monitor the temperature as you're going down the highway. As they deliver -- as we deliver, they pull the product out and read that device. That device will show exactly what's been happening inside that trailer during the travel time.

We experience at times when the customer refuses the product because there is a spike in the temperature. Anything over 40 degrees, they set it aside. They sometimes take it and a lot of times refuse it. We buy it.

We're very concerned that this device will shut that down and won't start again. And we're going to have spikes and we had have a lot of potential claims hanging out there.

We would like to have the staff look at this nine-year period group 24 months more where we can get into a true engine that's going to be compatible to the rule from now on. There, you're putting very good money towards a good cause. Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Dan Miller and then Patrick Smith.

MR. MILLER: Good morning, Madam Chairman, members of the Board and staff.

My name is Dan Miller. I'm with Save Mart Supermarkets. Save Mart is a privately held California corporation, which operates 245 grocery stores in northern California and northern Nevada.

To service this group of stores, we operate a transport fleets combined facilities approximately 200 tractors, 500 trailers; employ approximately 400 drivers, mechanics, and staff.

In the last three years, we have retrofitted or replaced 150 of our TRU units. We are 100 percent compliant under the current law. In the next -- or this year, we have 70 units will come up for compliance by year end.

As was stated before, there's currently only one supplier, one certified unit -- filter unit on the market. The repower unit, all that does is restart the clock again, and seven years later, we have to deal with that issue again.

Our concerns -- and I think I speak for the industry.

Number one, lack of ULE TRU options available to

us.

Number two, the rule is not cost effective. It's the estimates on the filters, repowers are over the estimates presented by the staff a number of years ago. And we've incurred, as operators, additional maintenance costs to service these units.

There is no Tier 4 engine available, and that won't be available for several years. And we're stuck with a filter or repower option.

Updates TRU inventory supports a two-year additional life, and I would like to ask the Board to look at extending the TRU life an additional two years. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Mr. Smith.

MR. SMITH: Madam Chair, Board members, and staff, my name is Patrick Smith and I'm Transportation manager for Harris Ranch.

Originally, we tried to get to 85 percent compliance. There were two options available to us for our units. We worked with staff, met with manufacturers, and even did field testing. But they weren't practical for our operation. They wouldn't work. So we had to go back to Level 2 compliance. And that gave us two options, retrofit or engine replacement.

Engine replacement was approximately 50 percent higher, so we chose to retrofit.

We met with the retrofit manufacturers and Level 2 device. They were planning a future cartridge that could be a change to meet Level 3 compliance that could exchange for a modest up-charge. We retrofitted 49 units at a cost of approximately $300,000. In 14 months of operation, we had the following failures: 51 electronic control units, 104 percent failure rate; 30 particulate filters, 61 percent failure rate; 44 alternators, 90 percent failure rate; 35 batteries, 73 percent failure rate; six engines, twelve percent failure rate.

In all of our years of operation, we never replaced an engine. These failures cause down time, required emergency action to maintain temperature control for food safety, cold chain custody. You're going to hear a lot about the new federal cold chain custody regulations that President Obama ordered to ensure food safety.

We have a system in our trailers called temperature tractor which gives us real-time readings. When a TRU goes down and ambient temperatures or 90 degrees and above, within an hour, internal trailer temperatures are 65 degrees. Duty cycle set points range from 25 degrees to 32 degrees and our product has to be delivered at 40 degrees or less.

Our duty cycle for our TRUs would be similar. It's not a heavy load duty cycle. It would be similar if you are driving your vehicles down the intestate at 45 miles an hour instead of 70 miles an hour. You would have 20 to 30 percent better fuel economy and your engines would run cooler.

Since retrofitting our TRUs, fuel consumption is 33 percent higher. I suspect lower operating RPMs do not facilitate regeneration, causing more back pressure, increasing fuel consumption.

Our retrofitted TRUs would be out of compliance soon unless the rule would be extended. If not extended, they will have to be retrofitted for 85 percent particulate reduction. I'm very doubtful that the technology will be available for 85 percent particulate reduction, considering the failures we experience with 50 percent particulate reduction. We would certainly welcome a longer operational life for TRUs or a one-and-done concept that Mayor Loveridge suggested in a meeting last year.

CHAIRPERSON NICHOLS: Could you summarize?

MR. SMITH: I would like to thank the Board for allowing -- one last thing. Our maintenance provider informed us our maintenance rates are going up 50 percent.

CHAIRPERSON NICHOLS: Thank you, Mr. Smith.

We have two witnesses from Rypos: Thomas Babineau and Peter Bransfield.

MR. BABINEAU: Madam Chair, Board members, thank you.

I'm Tom Babineau from Rypos. We are one of the VDECS suppliers that have been referred to so affectionately this morning. We're not a new comer to this market space. We've been developing and supplying electrically regenerated filters for California's market for over ten years. We have built an installation and support network that covers the western United States and Mexico. So there is a lot today to talk about all availability and reliability.

Our LE TRU experience didn't come without pain.

CHAIRPERSON NICHOLS: Could you move closer to the microphone? We're having a hard time. Thank you

MR. BABINEAU: We have supplied over 5200 filters to the field. And collectively these filters have accumulated over 20 million operating hours, removed 215 tons of PM, and we are removing 90 tons per year at the rate today.

West Virginia University did a test two months ago. Our fuel consumption to achieve those reductions is at 4.8 percent. That is an independent lab testing data that we can make available.

The general success of the program didn't come without hardships. Early on, new technology, these filters are part of a system. And we made some mistakes. We fixed those mistakes, learned from them. And frankly, we paid for them 100 percent. We move quickly to voluntarily exchange 100 percent of the units, whether they were having problems or not. We have not charged a single dollar for any repair or replacement. Units in spite of warrantee we've covered cost.

We've been completely transparent with our customers and ARB staff regarding issues and recovery plans, and ARB staff, when notified by us there were problems or the field, immediately got involved and have been great about addressing these issues.

Our efforts to fix the issues have worked. Our mean time between repairs has improved. Our failure rate peeked at 6.2 percent. So of the 5200 units that we have in the field, we had 318 failures. We are now down to a 3.7 percent failure rate.

While that is still unacceptable, the operators have hung in there with us, resolved problems, educating themselves and others as part of the solution. Working to improve the product is also part of the solution.

Today, 95 percent of the failures are due from the engine side not providing quality electricity to the

filter. That doesn't mean the filter doesn't have a part in that, but maintenance is the key issue here to maintain. If they used the recommended parts, the recommended belts, operate with the recommended belt tensioning, we have a reliable system.

The ULE TRU product, we're in the threshold of the ULE TRU product. The final configuration is easier to install, which is a more effective, more efficient alternator, which should aid this problem, has a better belt and pulley system, which should aid the problem, and more fault checking to identify the issues early on so that we can address them. VDECS are not mufflers. They're sophisticated pieces of equipment. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Mr. Bransfield here?

MR. BRANSFIELD: Thank you, Madam Chair.

I don't really have any comments. I'm making myself available to answer direct questions because there's been a lot of talk about performance, about reliability, about supporting the marketplace. And I wanted to make sure that the Board had a full opportunity to ask direct questions and get facts.

CHAIRPERSON NICHOLS: Thank you.

We may get back to you then during the course of the discussion.

Mike Tunnel.

MR. TUNNEL: Good morning, Chairman Nichols, members of the Board and staff.

My name is Mike Tunnel. I'm here on behalf of the American Trucking Association.

ATA has been working closely with the California Trucking Association and its Refrigerated Carriers Conference to analyze the proposed amendments.

We appreciate the continuing dialogue with staff and members of the Board.

Based on these discussions, we request the Board take two specific actions today:

First, we urge the Board to direct staff to adjust the emissions inventory. Quite simply, the inventory is based on operating modes that TRUs never use, never use. As a result, the inventory may be overstating PM emissions by as much as 60 percent. With the inventory serving as the basis for analysis and recommendations before you today, it needs to be adjusted to more accurately reflect TRU operations.

Secondly, we urge the Board to provide a minimum two-year extension to the operating life. We believe that inventory adjustments further justify this extension. In addition, this extension will provide additional time for compliance options to become available. Specifically, a

one-and-done compliance solution currently does not exist for the majority of TRU operators. Given the mixed results fleets are having with retrofits and the scarce number of ULE TRU options, fleets are having to invest in temporary compliance solutions.

