

**DRAFT FINAL  
2012 AQMP**

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**RESPONSES TO COMMENTS  
TO THE 2012 AQMP**

**NOVEMBER 2012**

# **SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT GOVERNING BOARD**

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**EXECUTIVE OFFICER:**  
**BARRY R. WALLERSTEIN, D.Env.**

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**COMMENT LETTER LOCATOR**

<b>AGENCY/ COMPANY</b>	<b>DATE</b>	<b>Comment Letter Locator</b>
AEROPRES Corporation	11/12/2012	<b>SS-27</b>
Air Conditioning Heating, and Refrigeration Institute (AHRI)	8/31/2012	<b>V</b>
Air-Scent International	10/1/2012	<b>SS-4</b>
Alpha Aromatics	10/1/2012	<b>SS-5</b>
American Chemistry Council	10/5/2012	<b>SS-17</b>
American Cleaning Institute	8/31/2012	<b>SS-1</b>
American Coatings Association	6/13/2012	<b>D</b>
American Coatings Association	8/31/2012	<b>P</b>
American Coatings Association	10/5/2012	<b>SS-16</b>
American Coatings Association - David Darling	2/4/2011	<b>E</b>
American Jetway Corp.	11/6/2012	<b>SS-23</b>
Armored AutoGroup	10/10/2012	<b>SS-18</b>
Association of CA Cities Orange County (ACCOC)	7/25/2012	<b>A</b>
Automotive Specialty Products Alliance (ASPA)	10/12/2012	<b>SS-20</b>
Bear Valley Electric Service	8/31/2012	<b>X</b>
Bear Valley Electric Service	10/9/2012	<b>TT</b>
BETCO Innovative Cleaning Technologies	9/12/2012	<b>SS-3</b>
Blaster Chemical Company	11/8/2012	<b>SS-25</b>
CA Council for Environmental and Economic Balance (CCEEB)	10/31/2012	<b>CCC</b>
California Council for Environment and Economic Balance (CCEEB)	8/31/2012	<b>BB</b>
California Small Business Alliance	11/12/2012	<b>EEE</b>
California Trucking Association	8/30/2012	<b>J</b>
Chicago Aerosol	11/12/2012	<b>SS-28</b>
CIAQC	11/8/2012	<b>GGG</b>
City of Santa Clarita	8/31/2012	<b>K</b>

AGENCY/ COMPANY	DATE	Comment Letter Locator
Clean Energy	8/31/2012	FF
COBRA	11/6/2012	SS-24
County Sanitation Districts of Los Angeles County	8/30/2012	M
CRC Industries, Inc.	11/12/2012	SS-29
Dairy Cares	8/31/2012	EE
Darnall Army Medical Center	9/28/2012	OO
Diversified CPC International, Inc.	11/12/2012	SS-30
Dow Chemical Company	10/5/2012	SS-14
Eastern Aerosol Association (EAA)	10/4/2012	SS-9
Einstein, Dr. Geoffrey Kabat	10/30/2012	WW
Enstrom, James E.	8/30/2012	U
Enstrom, James E.	9/20/2012	NN
Four Star Chemical	11/12/2012	SS-37
Gatzke Dillon & Balance (GDB) LLP	11/8/2012	HHH
Gatzke Dillon & Ballance LLP	10/30/2012	XX
Harvey Eder	11/8/2012	JJJ
Ian Gecker & Associates, LLC.	10/5/2012	SS-12
IFRA North America	9/28/2012	QQ
IKI Manufacturing Co.	11/12/2012	SS-31
International Fragrance Association North America (IFRANA)	8/31/2012	II
ISSA	8/31/2012	L
John R. Froines	10/26/2012	VV
John Wayne Airport	8/31/2012	AA
John Wayne Airport	9/28/2012	RR
Joint Orange County Coalition	9/12/2012	LL
LA Department of Public Works - Cynthia Holguin	8/14/2012	O
LA Department of Water & Power	8/31/2012	S

<b>AGENCY/ COMPANY</b>	<b>DATE</b>	<b>Comment Letter Locator</b>
Latham & Watkins LLP	8/31/2012	<b>DD</b>
Leroy Mills	11/8/2012	<b>III</b>
Losorea	10/5/2012	<b>SS-10</b>
Mar Vista Community Council	5/20/2012	<b>G</b>
Mesa Consolidated Water District	9/12/2012	<b>KK</b>
Mitchell M. Tsai, Esq	3/28/2012	<b>F</b>
Mitchell M. Tsai, Esq	8/28/2012	<b>N</b>
MONTSENBOCKER'S Lift Off	11/12/2012	<b>SS-32</b>
Mothers Incorporated	10/15/2012	<b>SS-21</b>
National Aerosol Association (NAA)	11/12/2012	<b>SS-33</b>
Natural Resources Defense Council (NRDC)	9/5/2012	<b>JJ</b>
Neighbors of Santa Monica Airport	7/28/2012	<b>I</b>
Nexreg Compliance Inc.	10/5/2012	<b>SS-15</b>
Orange County COG (OCCOG)	8/31/2012	<b>Z</b>
Orange County Transportation Authority (OCTA)	8/31/2012	<b>R</b>
Pacific Merchant Shipping Association (PMSA)	10/31/2012	<b>ZZ</b>
Paramount Petroleum	8/30/2102	<b>CC</b>
Personal Care Products Council	9/28/2012	<b>PP</b>
Pestco Inc.	10/1/2012	<b>SS-7</b>
PLZ Aeroscience Corp.	10/30/2012	<b>SS-26</b>
Public Solar Power Coalition - Harvey Eder	7/17/2012	<b>H</b>
Public Solar Power Coalition, Harvey Eder	10/31/2012	<b>YY</b>
Quality Car Care, Inc.	10/25/2012	<b>SS-22</b>
Radiator Specialty Company (RSC)	10/10/2012	<b>SS-19</b>
RadTech	10/31/2012	<b>BBB</b>
Roof Coatings Manufacturers Association (RCMA)	10/5/2012	<b>SS-13</b>
SASOL	11/12/2012	<b>FFF</b>

AGENCY/ COMPANY	DATE	Comment Letter Locator
SC Johnson	8/31/2012	Q
Shield Packaging of California	9/28/2012	SS-2
Sierra Club Angeles Chapter	10/31/2012	AAA
Simple Green	10/1/2012	SS-8
Southern California Business Coalition	5/15/2012	C
Southern California Business Coalition (SCBC)	8/31/2012	T
Southern California Edison	8/31/2012	Y
Southern California Gas Company, Sempra Energy Utility	8/31/2012	GG
Spray Products	11/12/2012	SS-35
Stoner	11/12/2012	SS-34
SurcoTech	10/1/2012	SS-6
The Adhesive and Sealant Council (ASC)	9/17/2012	MM
The Consumer Specialty Products Association (CSPA)	10/9/2012	SS
The Port of Los Angeles & Port of Long Beach	8/30/2012	HH
The Port of Los Angeles, Port of Long Beach	10/31/2012	DDD
Turtle Wax	11/9/2012	SS-36
U.S. EPA	8/31/2012	B
WD-40 Company	10/12/2012	UU
Western Aerosol Information Bureau (WAiB)	10/5/2012	SS-11
Western States Petroleum Association (WSPA)	8/31/2012	W

