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Clerk of the Board  
Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**Subject:** Ford Motor Company Comments on Proposed 15-Day Modified Text to the "LEV III" amendments, dated February 22, 2012

Ford Motor Company (Ford) appreciates the opportunity to provide comments in response to California's proposed 15-Day modified text of the "LEV III" amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards and Test Procedures, the On-Board Diagnostic System Requirements for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and to the Evaporative Emission Requirements for Heavy-Duty Vehicles, dated February 22, 2012 ("15-Day Notice"). Ford supports the comments submitted by the Alliance of Automobile Manufacturers ("Alliance"). The comments provided herein supplement those of the Alliance.

Ford is a leader in innovation and we are committed to providing safer, cleaner, and more fuel-efficient automobiles that produce less greenhouse gas ("GHG") and criteria emissions. We are a full line manufacturer and are focused on implementing the most cost-effective fuel-efficiency technologies across a large volume of our vehicles, as well as on introducing new products that offer improved fuel efficiency without compromising style, utility, or performance.

Our views on the "15-Day Notice" revisions are summarized below and discussed in more detail in the body of our comments:

## Summary

Ford recommends that the ARB make the following modifications:

1. Replace any references to the "1.08" Ethanol adjustment factor with the generic term "the Ethanol adjustment factor". We further request that CARB staff work with industry to develop a comprehensive data set to generate a more representative factor, which could be communicated at a later date via MAC or Mail-out.
2. Waive Ethanol measurement for BETP HC measurements or provide a BETP-specific adjustment factor.
3. Correct error to MDV VEC equation on Page A-30.

4. Allow manufacturers with Capless fuel systems to comply with ISO-9158, SAE J285 or equivalent as an alternative to complying with ISO-13331-1995(E).

We will be pleased to discuss this information with you or members of your staff. Should you wish to do so, please contact me at 313-322-5180.

Sincerely,

/s/

## Attachment A

### Notice of Proposed 15-Day Modified Text of the “LEV III” Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards and Test Procedures, the On-Board Diagnostic System Requirements For Passenger Cars, Light-Duty Trucks, And Medium-Duty Vehicles, and to the Evaporative Emission Requirements For Heavy-Duty Vehicles, dated February 22, 2012

#### Supplemental Comments of Ford Motor Company

Ford Motor Company (Ford) appreciates the opportunity to provide comments in response to California's proposed 15-Day modified text of the “LEV III” amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards and Test Procedures, the On-Board Diagnostic System Requirements for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and to the Evaporative Emission Requirements for Heavy-Duty Vehicles, dated February 22, 2012 (“15-Day Notice”). Ford supports the comments submitted by the Alliance of Automobile Manufacturers (“Alliance”). The comments provided herein supplement those of the Alliance.

Our views on the “15-Day Notice” revisions are provided below:

1. **Ethanol Mass Adjustment Factor for Evaporative HC Measurement (15-Day Notice, Enc D, Part III (D)(1)(1.1), Page D-7 and Part III (D)(11)(11.3)(11.3.1), Page D-10)**: Language has been added to require that Ethanol is accounted for via measurement or mass adjustment factor when vehicles are tested with the E10 LEV III certification fuel. While we appreciate the option to use a factor in lieu of Ethanol measurement for evaporative emissions testing, we believe the proposed adjustment factor (1.08) is too high and should be closer to 1.03. Ford has analyzed HC emissions results for nine 2008 to 2011 MY flexible-fueled vehicles tested with E10 fuel. The HC mass resulting from FID only measurements were compared to the HC mass adjusted for the Ethanol mass measured with impingers. We determined that on average the HC mass increases by 3%. We do not expect CARB to simply accept our data and recommendation in the context of this rulemaking. However, we do think that CARB should engage in a dialogue with Ford and other members of industry about the correct adjustment factor, rather than inserting a specific adjustment factor into the regulations at this time.

We request that CARB staff amend the regulatory language to replace any references to the “1.08” value with the generic term “the Ethanol adjustment factor,” which would be defined as a factor to be determined by CARB, intended to account for the mass of Ethanol emissions not captured by FID only HC measurements. We further request that CARB staff work with industry to develop a comprehensive data set to generate the most representative factor, which could be communicated at a later date via MAC or Mail-out.

2. **Ethanol Measurement or Adjustment Required for the Bleed Emissions Test Procedure (15-Day Notice, Enc D, Part III (D)(1)(1.1), Page D-7 and Part III (D)(11)(11.3)(11.3.1), Page D-10)**: In prior discussions, CARB staff indicated that Ethanol measurement would not be required on the Bleed Emissions Test Procedure (BETP). Ethanol will have a negligible impact on HC measurements at the proposed standard levels, so there is no compelling need for such measurements on the BETP. Imposing such a requirement, however, would force additional, costly facility upgrades for OEMs planning to conduct BETP testing in-house. It is not necessary for the regulations to compel such expenditures in light of the minimal impact that such testing would have.

We request that CARB add language to waive Ethanol measurement for BETP HC measurements or provide a BETP-specific adjustment factor.

3. **Error in MD VEC equation (15-Day Notice, Enc A, §1961.2(c)(2)(A), Page D-30):** There is an error in the MDV VEC equation (excerpted below).

$$\begin{aligned} & \{(1.437) \times \{[(\text{No. of ULEV250s and ULEV400s Produced excluding HEVs}) + \\ & (\text{No. of ULEV250 HEVs} \times \text{HEV VEC factor for ULEV250s}) + \\ & (\text{No. of ULEV400 HEVs} \times \text{HEV VEC factor for ULEV400s})] - \\ & \{(1.4) \times (\text{Equivalent No. of ULEV250s and ULEV270s Required to be Produced})\} + \end{aligned}$$

We request that the regulatory text be revised to remove the “ULEV270s” standard (shown in the red circle) with “ULEV400s”.

4. **“Specification for Fill Pipes and Openings of Motor Vehicle Fuel Tanks” update to ISO-13331-1995(E), (ISOR, APP I, III, Page I-2):** CARB staff is updating the Specification for Fill Pipes and Openings for Motor Vehicle Fuel Tanks to reference ISO-13331-1995(E). The nozzle diameter specifications in this standard do not align with the limits permitted in ISO-9158 and SAE J285. ISO-13331-1995(E) is based on SAE J1140, which has been cancelled. The specifications in ISO-9158 and SAE J285 are commonly used as design targets for Capless fuel systems.

We request that CARB staff add language to allow manufacturers with Capless fuel systems to comply with ISO-9158, SAE J285 or equivalent as an alternative to complying with ISO-13331-1995(E).

## Conclusion

Ford appreciates the opportunity to comment on the agency’s 15-Day modified text for the proposed LEV III amendments for 2015 - 2025 MY vehicles. We encourage the agency to carefully consider our comments as it finalizes this rulemaking. Ford is willing to work with CARB staff and provide support as required to finalize this rule.