This has significantly increased the cost of compliance four to seven times higher than originally projected. At some point, you have to ask -- you have to acknowledge that this approach isn't working. The amendments presented today do not address the core issue.

What is needed is a solution that manages the engine's operating cycle with its emission control system, not a bolted-on solution that compromises overall efficiency. This solution becomes available in 2013, and not only meets the ULE TRU standards, but lowers NOx emissions as well.

We ask that you address our core issue today, the lack of viable long-term compliance options by granting the two-year extension to operating life. Thank you for your consideration.

CHAIRPERSON NICHOLS: Thank you. Cara Bush. And then we have Bonnie Holmes-Gen and Crystal Jack. And that's the remainder of our list.

MS. BUSH: Good morning, Madam Chairwoman and members of the Board.

Cara Bush with the California Grocers Association.

We'd like to thank staff for working with us over the last ten months to address some of our concerns and look forward to continuing to work with staff to address a few outstanding concerns. So thank you very much, and we look forward to working with you.

CHAIRPERSON NICHOLS: All right. Thank you. Bonnie Holmes-Gen and Crystal Jack.

MS. HOLMES-GEN: Good morning, Chairman Nichols and Board members.

Bonnie Holmes-Gen with the American Lung Association of California. And welcome to new Board Member de la Torre.

And I wanted to add our voice to the voice of NRDC and our partners in support of the staff regulation and in opposition to the industry proposals for further delay of implementation of the TRU requirements.

And we are pleased to hear the testimony of the Manufacturers of Emission Controls and others about the Level 3 emission control devices that are moving forward and progress that has been made with these applications. And we think that proves the feasibility of this regulation and supports the direction of the staff.

We appreciate the thoughtful discussion by the

Board. And clearly, we have learned a lot over the past decade about these applications and this sector. But we've also learned a lot about the health impacts and the serious dangers of diesel exposures to communities, especially to children. And especially about the serious risk from the concentration of these units in hot spot areas.

I appreciate your focus, Chairman Nichols, about let's take a look more closely at what we can do to address these areas with high concentrations of diesel sources and units. And moving towards cleaner goods movement. Especially moving towards zero emission goods movement is a very high priority for the Lung Association.

So we know that the avoided health costs of this regulation are extremely high. Your last estimation was topping 2.6 billion in lives saved and asthma attacks avoided. These are tremendous benefits, and we believe they far exceed the costs of the regulation.

We can't afford major delays and weaken compliance. We urge you to move forward today and stay on track with the Diesel Risk Reduction Program.

CHAIRPERSON NICHOLS: Thank you.

MS. JACK: Madam Chair, Members, Crystal Jack on behalf of the Neisi Farmers League, California Citrus Mutual, California Grape and Tree Fruit League, and the

Western Agricultural Processors Association.

We wanted to come here today and express our support for all of the hard work the staff has put in. We greatly appreciate their efforts to address our concerns. And we look forward to this moving forward and continuing to work with staff. Thank you.

CHAIRPERSON NICHOLS: Thank you. Okay.

That concludes the list of witnesses that we have before us.

Staff, I don't know if you have any concluding remarks. I would appreciate your response to this issue about the four versus eight cycle test and what it means. Usually, ARB is not resistant to doing additional testing of any kind. So I'm kind of curious about your thoughts on this one.

STATIONARY SOURCE DIVISION CHIEF CORY: I'm going to call Todd Sax up to speak directly to the eight versus four mode.

MOBILE SOURCE ANALYSIS BRANCH CHIEF SAX: Chairman Nichols, members of the Board, my name is Todd Sax. I'm Chief of the Mobile Source -- I've got some backup slides.

So I'm Chief of the Mobile Source Analysis Branch. I'm responsible for the mobile source emissions inventories, including the one before you today.

I wanted to say a couple things about the inventory. First, obviously, we take our job very seriously. When we started developing this emissions inventory, we went back and looked at all of the available information out there. That included data on activity, emission factors, load, population, impacts of the recession, the whole gamut of what you need to consider for these types of issues. As was mentioned in the presentation, we made a number of updates to address those.

The stakeholders have alleged the emissions inventory is off by 60 percent. We don't believe that's the case. And we don't believe that for several reasons.

First of all, on the eight mode versus four mode issue, diesel engines are certified typically to an eight mode cycle that's meant to represent the range of operations that engines operate at. And when really what the issue before you today on emissions from diesel engines like this is what their real world duty cycle is. That's a function of the operating loads and modes they operate at. It's also a function of how they transition between those modes and the particular aspects of the settings to which the TRUs are operated on on the individual trailers.

What we have is data from the eight mode cycle.

We also have data for one engine manufacture for one engine certified to a four mode cycle. The stakeholders are arguing that a four mode cycle better represents TRU operation. That may very well be the case. In this case, manufacturers get the option to choose to certify between an eight mode and a four mode cycle. And in all cases, except one, they've chosen to continue certifying under the eight mode cycle.

And as part of certifying the four mode cycle, they need to be able to show that the engine operates only within that range of operation and then it transitions smoothly between those ranges. And so most of the engine manufacturers are not choosing to show that.

So next slide.

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MOBILE SOURCE ANALYSIS BRANCH CHIEF SAX: When we evaluated the data, we looked at what EPA assumes for TRU emission rates. We look at what we assume. We looked at an eight mode test, and we looked at four mode test results. What I'm showing you today is emission rates for the one engine we have that was tested on both an eight mode and a four mode result. And what this slide shows is that the emission rate that to which -- the emission rated of the four mode test result is the same as the emission rate that we're currently assuming in the emission

inventory.

What we would find by looking at the difference between the eight mode and four mode test for this particular result is it would have been about 30 percent higher. So for the one engine test that we actually had, it suggests there is a 30 percent impact, but that the emission rate we're using is consistent with the emission factors that we're using in the emissions inventory. So we don't see a lot of evidence that suggests at this point with the data that we have that our emission factors need to be changed.

The 16 percent factor that the stakeholders are claiming we believe is based on a combination of emission factors, activity, and deterioration factors. That's actually detailed in their comments. When you look at in terms of deterioration factors, for example, they're claiming we should cap our deterioration rates, which is a measure of how emission rates increase over time because of tampering and maintenance and other basic engine degradation associated with natural operation of these engines.

And what they are essentially claiming is that we should cap that at 3- to 5,000 hours of operation because they allege these engines are all regularly rebuilt over that period. What we've seen in the emissions inventory

is that the average useful life in terms of hours of operation on this equipment is more like 20,000 hours. So we don't feel it's appropriate to assume that engines go through multiple rebuilds and keep emission rates at the low levels they allege. We don't think it's appropriate.

And finally, what the stakeholders are alleging is that from an activity perspective, the activity levels should be much lower than what we've assumed. And we went back and looked at the surveys that we used to develop the activity rates for the inventory. Those rates cover about 25 percent of the in-state population. So it's a pretty robust survey.

When we look at the activity estimates in there, we're comfortable with the estimates we have. When you look at the stakeholder comments with regard to that, what they're essentially saying is that you should be able to spread this out and look at the impacts of different types of TRU operation, different types of facilities. But when we do that, we don't think you get a better robust estimate.

So in closing, covering all of these issues, I think that what the stakeholders are alleging on emission factors is not supported by the data. What the stakeholders are alleging on activity is also not supported by the data. And what the stakeholders are

alleging on deterioration is also not supported by the data. We're comfortable with our emissions inventory estimates. I'll take any questions.

CHAIRPERSON NICHOLS: That pretty much covers those points.

I know you're dying to speak. Jim, go ahead. Give us your best shot here. You want to tear it apart.

MR. LYONS: I'm just going to limit myself to the four mode versus eight mode. A lot of the stuff is the usual stuff we agree to disagree on.

The reason why manufacturers don't certify to the four mode is because they build engines that go into equipment. The only way you can certify an engine to the four mode test is if you limit its use only to TRUs. All you have to do is read the EPA regulations to find that out. And the reason why is because the particulate matter emissions are higher on the eight mode test. EPA wants to be conservative and want to make sure that engine is going meet the emission standards in any application it's used in.

That's why Todd has only got data from one engine. I have data for three engines that back mine up, because as I pointed out in my presentation, all of this data is collected by the engine manufacturers routinely in order to get your agency to certify their engines. To get

the data, we need to look at this. All we have to do is ask the manufacturers to provide the data to ARB and analyze it. It will take a couple months, and we can have a correct inventory. Thank you.