## **PREFACE**

The 2012 Air Quality Management Plan (AQMP) response to comments is prepared as part of the 2012 AQMP proceedings to ensure all questions raised and comments received during the development process of the 2012 AQMP are adequately considered and addressed. Based on the comments received and additional analysis, changes have been made to the Plan which is reflected in the Draft Final 2012 AQMP and the Draft Socioeconomic Report for the 2012 AQMP. Numerous recurring comment letters were received, and for ease of identification requested by several commentors, each individual letter is responded to separately, although repetitive. There is one exception. Staff received about 38 letters, all addressing VOC reduction strategies, almost identical in content. These letters are grouped together with one letter as the boiler plate, and the remaining letters referencing the answers in the boiler plate letter. The Letter SS from the Consumer Specialty Products Association (CSPA) is the boiler plate for this group and the 37 letters following after are the similar cases.



## AQMP Response to Comments

### A. Association of CA Cities Orange County (ACCOC), July 25, 2012



600 South Main Street, #940, Orange, CA 92868 | P: 714.953.1300 | F: 714.953.1302 | www.ACCOC.org  
July 25, 2012

Dr. Barry Wallerstein  
Executive Officer  
South Coast Air Quality Management District  
21865 Copley Dr.  
Diamond Bar CA 91765

**RE: ACC-OC Comments to the Draft Air Quality Management Plan**

Dear Dr. Wallerstein,

Thank you for the opportunity to comment on the South Coast Air Quality Management District's (AQMD) 2012 Draft Air Quality Management Plan (AQMP). As the largest municipal education and advocacy organization in Orange County, the Association of California Cities – Orange County (ACC-OC) is proud of its efforts to protect and restore local control on behalf of all 34 cities. Thus, we are grateful for the opportunity to review this important regional policy document to ensure local governments are able to continue to represent their taxpayers to most effective way possible.

The ACC-OC appreciates the mission of AQMD to protect the health and well-being of Southern California residents. Clean air is a vital part of Orange County's quality of life and we respect the importance as well as the complexities of your efforts.

However, the ACC-OC has several questions and concerns regarding the draft AQMP and its control measures as it concerns to potential impacts to local governments. Therefore, I have included the following chart outlining the specific Control Measures and the ACC-OC's suggested revisions or actions AQMD should take in order to balance the overall objectives of the AQMP and fiscal health of local governments.

As AQMD continues its AQMP process, we would appreciate responses to these issues and requests included below.

Measure #	Description	ACC-OC Concern & Recommendation
BCM-01	Emission reduction from <b>under-fired charbroilers</b> ; seeks to require that restaurants install new devices to reduce emissions from their charbroilers.	Restaurants are an important part of the Orange County economy and provide significant sales tax revenue to local cities. This mandate would discourage the development of new restaurants in the region, thereby reducing potential revenue sources for cities. Moreover, this measure is

A-1

		<p>untested and AQMD's own report states that "Emissions reductions specific to this control measure are unknown at this time."</p> <p><i>AQMD should have an economic impact analysis and a clearer picture of what this measure would improve air quality prior to its adoption.</i></p>	
<b>CMB-03</b>	This control measure seeks emission reductions from unregulated <b>commercial fan-type central furnaces</b> used for space heating.	<p>Local governments operate large facilities across Orange County, many of which are heated by the commercial units targeted by this measure. These units are not currently regulated by AQMD and this measure threatens to require cities replace costly units in order to meet this expansion of regulation.</p> <p><i>AQMD should conduct an economic impact analysis on how this measure would affect cities and other stakeholders prior to its expansion of regulatory authority.</i></p>	A-2
<b>FUG-01</b>	This control measure seeks reductions from <b>vacuum trucks</b> through the use of control devices and technologies, including carbon adsorption systems, positive displacement pumps, internal combustion engines, thermal oxidizers, refrigerated condensers and liquid scrubbers.	<p>Cities, especially those with their own utilities, own, operate and maintain between one and three vacuum trucks. Annual maintenance costs average approximately \$15,000 per truck. These trucks are essential elements to secure and sanitary public works. Expanded regulation of these trucks would be financially damaging to both cities and special districts. FUG-01 would significantly increase this burden, yet yield minimal (if any) benefits towards AQMD's overall goals.</p> <p><i>In its proposed regulations, AQMD does not identify municipalities as impacted parties to FUG-01. The ACC-OC requests that AQMD exempt local governments, including cities, special districts, county governments, and others from this measure due to their limited contributions to fugitive emissions and the disproportionate financial impact that would result from FUG-01.</i></p>	A-3
<b>ICE 01-02 and EDU-01</b>	These measures outline incentive programs and <b>education and outreach</b> efforts to facilitate the implementation of all control measures.	<p>Too often, the implementation of incentive and education programs falls to cities. These cost valuable time and monetary resources that are not currently available at the city level. It appears as if cities will have a level of responsibility for implementation based on the Measure EDU-01, which states that "The implementing agency will</p>	A-4

		<p>be the District, in cooperation with other local governments, agencies, technology manufacturers and distributors, and utility service providers.”</p>
		<p><i>AQMD, in its final AQMP, should state how it expects local governments to assist in the implementation of these programs as well as the resources provided and costs expected to be borne by cities.</i></p>

Cities and local governments are a leading source of innovation with regards to emissions reductions. Broadly, numerous municipalities have gone to fleet management services, drastically reducing the amount of vehicles miles traveled. In addition, many have are transitioning from gas-thirsty trucks to hybrid or natural gas vehicles and implementing forward-thinking air quality measures, like anti-idling policies and diesel particulate filters. These proactive, voluntary measures should be rewarded rather than discouraged through the expansion of regulations that would unintentionally harm local governments.

A-5

Again, we appreciate the opportunity to review and comment on this early draft. We look forward to your response on these requests, **especially Control Measure FUG-01**, as it will have the most immediate impact on local governments.

Please do not hesitate to reach me at (714) 953-1300 or [lkelly@accoc.org](mailto:lkelly@accoc.org) should you need further clarification.

