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To: Rajinder Sahota
Assistant Division Chief
Industrial Strategies Division
California Air Resources Board
1001 I Street
Sacramento, California 95814

Online submission: http://www.arb.ca.gov/cc/capandtrade/meetings/meetings.htm

COMMENTS ON WORKSHOP TO DISCUSS POSSIBLE REVISIONS TO THE CAP-AND-TRADE REGULATION

Dentons US LLP, on behalf of Foam Supplies, Inc. and True Manufacturing Co., Inc., submits this comment in response to the workshop held April 26 and to memorialize our comments made then. We appreciate the outreach by ARB staff to solicit informal comments before ARB begins a formal comment process. We stand by our prior comments, dated March 15, 2018, and wish to memorialize the comments we made during the April 26 workshop.

As previously stated, we support the staff recommendation with respect to the DEBS criteria. We support using the exact statutory language in the ARB guidance. Clearly, our collective scientific understanding of what is a "direct" effect has changed substantially and will continue to change as more research is done with respect to climate change. Therefore, given the long time until 2030, and beyond, we believe caution and flexibility is the best approach.

We continue to urge ARB to add new methodologies to those currently approved in order to generate quality offsets. The staff summary provided with respect to the submitted comments was quite helpful and it is notable that, in addition to Dentons, five other commenters specifically supported adoption of the "Methodology for Transition to Advanced Formulation Blowing Agents in Foam Manufacturing and Use" ("FBA Methodology"): Honeywell, Owens Corning, Foam Supplies, True Manufacturing and American Carbon Registry (ACR).

We would like to point out that an expanded version of the FBA Methodology ("FBA 2.0 Methodology") was just issued by ACR. The FBA 2.0 methodology[1] can generate project-based offsets from ten different manufacturing end uses. The scope of the methodology increases the opportunities for offsets that could meet the DEBS criteria. Those end uses are not under the cap and hence these reductions are beyond those which regulations currently require. The reductions are for HFCs, a potent Short Lived Climate Pollutant (SLCP). The offsets are calculated based on IPCC created emission factors and relate to end uses for which there has been minimal adoption of any low-GWP blowing agents. The project offsets are based upon actual production information, representing a mass balance approach with great certainty, accuracy and precision. There is essentially no risk of invalidation.

[1] FBA 1.0 was adopted by ACR in April 2016. FBA 2.0 was adopted by ACR in April 2018.

In issuing FBA 2.0, ACR has taken into account the decision in *Mexichem v. EPA* regarding the SNAP regulation. EPA has begun a stakeholder process to address that decision and stated "in the near-term EPA will not apply the HFC listings in the 2015 SNAP Rule, pending a rulemaking. This notice also provides the Agency's plan to begin a notice-and-comment rulemaking process to address the remand of the 2015 Rule" (83 Fed Reg, 18431 (second column) (April 27, 2018)).

The research supporting the ACR adoption of FBA 1.0 and now FBA 2.0 shows that there are some end uses for which alternatives are available and in use. See Appendix A-1 to FBA 1.0. However, for the 10 end uses listed in FBA 2.0, (all with very low adoption rates as of late 2017), it appears likely changes may be made for at least the transition dates for the 10 end uses addressed by FBA 2.0.

The following table is extracted from FBA 2.0, Appendix A, Table 9, to show the lack of adoption of low-GWP blowing agents in the ten end uses for which offsets would be generated by projects. This data was collected before the *Mexichem* decision and, therefore, it may tend to actually overstate the use of low-GWP blowing agents.

APPLICATION	2013	2014	2015	2016	2017
Rigid PUF injected foam – Marine flotation and buoyancy	1.29%	1.61%	2.04%	2.51%	2.89%
Rigid PUF injected foam – Heating, Ventilation, Air Conditioning and Air Handling Systems	2.06%	2.52%	3.21%	3.84%	4.41%
Rigid PUF injected foam – Refrigerated Transport	1.46%	1.80%	2.30%	2.77%	3.21%
Rigid PUF injected foam – Industrial Refrigeration Systems	1-2%	1-2%	1-2%	1-2%	1-2%
Rigid PUF injected foam – Retail Food Refrigeration	1.56%	1.91%	2.45%	2.88%	3.32%
Rigid PUF injected foam – Garage and Entry Doors	1.61%	2.14%	3.03%	3.88%	4.65%
Rigid PUF residential refrigerators and	1.18%	1.48%	1.92%	2.34%	2.75%

APPLICATION	2013	2014	2015	2016	2017
freezers					
XPS (Board, Billet, and Block only)	7-8%	7-8%	7-8%	7-8%	7-8%
Two-component Rigid PU Spray Foam	5%	5%	5%	5%	5%

Dentons also recommends ARB adopt version 2.0 of the Advanced Refrigeration Systems Methodology currently under review with ACR. That methodology has gone through the public comment period and is now undergoing ACR Peer Review; we expect it to be published by the end of May and to include a tool to recognize ARB-approved refrigerants. It will provide an incentive for the use of very low GWP refrigerants, such as propane with a GWP of 3.

These two methods Dentons has recommended would address recent legislative issues. The FBA Method addresses many of the concerns expressed in last year's session relating to environmental justice by providing support to manufacturing activates in urban areas. The Advanced Refrigeration System methodology provides recognition and incentives to go far lower (in terms or GWP for refrigerants) than required by ARB's recent rule to require SNAP-levels for refrigerants. Both methodologies reduce HFCs (the most potent SLCP class) and thus support California reaching the aggressive SB 1398 goal. As ARB is well aware that SLCP's have a more potent near term GHG effect than CO2, pound for pound, these methodologies have a far more immediate benefit than those that do not reduce SLCPs.

We respectfully urge ARB to formally consider adding both methodologies to its list of approved offset protocols.

Respectfully,

Susan Wood, Senior Advisor

Jeffrey Fort, Partner

Matthew Adams, Partner