CHAIRPERSON NICHOLS: Well, correct inventory is a term of art, as I've learned in this business, because people use inventories for different things, different purposes for these inventories. And if you want to try to find a way to measure every single engine -- the perfect inventory would measure every single engine exactly as it is used and reflect it with complete precision.

But that doesn't involve prediction. That only involves the past. It wouldn't even involve the future because you still have to apply deterioration factors and changes in use and all of those other factors.

So I'm just -- really having a hard time getting convinced that this is a huge problem that we need to fix right away. Despite the fact that you've raised this criticism, this four mode/eight mode thing seems like a bit of a red herring to me. I'm sorry, but I just need you to give me something better than just saying that unfortunately the poor manufacturers had to certify to this eight mode and it's too conservative.

MR. LYONS: Well, the difference is the factor of two in the particulate matter emissions inventory. It's

either about what staff estimates. It could be as much AS half of what staff estimates. If those kinds of differences are unimportant, I'm not sure what we can do about it.

But in the kind of work that I do, a factor of two is a big deal, especially if it can be addressed quantitatively by getting information that already exists from a limited number of engines.

CHAIRPERSON NICHOLS: No. Absolutely, it would be important if it changed the overall result. But then you go out and you compare it with what's out there in the real world in terms of PM emissions and exposures. Are you saying those are also wrong? That what's measured out there in the world in terms of PM is not correct?

MR. LYONS: Well, there's two things I'll say. One is that the change in the emission factors would effect the risk assessment proportionately. The risk would go down by about 50 percent, because the emissions went down.

And an excellent point was made by Board Member Berg who pointed out there is no monitoring data to back up these modeling estimates for the health risk assessments. I agree completely that monitoring should be done to give at east a couple of points of validation to the process. There's uncertainty in the emissions,

weather dispersion. There is uncertainty in a lot of areas. And the ground truth in this case is the monitoring data that would really convince me about the staff's health risk assessment.

CHAIRPERSON NICHOLS: Okay. Interesting back and forth. We have a proposal in front of us, and I think it's time to do something with it here.

Would anybody like to make any proposals?

Yes?

BOARD MEMBER D'ADAMO: Getting back to the four versus eight, my sense is that we're going to go forward, but we have more work to do sort of the comprehensive approach that you were talking about, Madam Chair. And as we move forward, I don't have any heartburn spending more time on four versus eight. I think that staff was directed to do that back in 2003 or 2004. And if all we have is what the engine manufacturers are giving us, because that's what they test on, I don't know if it's as easy as going back and saying give us the four mode. But I think we ought to continue to pursue it. I don't see any downside to getting that.

And then I'd like to go back to some of my earlier comments about seeing what we can do to hone in on site-specific emissions or data, and I'd like to have staff respond.

I know there's that facilities report. How often do you update that report? Are there any questions you could ask so we could get some further refined information as we move forward?

And then the last question that I had for Mr. Corey has to do with in light of the fact that repower is going to -- it appears that repower is going to be the preferred option, is there anything that we can justifiably do to provide some additional flexibility on the back end, not extending the useful life on the front end, but on the back end, providing for an additional period of time when repowers are used.

STATIONARY SOURCE DIVISION CHIEF COREY: Yes, Ms. D'Adamo. I'm going to go right to the last question you posed, and then Mr. Donohoue will go to the follow-up in terms of the distribution center work.

I think it's really a good question, because the '03s with the enforcement issue and need to continue to follow up on that, there was a requirement they took action.

So really, I think the core question here is the '04s in going forward and the point you just raised. So the '04s as we talked about earlier have today two options really: Repower option and the one verified level VDECS with the expectation of another one coming around.

If they stayed on the compliance schedule for the '04 by the end of the year and chose the repower route, that means they're putting in a 4I engine. That's a 70 percent reduction in PM. Not as great as the ULE TRU, they're 85 percent. But it's greater than the LE TRU, which is 50. So in a sense, it splits the baby in terms of the PM.

What we could do if they move forward with the existing schedule is return to the Board having done analysis on what are the implications of additional time on the back end, providing those 70 percent reductions in PM. What does that mean from a long-term emissions and local impact standpoint? Because the way the analysis was done that we're talking about today is time on the front end. We're convinced more time on the front end is not a sound approach. So in the back end, it would need to be formed by analysis, and analysis that we could return to the Board and discuss, but all predicated on the '04s taking action as currently called out in the reg.

CHAIRPERSON NICHOLS: Okay. So that would be a proposal to direct the staff to come back with some additional information. If we are going to go in that direction, I think there are a number of things I think we would like to direct them to come back to us in terms of additional information.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: What I've heard and think -- and you know, Richard has talked about that. I mean, what we've done in the proposal today is we have looked at engines get ULE TRU in the 2003 and before, and we said looking at all the data we have on those, we're recommending that you do extend the second step on that by a year, but we are doing that.

We're not recommending that you do that to engines that have not achieved LE TRU. We are willing to go back in as we gather additional data and look at those engines that come in as LE TRU now and see if as more data becomes available that there is a possibility of extending that on the back end. And some of the things that you've asked us to look at are the emission inventory related to four mode and all that. We are committed to gathering more data on that, additional risk analysis as far as looking at what the emissions locations of the risk are associated with that. I think additional information with looking at what -- over the next year or so what is happening on VDECS availability and operation.

And all of those play into the coming back to you on -- you know, it's going to take some time, but coming back and saying okay, here's what we think is going to be happening seven years from now. But it's much easier to deal with what's the population out there once we've got

some emission reductions, the 50 percent reduction. Then doing a two-year delay right now where we're delaying engines that are not getting a 50 percent reduction and having them operate for two additional years on the front end.

CHAIRPERSON NICHOLS: I didn't hear you suggesting that we delay at the front end.

BOARD MEMBER D'ADAMO: No. Just comparing.

CHAIRPERSON NICHOLS: Sorry. It seemed like a hypothetical. Good. I'm sorry.

With had Mrs. Riordan.

BOARD MEMBER RIORDAN: I have a quick question. I'd like to go the retrofits and their performance, because I think staff knows that I'm very supportive of your recommendations, but I also know that there are issues on performance retrofits. And I want to be sure that there is adequate flexibility in allowing for our Executive Officer to work some of the issues.

Mr. Goldstene, do you feel that you have that flexibility if we encounter some problems there with our retrofits and the performance of the installed retrofits?

EXECUTIVE OFFICER GOLDSTENE: I do. I think that's part of what's being incorporated here.

BOARD MEMBER RIORDAN: Good. Because I think I'm very hopeful that you can intervene if we do -- if a

problem does arise.

And then secondly, in that effort, to say this to those who are representing the trucking industry before us, who would they contact? Let's say they are having problems, significant problems, that seem to follow a pattern. Who should they contact in that regard?

EXECUTIVE OFFICER GOLDSTENE: Me. Send a letter to me and I can give it to Rich Boyd.

BOARD MEMBER RIORDAN: Mr. Goldstene is the man in the kitchen that takes the heat. All right. Good. I appreciate that. And I think the message ought to get out for that. Okay.

CHAIRPERSON NICHOLS: Well, and in fact, I think there is evidence that that has occurred when we have detected problems, not in this sector, but in others with the retrofit devices that were not performing according the certification standards, we've been able to yank the certification and make --

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: We've been very proactive in that area. If we want to talk about it a little bit more, we could.

We've specifically assigned a staff engineer to work through these issues. We've been out to the sites. We've held technology forums. We've, in all our workshops and all that, say if you have a problem, call us because

we're willing to go out and see what's happening. And we've worked very closely.

Some of the issues, there clearly have been some issues with these things. Some of the fixes that we're particularly seeing on the newer units, the upgrade for the alternators to address some of the electricity issues, the Kevlar belts to address tension issues, the replacement of the emission control units because moisture was getting into those. We've worked very closely with both the people that are using these units and the system manufacturers to make this as seamless as possible.

What we would like to do now is expand that effort even more as we move into this next phase of Level 3 with having weekly meetings with the -- weekly calls with the retrofit system manufacturers and things like that and periodic meetings with the industry group to see that we're on top of this whole thing.

BOARD MEMBER RIORDAN: Good. Thanks.