Sincerely,



Lacy Kelly  
 Chief Executive Officer  
 Association of California Cities – Orange County

cc:  
 Supervisor Shawn Nelson, 4<sup>th</sup> District  
 Mayor Miguel Pulido, City of Santa Ana  
 ACC-OC Board of Directors

**Responses to Comment Letter A**  
**ACCOC**

**Response to Comment A-1:**

AQMD staff will consider any concerns regarding the economic impact associated with implementing emission controls at restaurants, particularly existing small businesses. However, under-fired charbroiling is still one of a few, large unregulated sources of air pollution. Prior rule development efforts have been put on hold due to affordability issues (capital, installation, and annual operating), which is why the AQMD is conducting testing at UCR-CCERT. The goal of the testing is to identify technologically feasible, cost-effective, and affordable emission controls. It is worth noting that the Bay Area AQMD already has a rule in place that establishes requirements for under-fired charbroilers and the AQMD is one of many air pollution control agencies currently looking at control programs for this source category. If technologically feasible and affordable emission controls have been identified, and additional emissions reductions are needed for attainment of ambient standards, then rule development process will begin, which will include a full environmental and socioeconomic analyses.

**Response to Comment A-2:**

A socioeconomic analysis has been conducted as part of this AQMP. Broad in scope, the analysis encompasses the economic impact of all proposed control measures. As required by state law, AQMD staff will also prepare a socioeconomic assessment and a cost-effectiveness analysis as part of this measure's rulemaking process. This proposed measure will not require local governments to replace their forced air-heating units. Instead, the proposed measure will require manufacturers to produce a lower emission product at some date in the future and will require sales outlets to sell only compliant units to customers after that date. After that date, at the time of replacement, local governments can purchase low emission compliant furnaces. In addition, this proposed measure is not an expansion of AQMD authority. The AQMD currently has the authority to regulate these units just as it currently regulates smaller residential units and larger units with heat input of 2 million Btu/hour or greater.

**Response to Comment A-3:**

Although FUG-01 does not exempt local governments, including cities, special districts, county governments, and others from this measure, the District does not expect the control measure to have a significant financial impact on them. This control measure is based on Bay Area AQMD Regulation 8, Rule 53: Vacuum Trucks Operations, which is limited to emissions of organic compounds from the use of vacuum trucks to move materials that are typically handled at petroleum refineries, bulk plants, bulk terminals, marine terminals, and organic liquid pipeline facilities. Because

local governments, cities, special districts, county governments primarily use vacuum trucks to remove trash from parking lots, clean out sewers and water mains for maintenance work, and remove waste from septic tanks and portable toilets, the AQMD will carefully consider whether to include them in the rule's scope. The Bay Area AQMD regulation does provide an exemption for emergencies that would be applicable to both private and public agencies under defined circumstances (e.g., a petroleum product spill) where the delay in acquiring and using equipment to comply with the rule would result in a risk of significant harm to facility equipment, personnel, the public, or the environment. District staff expects to include similar provisions in any rulemaking efforts. Any other use of vacuum trucks that would otherwise be subject to the proposed control measure would be assessed during the rulemaking process with appropriate stakeholder input, along with an evaluation of cost impacts and effectiveness to determine the form of the control requirements. Finally, the rule would be subject to socioeconomic impact analysis if it results in a significant impact on air quality or emissions limitations.

**Response to Comment A-4:**

The ICE-01, ICE-02 and EDU-01 measures do not propose to require cities to participate in incentive program funding. Incentive programs are generally voluntary and implemented by the District. However, AQMD hopes to partner with local governments where appropriate to enhance and outreach and education efforts.

**Response to Comment A-5:**

AQMD staff agrees that cities and local governments can be a leading source of transportation innovation that has reduced vehicle miles travelled through ridesharing and other fleet management services. Local governments have implemented fleets with alternative technology vehicles and clean fuels that help with air pollution and fuel costs. There are no proposed measures that would discourage such activities or add additional regulatory requirements on local governments. The AQMD will continue to be a significant supporter of these transportation changes in local government fleets and operations through incentive programs, grant funding, and providing technical assistance.

**B. U.S. EPA, August 30, 2012**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

AUG 30 2012

Elaine Chang, Dr.PH  
Deputy Executive Officer  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, California 91765

Dear Dr. Chang,

The U.S. Environmental Protection Agency (EPA) appreciates the opportunity to review the draft 2012 South Coast Air Quality Management District's (District's) Air Quality Management Plan (draft 2012 AQMP), which addresses the planning requirements for the 2006 fine particulate (PM<sub>2.5</sub>) National Ambient Air Quality Standards (NAAQS). Thank you for continuing to work with EPA, the California Air Resources Board (ARB), the Southern California Association of Governments (SCAG) and all stakeholders to ensure that the Plan provides for expeditious attainment of the 35 µg/m<sup>3</sup> 24-hour PM<sub>2.5</sub> standard in the South Coast. The draft 2012 AQMP reflects an extensive effort from you and your staff, and we understand that additional work at the District and ARB is underway. Here are our preliminary comments on the plan.

**Emission Inventories**

Documentation of the Baseline Emissions Inventory

Baseline emissions inventories are the projected future inventories that incorporate reductions from baseline control measures; that is, measures adopted prior to a plan's development that continue to provide additional reductions between the base year and the attainment year.

Preliminary results of the air quality modeling as presented in Chapter 5 and Appendix V of the draft 2012 AQMP show that baseline measures are expected to provide for attainment of the 35 µg/m<sup>3</sup> standard by 2014 in most of the South Coast air basin. Given the importance of an accurate understanding of these baseline measures for attainment planning purposes, we recommend that the plan identify the specific measures that are providing the baseline reductions and the emissions reductions associated with each measure. The AQMP should highlight the baseline measures with compliance dates during the period that the Plan covers. We note that while the draft AQMP already describes the measures that have been adopted to regulate sources in the South Coast, the final AQMP should also identify the measures for which emissions reductions are included in the baseline inventories.