CHAIRPERSON NICHOLS: I'd like to bring this conversation to some sort of a formal resolution, if we could, with a motion to -- are we able to do that at this point?

BOARD MEMBER BERG: I do have one still issue.

CHAIRPERSON NICHOLS: Okay.

BOARD MEMBER BERG: And that is I think it's

important to understand that everything up to 2003 we're not looking at changing at all and we do have a compliance issue there. And we need to bring those into compliance. And so I'm trusting that staff and enforcement has a plan to do that, not only because we need the emissions, but also it keeps a level playing field. And that some of the recommendations today will also help that.

We really have a problem with the 2004 and the 2005 engines, because in 2006, those engines will be able to purchase a brand-new Tier 4 and they will be in compliance forever. Correct?

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: That's correct. They will be able to purchase it. But they will not be able to repower their existing unit. When they purchase it at that point in time, it's not just an engine. It's also going to have to be the compressor and the refrigeration unit which changes the cost picture significantly.

BOARD MEMBER BERG: Okay.

CHAIRPERSON NICHOLS: So just clarify this. You're talking about a 2006 engine in 2000 --

BOARD MEMBER BERG: 13.

CHAIRPERSON NICHOLS: 13. All right.

BOARD MEMBER BERG: But they'll have that as an option.

STATIONARY SOURCE DIVISION CHIEF COREY: That's correct.

BOARD MEMBER BERG: They'll be able to take the compliance down to one step, if they choose. At that point, they can continue to repower. Hopefully, they'll be even more retrofits that is also an option. And they can go and change out the full unit and be done. But three.

So really, we're looking at the 2004 and even 2005 will have more options. So today, if we didn't change the rule at all, would the manufacturers be in compliance by putting in a 4I engine?

STATIONARY SOURCE DIVISION CHIEF COREY: Yes, they would.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: They would re-set the clock for seven years.

STATIONARY SOURCE DIVISION CHIEF COREY: Seven year, and we talked about evaluating the extension of the back end.

BOARD MEMBER BERG: So we didn't need to do an amendment in order for them to put in the 4I engine?

STATIONARY SOURCE DIVISION CHIEF COREY: Correct.

BOARD MEMBER BERG: Okay. I'm concerned that we have 60 days to get into compliance, but what you're saying to me is they could have had that compliance option

all along.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: That's correct. And it's clear based on our discussions with stakeholders they are waiting to see what you all do.

BOARD MEMBER BERG: Well, I don't blame them. I can understand that from a business perspective.

STATIONARY SOURCE DIVISION CHIEF COREY: I did want to add one point to that by including making reference to the provision for the Executive Officer. So there are case-specific examples, situations. Piece of equipment wasn't available, delay in order. Executive Officer has the flexibility to take that into account through a period of time of 2012 in terms of their compliance.

BOARD MEMBER BERG: How many engines do we estimate are in the 2004 range?

PROCESS EVALUATION SECTION MANAGER BOYD: About 4,000 engines.

BOARD MEMBER BERG: So you have time, Mr. Goldstene, to address the better part of 4,000 engines in the next of 60 days?

EXECUTIVE OFFICER GOLDSTENE: Bob and Rich do, yes.

(Laugher)

BOARD MEMBER BERG: I think we'll be calling me

if you don't.

EXECUTIVE OFFICER GOLDSTENE: I think they will. I think we're ready for that. If there is any issue, we have some flexibility also on the other end.

BOARD MEMBER BERG: I'm ready.

CHAIRPERSON NICHOLS: Does that satisfy you? Great. Those are very good points.

I guess this also helps to me what the universe of things is that we're talking about.

But I'm still focused on this issue of the attack on the emissions inventory and on the risk factors that we're dealing with, although even at half those levels we're still talking about some facilities which are way in excess of anything that we would consider to be acceptable in terms of excess cancer risks. So I'm not worried about it to the extent that I think we're focusing on the wrong thing here.

But I think there is an issue about whether we're using the best data or not when we develop our rules. So which are the engines that are subject to this four versus eight question?

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: All of them.

CHAIRPERSON NICHOLS: Going back forever? I mean, starting --

PROCESS EVALUATION SECTION MANAGER BOYD: '99.

CHAIRPERSON NICHOLS: So we would have to do some pretty substantial review of data then going back?

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: Yes, we would. And we have, you know, prepared internally. We do not have that information in our database. We've prepared both working with PTSD and SSD and sent a request down to MSOD to identify the engine families and the type of information.

The other thing that we really need here is deterioration data. That's what's been lacking. That's what we've had a difficult time to get. That's going to be a very detailed and time-consuming analysis. And the first step of it relies on engine manufacturers going back in and pulling that data and getting it to is us, which is going to be a time-consuming effort.

CHAIRPERSON NICHOLS: This is proprietary information?

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: All those kinds of things.

CHAIRPERSON NICHOLS: But you're willing and already embarked on an effort to do that.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: Yes, we have.

CHAIRPERSON NICHOLS: What's your estimate of how

long this is going to take?

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: Well, I think it's going to take us at least three months to get the data and look through the additional work and then the internal analysis. And obviously, you know, with this thing, we would have to have some type of technical meetings and all that. So I would not envision that we would be able to do something before late 2012.

CHAIRPERSON NICHOLS: Would that fit with the rest of the Board's need here to re-look at this issue?

BOARD MEMBER D'ADAMO: Along with the other issue on the --

CHAIRPERSON NICHOLS: Back end.

BOARD MEMBER D'ADAMO: Consideration on the back end.

CHAIRPERSON NICHOLS: On the back end compliance. All right then. So we have a motion to approve the Resolution that's before us here?

BOARD MEMBER RIORDAN: I would so move, Madam Chair.

BOARD MEMBER YEAGER: Second.

BOARD MEMBER BERG: Second.

CHAIRPERSON NICHOLS: Okay

BOARD MEMBER BERG: Madam Chair, ex parte.

CHAIRPERSON NICHOLS: There is an attachment?

BOARD MEMBER BERG: Ex parte.

CHAIRPERSON NICHOLS: Oh, ex parte. Sorry. I was not -- I definition have any. Okay. Go ahead. Let's start with you, then.

BOARD MEMBER BERG: On October 4th, I had a call with Rypos with Tom Babineau and follow-up calls as well.

On October 17th, I had a call with the California Trucking Associations and CPA. Also Harris Ranch, Foster Farms, and Central Valley Trailer Repair, also with some follow-up data.

On October 19th, I had a phone call with NRDC and Coalition for Clean Air and also some follow-up information.

Then I had a sidebar comment yesterday with Bonnie Holmes-Gen. All of the testimony is consistent. All my calls were consistent with their testimony today.

CHAIRPERSON NICHOLS: Okay. Thank you.

CHAIRPERSON NICHOLS: Ms. D'Adamo.

BOARD MEMBER D'ADAMO: I don't have it on my list, but I met with Tom Babineau with Rypos I believe in early October. I just don't have it on my list here.

October 11th, a call with California Trucking Association. Actually, this was a meeting. CTA, Chris Shimoda, Pat Smith, Harris Ranch, Bryan Long, Foster Farms, Mike Shumake, Central Valley Trailer, and Dan

Miller with Save Mart.

And then October 19th the same group in addition to staff, Richard Corey and others. And the discussions were consistent with the testimony today.

CHAIRPERSON NICHOLS: Any others? No. Okay. All right then.

I think we're ready to call the question at this point. So we have a motion before us. We have a Resolution. There was an attachment to it, Attachment B apparently. Just the make sure you all have that as well.

All in favor, please say aye.

(Ayes)

CHAIRPERSON NICHOLS: Opposed?

All right. We've approved it. Thank you very much. And we'll be back to this before the end of next year.

We need a break to shift in personnel. Let's give ourselves until 11:00.

(Whereupon a recess was taken.)

CHAIRPERSON NICHOLS: We're ready to resume the meeting with Agenda Item 11-8-5, the proposed 2011 amendments to the California Phase 3 reformulated gasoline regulations.

I understand that we have no witnesses who've signed up to testify on this item. But we will have a

brief staff presentation and Board discussion before we vote. So go ahead.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman Nichols.

California's reformulated gasoline regulations have played a major role in our air quality program by reducing emissions from motor vehicles by at least 15 percent and reducing cancer risk from vehicle emissions by 40 percent. The regulations have also facilitated the introduction of cleaner motor vehicles.