B-1

Rule Effectiveness

EPA recommends that states consider “rule effectiveness” as part of the calculation of emissions estimates for stationary point and non-point (or “area”) sources when developing base year and projection year emissions inventories.<sup>1</sup> Adjustments for rule effectiveness (RE) are appropriate for emissions estimates that involve the use of a control device or control technique (*i.e.*, where the estimates are contingent on the effectiveness of controls), but not where emissions can be calculated by means of a direct determination (*e.g.*, direct emission measurements or explicit records of types and amounts of solvents used) or for uncontrolled emission sources.<sup>2</sup> Accordingly, we recommend that the District develop its base year and projection year emission inventories using appropriate RE adjustments for the stationary and area source emissions estimates that are contingent on the effectiveness of controls. We also recommend that the District include, in its SIP emission inventory submissions, specific documentation of any RE adjustments applied to the emissions calculations, and the basis for the identified adjustments, consistent with EPA guidance. Use of the highest RE range (86 to 100%) in developing emissions estimates may be appropriate where the SIP contains adequate documentation of high compliance rates in the regulated industry and rigorous enforcement/compliance programs, such as source-specific monitoring, submittal of monitoring records, inspections, and compliance assistance programs.<sup>3</sup>

B-2

**Requirements for Reasonably Available Control Measures Demonstration**

The Draft 2012 AQMP should provide for implementation of all reasonably available control measures (RACM) for existing sources as required by Clean Air Act (CAA) section 172(c)(1). RACM are those economically and technologically feasible measures that are necessary to provide for attainment as expeditiously as practicable or to demonstrate reasonable further progress. See 40 CFR section 51.1010; see also 70 FR 71612 at 71661 (November 29, 2005). As part of the RACM demonstration, the AQMP should include a list of the potential measures considered by the State, District, and SCAG and analysis sufficient to show that all RACM, including reasonably available control technologies (RACT), have been adopted and are being implemented expeditiously. See 40 CFR section 51.1010(a). Potential measures that are reasonably available considering economic and technological feasibility must be adopted as RACM if, considered individually or collectively, they would advance attainment in the area by one year or more. See 40 CFR section 51.1010(b). Please work with ARB and SCAG to identify any potential RACM that are not adopted and to quantify potential emission reductions from

B-3

<sup>1</sup> “Rule effectiveness” is a term that describes a method to account for the reality that not all facilities covered by a rule are in compliance with the rule 100% of the time. See “Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations,” EPA-454/R-05-001, August 2005 (Appendix B), at B-3.

<sup>2</sup> “Rule Effectiveness Guidance: Integration of Inventory, Compliance, and Assessment Applications,” EPA 452/R-94-001, January 1994.

<sup>3</sup> See “Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations,” EPA-454/R-05-001, August 2005 (Appendix B).

these measures. As part of this analysis, the plan should estimate the additional emission reductions needed to advance attainment by one year.

B-3

**Documentation of Interpollutant Trading Ratios**

If the final AQMP will include provisions that rely on trading between PM<sub>2.5</sub> and its precursors to meet CAA requirements (e.g., a trading mechanism for transportation conformity), the AQMP should document the methods used to derive equivalency ratios. This documentation should include rationales explaining why the methods are reasonable for the specific requirement. The methods should be based on the photochemical modeling used in the attainment demonstration and should account for the variability of pollutant and precursor relationships across the air basin. Note that under the transportation conformity rule, interpollutant trading for PM<sub>2.5</sub> and its precursors is allowed only upon EPA approval of a specific trading hierarchy and ratio(s) as part of the PM<sub>2.5</sub> attainment plan for the area.<sup>4</sup>

B-4

**Contingency Measures**

Section 172(c)(9) of the CAA requires that SIPs for PM<sub>2.5</sub> nonattainment areas provide for the implementation of specific contingency measures to be implemented if the area fails to make reasonable further progress or to attain the NAAQS by the applicable attainment date. Under long-standing EPA policy, these contingency measures should, at minimum, ensure that an appropriate level of *emissions reduction progress* continues to be made if attainment or RFP are not achieved and additional planning by the State is needed.<sup>5</sup> Accordingly, the PM<sub>2.5</sub> plan should identify the specific amounts of emission reductions (generally expressed in tonnages) associated with each adopted contingency measure, together with the District's rationale for how these adopted measures ensure an appropriate level of emissions reduction progress if attainment or RFP are not achieved.

B-5

**Update on Implementation of the 2007 AQMP for 8-Hour Ozone**

We fully support the District's inclusion in the 2012 AQMP of updates on the implementation of control measures and emission reduction commitments relied upon in the South Coast 2007 AQMP to demonstrate expeditious attainment of the 1997 8-hour ozone NAAQS. We urge the District to continue working closely with EPA staff to identify the specific near-term and long-term control measures that will fulfill the NO<sub>x</sub> and VOC emission reduction commitments contained in the SIP-approved South Coast 2007 8-hour ozone plan, and to develop appropriate methodologies for calculating the emission reductions attributed to each such measure.

B-6

<sup>4</sup> See 40 CFR 93.124(b).

<sup>5</sup> See "State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," 57 FR 13498, 13511; see also "Clean Air Fine Particle Implementation Rule," 72 FR 20586, 20643 (April 25, 2007) (contingency measures should represent a portion of the actual *emissions reductions* necessary to bring about attainment in the area) and Memorandum dated March 2, 2012 from Stephen D. Page, Director, Office of Air Quality Planning and Standards, to EPA Regional Air Directors, "Implementation Guidance for the 2006 24-Hour Fine Particle (PM<sub>2.5</sub>) National Ambient Air Quality Standards (NAAQS)" (plan may show that the cumulative effect of the *emission reductions* to be achieved by adopted contingency measures would result in specified reductions in ambient pollutant levels).



**Comments on Specific Measures and Rules**

**BCM-01 Further Reductions from Residential Wood Burning Devices**

Page 4-10 of the draft 2012 AQMP describes a new basin-wide curtailment provision that would apply "...whenever a PM<sub>2.5</sub> level of greater than 30 µg/m<sup>3</sup> is forecasted at any monitoring station at which the design value has exceeded the current PM<sub>2.5</sub> 24-hour standard of 35 µg/m<sup>3</sup> for either of the two previous periods."

We support the District's efforts to address upwind/basin-wide PM<sub>2.5</sub> emissions. In the draft AQMP, it is unclear how the criteria will be applied. The PM<sub>2.5</sub> design value is the 3-year average of annual 98th percentile of 24-hour average values. Please clarify how the new curtailment criteria will be calculated, for example:

- "...whenever a PM<sub>2.5</sub> level of greater than 30 µg/m<sup>3</sup> is forecast at any monitoring station that exceeded the current PM<sub>2.5</sub> 24-hour standard of 35 µg/m<sup>3</sup> at least once during the previous 2 years."
- "...whenever a PM<sub>2.5</sub> level of greater than 30 µg/m<sup>3</sup> is forecast at any monitoring station that recorded violations of the current PM<sub>2.5</sub> 24-hour standard of 35 µg/m<sup>3</sup> at least once during the previous 2 design value periods."

Also, please clarify whether the curtailment criteria will apply for the entire curtailment season.

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is considering lowering the residential wood burning curtailment threshold to below 30 µg/m<sup>3</sup> (SJV PM<sub>2.5</sub> Plan, Appendix D, June 27, 2012 draft). We recommend the District consider whether a lower threshold is appropriate in the South Coast air basin given model forecast ability and/or PM<sub>2.5</sub> reduction needs.