In today's proposal, we're making minor technical amendments that are designed to update certain provisions of the regulations and to increase the consistency and enforceability of the regulations.

Adrian Cayabyab of the fuel section is going to make the staff's presentation. Adrian.

(Thereupon an overhead presentation was presented as follows.)

AIR RESOURCES ENGINEER CAYABYAB: Good morning, Chairman Nichols and members of the Board.

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AIR RESOURCES ENGINEER CAYABYAB: Here is a brief overview of what I will talk about today.

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AIR RESOURCES ENGINEER CAYABYAB: I'd like to

first provide a brief history of our reformulated gasoline program. Originally, staff designed California's reformulated gasoline program to be implemented in two phases. The Board approved Phase I in 1990, which became effective in 1992.

The regulation lowered the vapor pressure of gasoline during the summer smog season, required deposit control additives, eliminated led in gasoline, and resulted in a reduction of over 200 tons per day of volatile organic compounds.

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AIR RESOURCES ENGINEER CAYABYAB: The Board approved Phase 2 of California's reformulated gasoline program in 1991, which became effective in 1996. It set specifications for eight fuel properties.

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AIR RESOURCES ENGINEER CAYABYAB: California's Phase 2 reformulated gasoline is one of the most significant pollution reduction measures undertaken in California.

Phase 2 reduced hydrocarbon emissions by 400 tons per day, NOx emissions by 200 tons per day, and CO emissions by 1300 tons per day.

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AIR RESOURCES ENGINEER CAYABYAB: The Phase 2

reformulated gasoline program also introduced the predictive model, which allows refiners to certify alternative formulations of California reformulated gasoline.

Today, virtually all of California's gasoline is certified through the use of the predictive model. The predictive model uses mathematical equations to show that the emissions from an alternative formulation meet required reductions for oxides of nitrogen, ozone-forming potential, and air toxics. When the Board first approved the predictive model, staff committed to periodically update the model when new data are available.

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AIR RESOURCES ENGINEER CAYABYAB: Subsequent to the completion of Phase I and Phase 2, the reformulated gasoline program was again updated. Phase 3 prohibited the addition of MTBE to California gasoline after 2003 and preserved and enhanced the emission benefits of the reformulated gasoline program.

The regulations provided flexibility for refiners to transition to the use of ethanol as an oxygenate.

In addition, staff updated the predictive model to reflect the latest available motor vehicle emissions test data.

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AIR RESOURCES ENGINEER CAYABYAB: Since its inception, the Phase 3 reformulated gasoline regulations have been amended periodically. The most recent amendments came in June of 2007 where the mitigation of emissions associated with permeation was required and the predictive model was updated.

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AIR RESOURCES ENGINEER CAYABYAB: From the June 2007 amendments, it was discovered that there were nine minor transcription coefficient errors in the predictive model. We are here today to correct those minor coefficient errors.

These changes have no effect on any past or future fuel formulations but are necessary to ensure the accuracy of the regulations.

Staff is also taking this opportunity to propose some other minor changes to provide clarity, enhance flexibility, and ensure the practical and effective implementation of the reformulated gasoline regulations.

Staff is proposing to allow RVP-controlled gasoline, also known as summer gasoline, to be produced year-round and to require gasoline produced with an RVP of 7.2 PSI or less to meet all of the standards of RVP controlled gasoline, not just the vapor pressure standard. This avoids transition fuel issues associated with

changing from winter gasoline to summer gasoline.

Staff is also proposing to delete an outdated provision in the regulation to remove unnecessary language.

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AIR RESOURCES ENGINEER CAYABYAB: Staff is proposing that producers or importers provide sufficient notice to ARB staff and allow ARB inspectors an opportunity to sample and test the gasoline before it is transferred. Staff is proposing to amend the list of materials that may be blended with non-oxygenated gasoline blend stock, otherwise known as CARBOB. Staff is proposing to amend the definition of racing vehicle to more closely align with U.S. EPA's definition. Staff is also proposing to make other miscellaneous changes.

As these are minor technical amendments, there are no economic or environmental impacts expected from these amendments.

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AIR RESOURCES ENGINEER CAYABYAB: Based on stakeholder comments subsequent to the release of the staff report, staff is now proposing to add some additional language to the CARBOB blending prohibition to provide necessary flexibility for normal business operations involving pipeline mixing, storage tanks, and

cargo tank trucks.

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AIR RESOURCES ENGINEER CAYABYAB: In conclusion, staff recommends that the Board approve the proposal with staff's proposed modifications.

Thank you. This concludes my presentation. We would be happy to answer any questions.

CHAIRPERSON NICHOLS: Are there any questions by members of the Board?

I think this is very straight forward. This is just a fact of life. When you run a regulatory program, you have to go back and review your regulations every once in a while and find the little things that need to be fixed and fix them, which we seem to have done.

If there is no further review, we'll take a motion to approve this Resolution.

BOARD MEMBER D'ADAMO: So moved.

BOARD MEMBER RIORDAN: Second.

CHAIRPERSON NICHOLS: All in favor, please say aye.

(Ayes)

CHAIRPERSON NICHOLS: Thank you very much. Good job.

We will now hear an update on the mandatory commercial recycling issue. This is not a regulatory

item. But we do want to let the Board hear about good news that's happening on the climate front. We didn't even have to pass a regulation. Good things have happened, thanks to the Legislature and our friends at CalRecycle who may not have anticipated having to come up so soon.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman Nichols.

As you mentioned, the proposed commercial recycling regulation that was originally scheduled to be brought to the Board is no longer necessary due to the passage of Assembly Bill 341.

So instead, staff of ARB and CalRecycle will make an informational presentation to the Board on efforts date and where we go from here on commercial recycling in California.

I'd also like to acknowledge the work of the staff of both agencies that worked very closely together as we were preparing the regulation to bring here today and continue to work together with the design in this post AB 341 world.

I'd also like to introduce Mark Leary who's the Acting Director at CalRecycle to say a few words regarding the effort.

CHAIRPERSON NICHOLS: Thank you. Hi.

CAL RECYCLE ACTING DIRECTOR LEARY: Good morning, Madam Chair. And thank you, Executive Officer Goldstene. It's a great pleasure to be here this morning. It's actually of kind of nice to be back before a Board discussing recycling policy.

CHAIRPERSON NICHOLS: Even if it's not the Board you used to have.

CAL RECYCLE ACTING DIRECTOR LEARY: This is as good.

As Executive Officer Goldstene said, today's discussion is a result of outstanding collaborative efforts between our two organizations. Although this particular rulemaking is ending in this context, CalRecycle is committed to continue to work with the ARB on numerous activities related to climate change. And the collaborative mode that we've established will be critical to furthering these efforts.

I'd like to emphasize a few key points about mandatory commercial recycling that you'll hear about in the staff presentation. In addition to recognizing greenhouse gas reduction efforts, this effort will have substantial other environmental and economic benefits. Increasing commercial recycling will increase diversion of materials that otherwise would be disposed at landfills, which will result in these materials being managed as

commodities rather than waste, ultimately preserving resources. It will expand existing and create new manufacturing facilities in California using recycled materials as feedstock instead of shipping collective recycled materials out of the state or country. Ultimately, this will create jobs in California.

Finally, I want to express my gratitude to staff and the management of the Air Resources Board and stakeholders for all the work they've done over the last several years on this matter. It's been well worth the effort and in many ways helped to set the stage for success of AB 341.

Madam Chair, like you, I'm a big fan of collaboration across government agencies. I think we might accurately be accuse of not doing enough of it on occasion. But in turning this presentation over to your staff, I'd like to single out your presenter Mr. Dan Donohoue for his tremendous contribution in the spirit collaboration.

Thanks you, Madam Chair.

CHAIRPERSON NICHOLS: Thank you very much.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: Thank you. Just by way of quick introduction, Cara Morgan, CalRecycle; Brenda Smyth, CalRecycle -- these are the management team -- Howard Levenson, Robert Krieger,

ARB was the senior in charge of the project. And then there are probably a whole bench of people out in the audience, ARB and CalRecycle staff, that really participated admirably over the last three years on the work we've done.

One thing I did want to say is that this has been the best interagency experience that I've had in 30 years of ARB working with CalRecycle. The management and staff at CalRecycle is a class act. It's really been a great experience.