Additionally, the District should consider adding a provision to require removal of non-certified wood stoves upon property resale. This is a common provision in nonattainment areas around the country (e.g., Washoe County Rule 040-151, Section D-3, Placer County APCD Rule 225, Section 303, San Joaquin Valley APCD Rule 4901, Section 5.2, Great Basin Unified APCD Rule 431, Section E, and Oregon Department of Environmental Quality Division 262 (340-262-0700).

**BCM-02 Further Reductions from Open Burning**

Page 4-10 proposes to ban agricultural burning on days when residential wood burning is banned basin-wide. We recommend the District also consider banning agricultural burning by sub-region on sub-regional curtailment days to more fully align the two programs. Additionally, we recommend the District consider whether a ban on burning specific agricultural crops, which have economically and technologically feasible alternatives to burning, is reasonable, as is done in SJVAPCD Rule 4103.

B-7

B-8


**BCM-03 Emission Reductions from Under-Fired Charbroilers**

We support the District's work to establish cost-effective controls in this area and recommend continued collaboration with EPA and the Bay Area and San Joaquin Valley air districts during this process. If there are areas where EPA can be of help, please contact Rynda Kay at (415) 947-4118 or [kay.rynda@epa.gov](mailto:kay.rynda@epa.gov).

Thank you for the opportunity to review and comment on the South Coast Draft 2012 AQMP. We look forward to working with you as the plan is finalized. If you have any questions or concerns, please call me at 415-972-3183.

B-9

Sincerely,



Elizabeth J. Adams  
Deputy Director, Air Division

**Responses to Comment Letter B**  
**U.S. EPA**

**Response to Comment B-1:**

Appendix III to the 2012 AQMP provides the base year and future years emission inventory that considers the effects of growth and of adopted regulations that have later implementation years. Thus, the reductions from past rules with later compliance dates are included in the baseline emissions inventory. However, in order to be more specific as per the comment, a new Table III 2-2B has been added to list the emissions reductions (for both 2014 and 2023) by District rules with Post-2008 compliance dates.

**Response to Comment B-2:**

As discussed in Chapter 3, the emission inventories are based on activity information, and emission factors from either EPA or facilities' annual emissions report, and rule requirements or source test. As noted in Appendix IV-A, the District followed the EPA's guidance on rule effectiveness. As such, the quantification of emission reductions in the baseline inventory reflects future reductions considering rule compliance rates and control effectiveness. For example, reductions in VOC emissions from the required reformulation of architectural coatings are a direct determination, and thus the District used 100 percent effectiveness. Other rules require control devices or compliance rates (e.g, Rules 461) that can achieve a certain percent reduction. This percent reduction achieved was considered in generating the emission inventory. Documentation in establishing the emission inventory can be found in Appendix III.

**Response to Comment B-3:**

The Draft 2012 AQMP provides for the implementation of all RACMs as expeditiously as practicable. The comprehensive six-step approach for RACM (including RACT for stationary sources) demonstration in this AQMP is essentially identical to that in the 2007 AQMP, and the current list of control measures is built upon those stated in the 2007 AQMP. It should be noted that the RACM demonstrations and the PM<sub>2.5</sub> control measures in the 2007 AQMP were approved by EPA on November 9, 2011 (76 FR 69928). The robust demonstrations conducted by the District, CARB and SCAG for RACMs (Appendix VI and its attachment and Appendix IV-C) show that the three agencies have diligently analyzed all possible control measures available at this time, specifically considered the most stringent rules and regulations nationwide for opportunities for further emissions control. With many of the most stringent regulations in the nation already implemented in the District, opportunities for implementing further control are limited. The modeling analysis in Chapter 5 suggests that the region can meet the 24-hour PM<sub>2.5</sub> standard by 2014 (within 5 years of the designation date) by implementing the short-term episodic PM<sub>2.5</sub> measures listed in Table 4-2. As such, the District will not request an extension beyond 2014. The District has not identified any additional measures that could individually or

collectively be implemented to achieve the PM<sub>2.5</sub> standards earlier than 2014. The District is always open to suggestions and recommends that the commenter as well as the public provide detailed information on any potential measures that may individually or collectively advance the attainment date.

**Response to Comment B-4:**

The Draft Final 2012 AQMP provides a detailed description of the methodology used to determine the proposed Basin trading ratios (Appendix V, Attachment 8). The use of the trading ratios represents the impacts of regional precursor emissions reductions on the attainment of the NAAQS. Briefly, the ratios have been developed from the 24-hr PM<sub>2.5</sub> attainment demonstration. Projected reductions in the four basic components of particulates and their relative contributions to ambient 24-hour PM<sub>2.5</sub> levels were determined from CMAQ regional modeling. The procedure related SO<sub>x</sub> and NO<sub>x</sub> emissions reductions to corresponding reductions in ammonium sulfate and ammonium nitrate including the contribution of bonded water. Reductions of VOC emissions and directly emitted PM<sub>2.5</sub> were used to determine the ratios for organic carbon and the primary particulate component categories including EC. This methodology has been presented in the 2007 AQMP where trading ratios were specifically developed for the annual PM<sub>2.5</sub> attainment demonstration. The methodology was incorporated in the 2007 AQMP and was approved by U.S. EPA as part of that plan. The District requests EPA to approve the interpollutant trading ratios for use in transportation conformity and SIP emission reduction commitments. Staff has previously worked with U.S. EPA to help refine potential policy on emissions trading and the establishment of regionally determined trading ratios.

**Response to Comment B-5:**

The contingency measure discussion in Chapter 6 was expanded to include specific emissions reductions for each control measure relied on for contingency purposes. Table 6-2 in the Revised Draft shows the emissions reductions from each measure and the corresponding NO<sub>x</sub> equivalent reductions.

**Response to Comment B-6:**

The District appreciates the support from US EPA for the inclusion of control measures and emission reduction commitments relied upon in the 2007 AQMP to demonstrate expeditious progress towards attainment of the 1997 8-hour ozone NAAQS.

**Response to Comment B-7:**

The design value is the 3-year average of the annual 98th percentile of the 24-hour average values of monitored data ambient PM<sub>2.5</sub> data. The suggested alternative language implies a curtailment would be called if a violation of the standard occurs “at least once during the previous two years”; however, that one violation may be excluded

under the 98th percentile. Staff has clarified in the control measure that a curtailment would apply Basin-wide whenever a PM<sub>2.5</sub> level of greater than 30 µg/m<sup>3</sup> is forecast at any monitoring station at which the design value for either of the two previous 3-year periods exceed the current PM<sub>2.5</sub> 24-hour standard of 35 µg/m<sup>3</sup>.

The referenced San Joaquin Valley APCD proposed control measure includes consideration of lowering the curtailment threshold to 20 µg/m<sup>3</sup> in the event the area fails to attain the current PM<sub>2.5</sub> 24-hour standard of 35 µg/m<sup>3</sup>. The AQMD's control measure already proposes lowering the curtailment to 30 µg/m<sup>3</sup> to address forecast uncertainties. Note that lowering the threshold does not lead to additional daily emissions reductions, other than potential carryover from previous days. The San Joaquin Valley has significantly more carryover of PM<sub>2.5</sub> from day to day than the South Coast Basin. However, staff is considering longer term forecasts and curtailment periods that last multiple days to address any potential carryover influences. The expansion of the wintertime curtailment period to include October and/or March is also being considered.

As to the removal or replacement of a non-certified wood stove during property sale or transfer, this was considered during the development of Rule 445. Staff will revisit the issue as part of current incentive programs, but as the 2014 attainment date is fast approaching and given the rate of property transfers, adding the requirement to the rule would not have an appreciable effect by 2014.

#### **Response to Comment B-8:**

AQMD staff concurs that additional emissions reductions can be achieved with the alignment of the Rule 444 – Open Burning and Rule 445 – Wood-Burning Devices control programs. With respect to sub regional forecasts, Rule 444 currently includes a definition for source/receptor areas, which correspond to the same forecast areas under Rule 445. Under the provisions of existing Rule 444, the Executive Officer is authorized to restrict all burning activities by source/receptor areas if the air quality is forecasted to be unhealthy for sensitive persons (AQI 100). This corresponds with the existing Rule 445 curtailment threshold of 35 µg/m<sup>3</sup>. AQMD staff concurs and proposes to match the Basin-wide and regional curtailment criteria in Rules 444 and 445 to the extent possible while still being consistent with State law.

Regarding the suggestion to prohibit the burning of specific agricultural crops where there are alternatives that are technically and economically feasible, staff intends to require economically and technologically feasible alternatives to burning where possible.

**Response to Comment B-9:**

Staff appreciates the support and has been in contact with all the noted agencies as the District continues its efforts to seek affordable and technologically feasible controls for under-fired charbroilers. Control device testing at University of California Riverside, College of Engineering-Center for Environmental Research and Technology (CE-CERT) is ongoing with the participation of the agencies listed and U.S. EPA.

C. Southern California Business Coalition, May 15, 2012



May 15, 2012

Dr. William A. Burke, Chairman  
Members of the SCAQMD Governing Board  
South Coast Air Quality Management District  
21865 Copley Dr.  
Diamond Bar, CA 91765

Dear Chairman Burke and Governing Board Members:

As AQMD staff continues development of the 2012 Air Quality Management Plan, our coalition made up of the leaders of some of California's largest regional business entities and associations, wants to convey to you our recognition of the challenges and difficulties inherent in this process, and express our continued support for a well-balanced strategy that addresses federal requirements as well as economically feasible compliance approaches.

Through the AQMP Advisory Group, many of us have seen SCAQMD staff presentations on issues related to emissions inventories and modeling, but little discussion or information has been presented to date related to specific control measures or socioeconomic impacts under consideration for this AQMP. Since this last issue is one that the Board has weighed in on

C-1

numerous times on other rules and policies, we feel compelled to offer our assistance to help direct the drafting of the AQMP so that it complies with the Board's stated preferences regarding independent economic analyses of proposed policies, regulations and rules.

Through direction from the SCAQMD Governing Board, state legislation and recommendations of the Little Hoover Commission, common practice now calls for the development of an economic impact analysis prior to implementation of new regulations and the review of the economic impacts of certain current regulations.

While we would not presume to dictate one solution that would work for every political opinion, we do have recommendations based on our combined business sense and practical experience. In particular, there are two key areas in which we have broad agreement.

First, given the persistent economic recession in which we all find ourselves, we urge the SCAQMD Governing Board to exercise reasonable moderation when fashioning the AQMP. Specifically, now – more than ever – is the time to rely only on economical and proven technologies and strategies in this current AQMP and allow subsequent plans to focus on future, as-yet-developed technologies to provide substantial air quality improvements once our economy recovers.

Second, we support the principles of the Little Hoover Commission that call for using a standard set of economic analytic tools, "calibrated to the scope of the proposed regulation – to determine which alternative both meets the stated goal of the regulation and produces the desired social benefits, while avoiding unnecessary costs to regulated parties and society."<sup>1</sup>

As part of the socioeconomic impacts, we strongly urge SCAQMD to contract with a truly independent party to analyze certain factors related to the proposed AQMP. Please consider drawing upon the considerable expertise from within the entities represented in this letter to help develop the statement of work for that independent party. Following are the factors that should be analyzed:

**1. Cost Effectiveness Analysis (CEA)**

This process offers a framework for identifying the most cost-effective and financially efficient policy choice. CEA examines various policy options for obtaining a desired result, and creates a ratio of cost to an effectiveness measure (e.g., tons of emissions eliminated). The CEA should also be done for each control measure, as well as the overall AQMP.

We recognize that the District always estimates cost-effectiveness for new or amended rules, and attempts - whenever possible - to do so for proposed AQMP control measures. Our concerns, however, are with the facts that ever increasing, higher values for cost-effectiveness are routinely deemed acceptable, and that the actual values for cost-effectiveness continue to be calculated in a manner that underestimates the true costs.

We note that, in extreme contrast to the \$10,000 per ton cost-effectiveness upper bound set by President Clinton in 1994, or to historical benchmarks established by the District at \$13,000 per ton, values as high as \$65,000 per ton of emissions reduced have been referenced by SCAQMD senior staff as "acceptable" when discussing recent rules.

C-1

C-2

C-3

C-4

<sup>1</sup> Cover letter to the Governor and Legislature, Little Hoover Commission, "Better Regulation: Improving California's Rulemaking Process", 10-25-11



There has been no discussion in the AQMP stakeholder meetings to suggest that these spiraling values will be contained. Thus, there is the perception within the business community, which we represent, that the District lacks sufficient concern about the very real, and very significant, cost impacts of its regulatory programs.

Compounding the problem of ever-increasing levels of cost-effectiveness that are considered acceptable by the Board is that fact that the District's method of calculating cost-effectiveness produces "low-ball" values that do not reflect the true cost-effectiveness. Specifically, the District uses a Discounted Cash Flow (DCF) method, whereas virtually all other regulatory agencies (e.g., US EPA, all of the Cal/EPA agencies, the BAAQMD, etc.) use the Levelized Cash Flow (LCF) method. Although the District is required, per the Health and Safety Code, to estimate the true cost-effectiveness of its proposed rules for both decision makers and stakeholders, the DCF method underestimates the values for cost-effectiveness. This has the effect of making proposed rules seem more "attractive" than they really are. Further, the District's use of the DCF methodology means that the cost-effectiveness of its rules cannot be compared to those of other agencies' rules, and vice versa.