CHAIRPERSON NICHOLS: Well, thank you. That's all good to hear.

I guess I'd like to say at the outset that the fact that the Legislature took this concept and turned it into a obviously was some of their own ideas, but based on a lot of work that had been done by CalRecycle, it's also very gratifying.

And I know all of you sighed a big sigh of relief when the Governor signed the bill. But there is a eliminate of implementation work left to be done, especially given the ambitious goals that we have for reducing greenhouse gas emissions from this sector.

So I know this is not an end point, but a beginning. So any way, we'll listen to the presentation.

(Thereupon an overhead presentation was

presented as follows.)

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: Good morning, members of the Board. Today's presentation on commercial recycling will be brief.

We originally anticipated that we were going to be presenting for your consideration a proposed commercial recycling regulation jointly developed by ARB and CalRecycle staff. However, actions by the Legislature and the Governor to approve AB 341 changed those plans. Instead, Howard Levenson, Deputy Director of CalRecycle and I will be co-presenting an informational item updating you on the new direction outlined by AB 341.

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EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: I will begin by providing a brief background on the need for and the benefits of expanding and strengthening commercial recycling in California.

I'll provide an update on the efforts of ARB and CalRecycle staff over the past three years to develop commercial recycling regulations. I will then pass the presentation off the Howard to talk about AB 341 and the next steps needed by both of the agencies to ensure successful implementation of mandatory commercial recycling regulation in California.

And Howard will close with an overview of

CalRecycle's plans for implementing AB 341, discuss future efforts needed in the waste and recycling sector to maximize GHG reductions and increase diversions of solid waste from landfills.

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EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: This slide provides some background information on the magnitude of commercial waste in California.

Currently, there are about 36 million tons of commercial and residential solid waste are generated each year in California. About 75 percent of this waste, 28 million tons per year, comes from the commercial sector. The commercial sector includes businesses, multi-family complexes, apartments, and public entities.

We estimate that about 50 percent of the 28 million tons of commercial waste, or about 14 million tons, could be diverted from landfills.

This estimate is based on the data developed from past waste characterization studies contracted by CalRecycle. Waste characterization studies are basically field surveys of what material are being disposed of at solid waste facilities throughout the state. These studies provide critical information needed to estimate the quantity and composition of materials in the waste stream.

Future waste characterization studies will be needed to monitor the success of the commercial recycling program.

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EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: The annual cost to Californians to collect and dispose commercial waste is about $2.6 billion a year. And while there has been considerable voluntary effort on the part of businesses, and while there have been some jurisdictions that have adopted ordinances requiring commercial recycling, much more can be done.

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EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: AB 32 Scoping Plan identified mandatory commercial recycling as an area where significant GHG emission reductions were possible. In the plan, CalRecycle staff identified an initial GHG emission reduction goal of five million metric tons by 2020. These reductions could be achieved if about two million tons per year of traditionally recyclable material were diverted from being disposed of by landfilling.

Traditional recyclables includes aluminum, metal, cardboard, paper, wood, and plastic. The GHG reductions associated with recycling commercial waste come from energy saved by using recycled materials instead of raw

material to produce new products.

Currently, most of the GHG reductions from increased recycling will occur outside of California. This is because most new products manufacturing using recycled materials occurs outside the state and for some materials, outside of the United States. And while this can prevent some accounting challenges, the reality is that the GHG emissions reductions are a global issue.

The proposed regulation that we were going to present to you today relied on ARB's AB 32 authority, because at the time of the development, CalRecycle did not have statutory authority to adopt a commercial recycling regulation. As a result, ARB and CalRecycle partnered to develop a commercial recycling program for California.

We believe that the current GHG emission reduction goal of five million metric tons by 2020 is readily achievable and that significant additional GHG reductions will be possible in the future well beyond 2020.

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EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: As Mark mentioned, there are a number of good reasons for recycling commercial waste. The most obvious is the significant greenhouse gas emission reductions in energy savings due to diverting recycled materials from landfills

and then using them to produce new products. In addition, commercial recycling will conserve natural resources both locally and globally.

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EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: Recycling commercial waste will provide greater and more efficient utilization of the existing waste management infrastructure that currently has excess capacity. For materials such as green waste and food waste, it will provide opportunities to expand composting and to produce bio energy and bio fuels using anaerobic digestion technology. It will also provide opportunities for businesses to reduce waste disposal costs, expand recycling manufacturing in California, and create new jobs in California.

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EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: ARB and CalRecycle staff have been working together over the past three years in developing a commercial recycling measure. CalRecycle staff took a lead role in this effort. ARB staff worked side by side with CalRecycle and provided assistance, primarily in the areas of emissions, economics, and environmental impacts. The opportunity for public and stakeholder participation was extensive, including eight public workshops and over a hundred

meetings with stakeholders.

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EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: It became clear early on in the development process that the most efficient and least costly approach for implementing commercial recycling program in California would be to integrate it into CalRecycle's AB 939 program. AB 939 established the goal, quite radical at the time of adoption in 1989, of diverting 50 percent of our solid waste from landfills, by reducing waste generation, increasing recycling and composting of collected material.

Under AB 939, jurisdictions are responsible for implementing programs to achieve this goal. Every two to four years, CalRecycle evaluates each jurisdiction's performance. If a jurisdiction is not implementing the program adequately, CalRecycle can place them on a compliance schedule and take enforcement action, if necessary.

The AB 939 program has been very successful. One of the key reasons for its success is the flexibility it provides to jurisdictions allowing them to tailor their promises to the local needs and resources.

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EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: The key provisions of the proposed regulation were to require

local jurisdictions to implement commercial recycling programs that consist of education, outreach, and monitoring. And the second element was to require businesses and multi family complexes with five or more units that generated four or more units that generate four cubic yards of waste or more to recycle.

The picture in the bottom there gives you an idea of four cubic yard bin is.

May, are you here? May, could you stand up?

This is ARB staff lead on this entire project. And that kind of gives you a perspective what four cubic yards is. And were your kids in there? Okay.

At this point in time, I'm going to turn the presentation over to Howard Levenson, Deputy Director of CalRecycle.

CAL RECYCLE DEPUTY DIRECTOR LEVENSON: Thank you, Dan. I don't know how you top that.

Good morning, Madam Chair and Board members. It's a pleasure to be here. I know you've had a intense day-and-a-half and a historic day yesterday. And I want to congratulate you on that. Thank you for turning your attention to this matter.

As you know, in September, the Legislature past Assembly Bill 341. And the Governor signed that about two weeks ago on October 6th.

The overall objectives of AB 341 are very consistent with the proposed regulatory approach that CalRecycle and ARB staff had been developing and were planning to bring to you. As Chairman Nichols said, it looks like they took a lot of those ideas.

The main difference between the proposed regulatory approach and the legislation is that AB 341 brings additional multi-family complexes into the program. That's the primary difference.

Next slide.

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EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: Significantly, AB 341 does give CalRecycle the statutory authority to implement a mandatory commercial recycling program. It has the same basic requirements on jurisdictions and businesses. Jurisdictions are required to implement an education, outreach, and monitoring program, just as we envisioned in the proposed regulation. And businesses and multi-family complexes are required to recycle.

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EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: As a result of AB 341, CalRecycle and ARB staff believe that rather than moving forward with the previously proposed regulation, CalRecycle should initiate its own new

rulemaking process using its new authority under AB 341. The new rulemaking will rely on a lot of what's already been done, obviously. It will use the AB 939 program approach that Dan described for implementation and enforcement. It also will continue to provide flexibility to businesses and jurisdictions where it's appropriate.

We anticipate beginning the rulemaking period either late next week or early November with the release of a draft proposed regulations for a 45-day comment period. It's at the Office of Administrative Law right now receiving its final approvals.

As we learned throughout this rulemaking process with ARB staff, CalRecycle can't do this job alone. We do need to continue to rely on ARB for support and assistance from you and your staff to make this happen.

There is two critical areas where we think ongoing assistance is needed. First is support and assistance in monitoring the rule's effectiveness. CalRecycle is obligated under the Scoping Plan, as is ARB under AB 32, to monitor the rule's effectiveness. And we believe that statewide waste characterization studies that Dan described are the best way to monitor progress. And we plan to conduct studies in 2015 and 2019 to measure the effectiveness of the rule in reducing greenhouse gas emissions. And then report accordingly back to the ARB.

We'll also need ARB's assistance in developing and updating recycling emission reduction factors. ARB staff already developed as part of the earlier rulemaking process a significant number of emission reduction factors for many of the currently recycled materials. It was very important that these are now California-specific emission factors. That's a real advance in the science for this area.

These factors are critical for translating our waste characterization studies into actual greenhouse gas emission reduction estimates. So CalRecycle and ARB staff recommend that ARB maintain responsibility for updating emission factors and for developing new ones, given ARB's expertise in this area.

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EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: As we look forward to implementing CalRecycle's commercial recycling regulation, we'll be devoting considerable resources the assisting businesses and jurisdictions with the new regulation. This will include conducting workshops throughout the state, developing frequently asked questions and answers, promoting the Institute for Local Government's tools and models that they developed under contract to us for this purpose, and providing other outreach and tools as needed so that we can help

jurisdictions and businesses maximize their opportunities to reduce waste and achieve associated reductions in GHGs.

One of the most exciting opportunities provided by mandatory commercial recycling is the potential to create new jobs in California by expanding recycling and manufacturing operations in the state. That is, recycling materials here and achieve the greenhouse gas emission reductions instead of sending them overseas and seeing those emissions reductions occur elsewhere.

As we move forward, it's going to be critical that CalRecycle and ARB continue to work together on how best to support additional recycling manufacturing opportunities in California.

We are certainly committed to working with ARB staff on opportunities for further reductions in the solid waste sector. And that would include promoting composting and anaerobic digestion, both of which are measures in the Scoping Plan, additional recycling, re-manufacturing of recovered materials in the state, and a variety of other activities.

We certainly welcome to opportunity to work closely with your staff on implementation of AB 32, including the cap and trade regulation that you adopted yesterday so there is a very close alignment of those programs and particularly of the programs and the

regulation with our new statewide solid waste management goal of 75 percent, also set forth by AB 341. So a lot of opportunities in the future.

Lastly, I'd like to reiterate what Mark Leary said earlier not only about the benefits of commercial recycling to the state, but also about this collaborative effort.

And I also share the same sentiments that Dan expressed. This has been a truly amazing collaborative effort from the staff level all the way up through the Executive Director. We received a lot of support and help. And it's been a real learning experience for all of us. But it's been a good one. And I really do thank all of the ARB staff and management as well as obviously CalRecycle staff and management.

That concludes our presentation. And I'd like to return the microphone to Mr. Goldstene.

EXECUTIVE OFFICER GOLDSTENE: Thanks, Howard.

We're just very pleased that we were able to do this today. And I know Howard and Mark miss their Board; we can be their surrogate for a while.

CHAIRPERSON NICHOLS: Thank you all for being here.

We do a number of people who have come and want to speak on this item. I assume they're people with ideas

about how we should be moving forward on these issues.

I'll just call them up starting with Brenda Coleman from the California Chamber of Commerce.

MS. COLEMAN: Good morning, members.

Brenda Coleman here on behalf of the California Chamber of Commerce.

I'm here just to acknowledge the fact that this has been indeed a robust and collaborative process involving Cal Chamber and other stakeholders working with CalRecycle on this process. We really would like to acknowledge all the hard efforts of staff throughout this process. And we'd like to continue working with the department and with ARB as we move forward on the regulation.

In general, we really appreciate the flexibility that the regulation does provide for business and some of the exemption considerations that are allotted for business. Those are very important issues that have been addressed and we hope continue to be addressed as we move forward with the regulation.

Again, as has been acknowledged, this is a work in progress. And we would like to continue to work with the department and with ARB as we move forward with the regulation and advancing this important GHG emission reduction issue. So thank you very much.

CHAIRPERSON NICHOLS: Thanks you for being here.

Frank Farrel from the Greater Stockton Chamber of Commerce.

MR. FARREL: Yes, it's all about the Chambers, isn't it. I think I have a slide. I'll filibuster if you want while she's bringing that up.

I really want to thank CalRecycle and CARB staff for working over the weekend. I got e-mails over the weekend bouncing things back and forth regarding the cap and trade yesterday and really, really appreciate that.

Also I'd like to tip my hat to Board Member D'Adamo up there for putting up with all my late night e-mails to her. And so sorry, DeeDee. I had to call --

BOARD MEMBER D'ADAMO: I have to say, whenever I go to empty my recycles out in the alley behind my house, I think Frank is just going to pop his head up and say we need to do more for commercial recycling for value added products.

MR. FARREL: Absolutely. How many times have I said that? I wish I had a nickel. Right.

Again, Frank Farrel, Program Public Policy Director for the Greater Stockton Chamber of Commerce.

If you look at our slide, it demonstrates a wide coalition that the Chamber is part of. Up here what you have is environmental groups, business groups, economic

developers, Republicans, Democrats, value-added manufacturers, a whole bunch of different walks of life are experts, if you will, in their respective fields, all for one reason: Jobs. We, as Californians, have to make jobs a priority in our state. And without that, we're just going to continue to export our jobs to China or to other parts of the country. And economic development is a -- it's done on purpose. It's on purpose. It just doesn't happen.

We have a unique opportunity through AB 341 to reduce what's going to landfill, reduce greenhouse gas, and create jobs with what we're diverting.

The old saying goes -- I think Chair Nichols heard this down in Stockton when you came to our community a few weeks ago, if you're going to divert, you must convert. Convert those commodities into jobs. And it's not waste. These are commodities. These are things that can go right back into value-added products.

So on behalf of the Chamber, I want to thank you very much. On behalf of the Coalition, I want to thank you very much for listening to us and hope to engage with the recycling bin coalition. That's catchy name, isn't it? Recycling bin, everybody knows what a recycling begin. That's why we came up with that. Actually, came to me in the middle of the night.

My wife keeps slapping me, because ideas always come to me in the middle of the night for some reason.

But we are very, very proactive. And we really want to see these value-added markets here in California creates jobs for Californians in California. From Governor Jerry Brown on down, it was at the California partnership meeting a couple weeks ago we had five Cabinet secretaries there, and all of them had talked about jobs.

So I think the memo went out from the Executive Office that we have to make jobs a priority in our state. And this is such a low-hanging fruit issue, which has really bipartisan support I would think, and the businesses community who wants the jobs. And I know the state and the local jurisdictions would like to have additional revenue generated from more people working in the state. I this it's a win-win for everyone.

I also want to call attention to La Ronda Bowen, one of the best Ombudsmans the state of California's ever had. She's been putting up with me as well.

And I'm open for any questions you may have.

CHAIRPERSON NICHOLS: Well, all I can say if recycling fails to take off as a business, it won't be for any lack of effort on the part of the Stockton Chamber of Commerce.

MR. FARREL: I appreciate that. But the

California recycling market development zone is --

CHAIRPERSON NICHOLS: Is going to succeed.

MR. FARREL: Yes, ma'am. We'll do it and then we'll talk about it.

CHAIRPERSON NICHOLS: Thank you.

BOARD MEMBER BALMES: I just have one question. Are you sure your wife is slapping you in the middle of the night because of your ideas or because you're e-mailing Ms. D'Adamo.

MR. FARREL: Well, I think it's a little bit of both.

But, you, know it's just one of those things that we try to -- and I do invite everyone to visit our website at Greenteamsanjoaquin.com. Thank you.

CHAIRPERSON NICHOLS: Okay. Jennifer Svec.

MS. SVEC: Good morning, Madam Chair and Board members.

Jennifer Svec with the California Association of Realtors. We do have some concerns with the draft regulations. However, we've been working collaboratively with CalRecycle and their staff throughout this process and hope that we will be able to alleviate those concerns as we move forward in the regulatory process.

CHAIRPERSON NICHOLS: Thank you to our stakeholders.

Arthur Boone.

Mr. BOONE: My name is Arthur Boone. I'm the President of the Northern California Recycling Association. We're a group of about 160 people in the Bay Area who care about recycling.

We did not support AB 341 because we thought there were some loopholes in that bill that were really unfortunate. I want to call your attention to them.

One is in Section 9 of the law that says no local goals can be set higher than 50 percent. We have a State goal that says 70 percent. But the State has no authority then to push the cities to go beyond their 50s. That's a protection I presume for the 50 or 60 cities that are still considered non-compliant.