The District has, in the past, been made aware of the inadequacies of the DCF method. Although the problem - and the concerns of the regulated community - had apparently been given some consideration, as a practical matter the problem continues. In addition to establishing a clear and definitive policy regarding an upper bound on cost-effectiveness, the actual values for cost-effectiveness need to be calculated in a manner (i.e., LCF) that accurately reflects the true costs.

**2. Cost Benefit PLUS Opportunity Costs Analysis**

This tool attempts to examine the costs and benefits of policies and identifies the alternative that yields the largest net benefits for society.

**3. Comprehensive Analysis of Higher Cost Regulation**

The economic impact of the AQMP and its associated control measures is also relevant to the residents of this region in terms of their overall quality of life and jobs. The region's continued economic recovery must be a key component of policy makers' decision-making in the AQMP, as should the affordability of proposed regulations.

The AQMP should not be so focused on any one result without taking into consideration the broader context, or unintended consequences, of the solution it seeks. Undervaluing the fragile nature of our economy will place the region at a competitive disadvantage and potentially impact the affordable production and delivery of goods and services.

Finally, in order to produce a document that can be supported by both the regulated and non-regulated communities, the process must be fair, transparent and accountable. With that in mind, SCAQMD staff should also provide clarity and transparency with regard to benchmarking for future considerations.

We can't stress enough the need for credible independent evaluation of the data. In fact, this is the same direction given by the Board in relation to Rule 1110.2, Rule 1147, and the Energy Policy adopted by the Board last year.

We are not requesting *less* regulation when it comes to the AQMP, but rather *better* regulation. On a larger scale, even the state's economy will benefit from better, more effective regulation and reduced uncertainty.

C-4

C-5

C-6

C-7

The regulated community appreciates the public process thus far, and believes that as the development of the AQMP moves forward, increased collaboration is needed between the SCAQMD and relevant stakeholders to create a better consensus on how to reduce the region's emissions as required under existing law, while simultaneously improving the region's economy. To this end, and in keeping with your February 3, 2012 comments on the importance of outreach to stakeholders, we respectfully request a meeting with you, and the Executive Officer, to discuss how our recommendations might be incorporated into the current development and outreach schedule for the 2012 AQMP.

C-8

To follow up on this request, Tracy Rafter, CEO of BizFed ([tracy.rafter@bizfed.org](mailto:tracy.rafter@bizfed.org)) or Kate Klimow, Vice President of Government Affairs for Orange County Business Council ([kklimow@ocbc.org](mailto:kklimow@ocbc.org)) will contact your office to schedule a meeting.

Sincerely,

Southern California Business Coalition - AQMP Stakeholders Working Group

Comprised of members of the following associations:



Tracy Rafter  
BizFed, Los Angeles County Business Federation



Kate Klimow  
Orange County Business Council



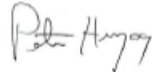
Bill LaMarr  
California Small Business Alliance



Clayton Miller  
Construction Industry Air Quality Coalition



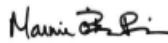
Gary Toebben  
Los Angeles Chamber of Commerce



Peter Herzog  
NAIOP SoCal Chapter



Rob Evans  
NAIOP Inland Empire Chapter



Marine Primmer  
Mobility 21



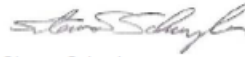
Jim Clarke  
Apartment Association of Greater Los Angeles



Cynthia Kurtz  
San Gabriel Valley Economic Partnership



Rich Lambros  
Southern California Leadership Council



Steven Schuyler  
BIA of Southern California, Inc.



Joeann Valle  
Harbor City/Harbor Gateway Chamber of Commerce



Patty Senecal  
Western States Petroleum Association



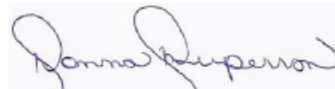
Michael D. Shaw  
California Trucking Association



Stuart Waldman  
Valley Industry & Commerce Association



David W. Fleming  
Los Angeles County Business Federation



Donna Duperron  
Torrance Area Chamber of Commerce



Fred Johring  
Harbor Trucking Association



Paul C. Granillo  
Inland Empire Economic Partnership

CC: Dr. Barry Wallerstein, Executive Officer

**Responses to Comment Letter C**  
**SCBC**

**Response to Comment C-1:**

Staff has released cost and cost-effectiveness data for the AQMP control measures ([http://www.aqmd.gov/gb\\_comit/aqmpadvgrp/2012AQMP/meetings/2012/july26/CostSummary.pdf](http://www.aqmd.gov/gb_comit/aqmpadvgrp/2012AQMP/meetings/2012/july26/CostSummary.pdf))

[http://www.aqmd.gov/gb\\_comit/aqmpadvgrp/2012AQMP/meetings/2012/july26/DetailCost.xls](http://www.aqmd.gov/gb_comit/aqmpadvgrp/2012AQMP/meetings/2012/july26/DetailCost.xls)). The full socioeconomic analysis was released in late September which can be found at: <http://www.aqmd.gov/aqmp/2012aqmp/DraftSocioeconomicReport.pdf>.

The analysis includes discussions on the distribution of costs and benefits to 21 sub-regions within the AQMD and presents the resulting regional employment and competitiveness impacts.

**Response to Comment C-2:**

The standard set of tools called for in the Little Hoover Commission report (October 2011) has not been developed to date. The District's socioeconomic analysis of the Draft 2012 AQMP includes detailed costs of individual control measures and benefits of meeting the federal PM2.5 standard (health, visibility, material, and congestion relief). The benefits analysis is based on peer-reviewed research. Additionally, Regional Economic Models, Inc. (REMI), that has been used by consultants, public agencies and academicians, is used to assess the ripple effects of costs and benefits of clean air on the local economy. The District's analysis, in many instances, has exceeded the scope and depth of similar analyses performed by other entities.