So the question is what are we going to do with that. I think that's the real question.

What we think is going to happen is that every city that's already at 50 percent is going to say we are in compliance with the law and we already do something. Doesn't have to be anything because the regulations don't spell it out. We are doing something regarding commercial recycling and regarding multi-unit recycling. So we're not convinced at all that the regulatory structure which has been developed jointly so far is really going to touch the problem.

Second problem is that that the original goal for these regulations was five million tons of CO2 diversion. The Board admits -- the Waste Board people, staff, admits that's two million tons of diversion out of 14 million readily available. Why was the goal set so low? Okay.

What John Davis argued five years ago was that if we recycled everything for which markets exist and which is currently in the waste stream, we would create emission reductions equal to 19 percent of all the industrial emissions that are generated in California.

On that basis, I went to the ETAAC Committee five years ago. I got recycling on the table three years ago. Dorothy Rothrock the night before her report was due called CAW and said what do we put in the report? They said because they've been working on this bill for a couple of years before it was vetoed last year, if you know, they said commercial recycling and multi-units. So that's how it got in. That's how it got on your agenda. Was that the best possible thing to happen? I don't know.

For the Air Board to walk away from these regulations at this time I think is a big mistake. I believe our association thinks it would be a big mistake. There are significant industrial emission implications for these regulations. I do not believe the way 341 is written is it's going to give the push that's necessary to

make that happen. I think your authority is separate and distinct. I think it should remain in the books and it should remain on your table. And I think it's a really sad thing that would happen.

That's about it.

CHAIRPERSON NICHOLS: Well, thank you, Mr. Boone.

I think I understand your comments. And I just want to respond that, undoubtedly, the legislation could have been stronger. And one of the things about the legislative process is that it usually does start out at somewhere more ambitious than where it ends up to get a bill through. But usually the decision is that if it's moving you forward, in this case, we believe getting the authority on the books to regulate in this area is a critical step forward, that had not -- I mean, it's true ARB was going to and could still use the authority of AB 32 to step into this area. But we have an agency in this state whose job it is to work on recycling and giving that agency clear authority to regulate in this area, in my opinion, is a major benefit in and of itself.

But we're not going away. ARB intends to be very actively involved in making sure that the tons we've called for do come to pass. And more than that, I think if we see that there are opportunities to do better -- and I sincerely hope you're right -- that we will be able to

build on this. But we'll start with taking the first step at least in this direction.

MR. BOONE: We hope the Governor will appoint a Director for this department. It's been ten months now. There have been several identified candidates that are acceptable to us that have been hanging for a couple months. It's a very poor sign of this Administration's commitment to waste reduction and recycling. I'm sorry.

CHAIRPERSON NICHOLS: Well, I've had some luck so far. So we'll hope he's open a roll to make more appointments. We're very happy with the one we've got.

Tim Coyle and then Evan Edgar.

MR. COYLE: Madam Chair and members of the Board, Tim Coyle on behalf of the Apartment Association of Los Angeles, San Diego, and Santa Barbara.

All I'll turn the tables back a little bit towards the idea of this being a very collaborative process, both through the regulation development and then the legislation. As it always turns out, we represent -- I represent a diversity of apartment owners throughout the southland. And you might guess that a bill like AB 341 that was passed does have some workability problems. So we look forward to working with CalRecycle on maybe ironing out those workability problems.

But we endorse the idea of course of improving

the reach of recycling policy and program for the state.

CHAIRPERSON NICHOLS: Great. Thank you.

MR. EDGAR: Madam Chair, Board members, my name is Evan Edgar on behalf of the California Refuse Recycling Council and California Compost Coalition.

Today, we have a mandate with destiny for RSD moving forward with mandated commercial recycling. On July 1, 2012, we will have programs in place. Many of our companies, over 100 haulers statewide, already have commercial programs and looking to expand them.

We also represent 50 different material recovery facilities in California as well where we make a lot of bales, and those bales are being shipped elsewhere. We're looking forward to making bales and keeping the stateside. And we are coalition members with Frank Farrel and company in order to make that happen next year in order to create more jobs in California.

On behalf of the Compost Coalition, we do a lot of composting as well. And we look forward to working with the San Joaquin Valley APCD and agriculture in order to make more compost in California. And we applaud CalRecycle for the program EIR on anaerobic digestion that goods a long way. And the partnership for the last three years with CARB and CalRecycle has been great. There's been a lot of moving targets. It's been a lot of

legislation, a lot of collaboration, and what we have, we have regulatory certainty.

We support CalRecycle with their venture to take these regulations to build on the back of AB 939. We've gotten to 50 percent over the last ten years -- actually, the last 20 years. They're at 64 percent today. And we believe the 939 process in order to piggy-back on that process for program development is the right way to go.

So we support CalRecycle staff taking over. We support CARB still being involved with the five million metric tons of CO2 and look forward to our mandate with destiny.

CHAIRPERSON NICHOLS: Thank you. For your support.

That concludes the list of people who have signed up to testify on this item. And since it's just an informational item, we will close the hearing. It's also the end of our formal business, but we do have a scheduled public comment period, and we have one individual who has signed up to speak to us. This is on any matter of interest and apparently he has a presentation to make on a dripless nozzle. Matt Millhard.

MR. MILLHARD: Hello. My name is Matthew Millhard. I'm a fifth-year PUC candidate down at USCD and came up here to talk to you about the dripless nozzle.

I'd like to thank you for loaning me a few minutes of your time.

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MR. MILLHARD: A wise group of people once said, "The air is cleaner but not clean enough." Anybody know who that is?

CHAIRPERSON NICHOLS: Us.

MR. MILLHARD: That's correct. Yeah. So I just wanted to reiterate you guys have done a lot for our environment here in the state of California. Here's some of the things up here: Zero emission vehicles wouldn't be here if it wasn't for you. Vapor recovery systems 1 and 2. You guys even recognized fuel spillage that everyone else disregarded. And you enforced liquid retention maximum in hoses and then enforced a post-fueling drip maximum three drops.

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MR. MILLHARD: Why am I here today? Because it's a problem. Three drops is clean but not clean enough.

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MR. MILLHARD: And so I think the solution is very simple, and I'm not sure why it hasn't been done. But the solution is this: A retrofitted valve that sits at the end of the nozzle, opens from minor amounts of back pressure. And as soon as you're done filling, it closes.

It seals. Now there is no post-fill drops. We have a solution to this.

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MR. MILLHARD: And why? Why is a few drops a problem to the state of California?

I've done these calculations, and it blows my mind that over 130,000 gallons a year is spilled from the drips. There is over 20 billion gallons of gas pumped in the state of California. The volatile organic compounds that are released into the atmosphere from this, the toxicological risk, water contamination, and over half a million dollars a year in spilled fuel. And although the financial cost is easy to see, the immeasurable burden on the environment isn't.

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MR. MILLHARD: It's simple. It's a valve. It goes into the end of the nozzle, a few parts: O rings, seals to the body. The body has an O ring on the outside that seals to the inside of the nozzle. Can easily be retrofitted into the end.

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MR. MILLHARD: The future is in your hands. California needs a enforced dripless valve, just as it needed the vapor recovery systems that you implemented and the zero emission vehicles.

The California Air Resources Board to my knowledge is the only entity that can do this.

Thank you very much for your time. If you have any questions, I'd be more than happy to answer them.

CHAIRPERSON NICHOLS: Well, thank you. We do have staff here, and I'm going to ask them to take a look at your presentation. And I'll ask Mr. Cackette to have -- Mr. Tom Cackette here who's in charge of this particular program, and he or one of his staff members will get back to you and discuss the ideas in your presentation. We appreciate your work on this and your taking the time to come up and talk to us.

MR. MILLHARD: Thank you so much.

CHAIRPERSON NICHOLS: Thank you. All right. And with that, unless there is any other business, we are adjourned.

(Whereupon the Air Resources Board meeting adjourned at 11:47 AM)

CERTIFICATE OF REPORTER

I, TIFFANY C. KRAFT, a Certified Shorthand Reporter of the State of California, and Registered Professional Reporter, do hereby certify:

That I am a disinterested person herein; that the foregoing hearing was reported in shorthand by me, Tiffany C. Kraft, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said hearing nor in any way interested in the outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 26th day of October, 2011.

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TIFFANY C. KRAFT, CSR, RPR
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