**Response to Comment C-3:**

Experts hired and invited to assist in the AQMP socioeconomic analysis are well established professionally in their respective fields. The list of experts include: Dr. Leland Deck, Ph.D. of Stratus Consulting Inc., Professor J. R. DeShazo of UCLA, Professor Gloria Gonzalez-Rivera of UC Riverside, Professor Lisa Grobar of California State University, Long Beach, Professor Emeritus Jane Hall of California State University, Fullerton, Stephen Levy of CCSCE, Professor Paul Ong of UCLA, Professor Karen Polenske of MIT, Dr. Gang Shao, Ph.D. of MarcoSys, LLC, and Dr. Fred Treyz, CEO of REMI. Additionally, the AQMD's Scientific, Technical and Modeling Peer Review Advisory Group (STMPRAG) is composed of leading experts in the socioeconomic and air quality modeling fields, representatives from the regulated community, and participants from public interest groups. The list of STMPRAG members can be found at:

[http://www.aqmd.gov/gb\\_comit/stmpradvgrp/2012stmprpadvgrpmembership.html](http://www.aqmd.gov/gb_comit/stmpradvgrp/2012stmprpadvgrpmembership.html).

The District carefully considers the comments of the advisory groups and incorporates them when appropriate.

**Response to Comment C-4:**

Cost-effectiveness analysis, whether LCF and DCF, provides a relative ranking of regulatory alternatives. The DCF method, because it relies on the present value of all costs associated with a given proposal, allows for the analysis of complex cash flow patterns that cannot be analyzed with the LCF method. As such, under the same assumptions (e.g., interest rate and project life), LCF and DCF are mathematically equivalent. They merely show two different approaches to presenting a stream of costs occurring over a period of time.

**Response to Comment C-5:**

The clean air benefit analysis is based on the opportunity cost concept where the price of a non-market commodity is deduced from goods and services sold in a market system. The socioeconomic analysis of the 2012 AQMP uses these deduced non-market values (i.e., opportunity costs) to estimate the regional economic impacts of health, visibility, material, and congestion. This is a standard approach in the economics profession. Please see response to Comment C-1 regarding cost analysis performed under this concept.

**Response to Comment C-6:**

The socioeconomic analysis of the all measures proposed in the Draft AQMP was released in late September. Costs associated with individual measures have been released (see response to Comment C-1). A more detailed and comprehensive analysis of the socioeconomic impacts of each measure occurs during the rule making process.

**Response to Comment C-7:**

Please refer to Comment C-1.

**Response to Comment C-8:**

Please contact Dr. Phil Fine at 909-396-2239 to arrange a meeting with staff.

**D. American Coatings Association (ACA), June 13, 2012**



June 13, 2012

Dr. Philip Fine and Joe Cassmassi  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

**RE: SCAQMD 2012 Air Quality Management Plan (AQMP) Advisory Group Meeting #9 – Control Measure Concepts; ACA Comments**

Dear Dr. Fine and Mr. Cassmassi:

The American Coatings Association (ACA) submits the following initial comments on CTS-01 *Further Emission Reduction from Architectural Coatings (Rule 1113)* that were presented at the May 17, 2012 Air Quality Management Plan (AQMP) Advisory Group Meeting.

**Architectural and Industrial Maintenance (AIM) Coatings Inventory**

ACA wants to assure that appropriate inventory credit is given for the significant reductions already achieved in mass and reactivity of VOC emissions from architectural coatings, and additional reductions to come from requirements for colorants, VOC limit reductions and thinning/cleaning solvents.

SCAQMD should fully explain any discrepancies or changes to the architectural and industrial maintenance (AIM) coatings inventory. At the May AQMP meeting, staff released a preliminary draft AIM inventory of 26.16 tpd for 2008, 22.87 tpd for 2014, and 24.72 tpd for 2023. Recent revised information suggests the inventory for 2008 is now 21.9 tpd (16.1 tpd for AIM coatings; 2.8 tpd for thinning/ cleaning/additives; and 3.1 tpd for colorants). ACA requests additional information on what the 2.8 tpd for thinning, cleaning and additives includes. ACA has also requested additional information on the 2014 inventory. ACA suggests the estimated 2014 inventory is too high, considering the 2011 Rule 1113 Staff Report where the District estimated the 2009 inventory to be as low as 11.6 tpd. Assuming the 2009 and 2014 inventories are similar (11.6 tpd), the original 2014 estimate of 22.87 tpd may be as much as two times too large. Instead of accounting for 22% of the AIM inventory, the proposed CTS-01 would instead account for nearly 43% of the AIM inventory.

ACA suggests the District develop an AQMP strategy that relates development/implementation of CTS-01 to future AIM emissions. If for example the District is able to document (via Rule 314) that the AIM emissions in 2012 are less than say 12 tpd (hypothetical number), then the District would not need to develop/implement CTS-01, since the District could take credit for the reductions in Rule 314. If on the other hand, the AIM emissions in 2012 are more than 12 tpd, then the District would develop and implement CTS-01 to reduce the industry emissions to

D-1

below 12 tpd. Another benefit of this option is that it resolves District concern that the recent inventory reductions are economy related (i.e. the emissions will increase once the economy improves).

D-1

**AIM VOC Reduction Estimate**

ACA assumes that the 4-5 tons per day in CTS-01 will come from reductions from the recent Rule 1143 (9.75 tpd) and Rule 1113 amendments (4.4 tpd) since the estimated a 4-5 tpd reduction from CTS-01 is too large based on the associated CTS-01 synopsis. In comparison, the 2011 Rule 1113 amendments resulted in estimated reductions of 4.4 tpd, which included VOC limit reductions for 11 categories (0.4 tpd), changes/phase-out of the averaging provision (1.2 tpd) and limits on colorants (2.8 tpd). ACA requests further details on the estimated CTS-01 reductions, since ACA is concerned that the reductions detailed in the synopsis will not result in 4-5 tpd of reductions, therefore the District will be forced to lower VOC limits for other coatings categories.

D-2

Further, similar to our comments on the 2007 AQMP (letter dated December 7, 2006), ACA is concerned that if these extreme and unproven reductions are approved, the industry will be forced to achieve the VOC targets regardless of whether the CTS-01 control measures are technologically feasible. As ACA commented in the past, we are concerned that once these reduction estimates are approved in the AQMP and the State Implementation Plan, the District may sidestep the technical concerns claiming that it has no choice since the reductions are "locked" into the Plan/SIP. Given this significant concern, the Plan should clearly state that any specific numeric goals or targets are subject to the District's statutory authority to regulate non-mobile sources and may be adjusted in the future based on technological feasibility analyses.

**CTS-01 Control Measure Technological Concerns**

ACA is currently reviewing the potential control measure concepts in CTS-01, however ACA offers the following initial comments:

D-3

**1. Reduce VOC Emissions from Flat, Nonflat and Primer, Sealer, Undercoaters (PSU)**

ACA is concerned that limits lower than 50 g/l (flat and nonflat) and 100 g/l (PSU's) may be difficult given the current problems associated with VOC test methods. In addition, ACA suggests the District complete a technology assessment to be sure that it is technologically feasible to lower the VOC limits, especially since certain products need to be kept at the current limits. See attached ACA comments dated 2/4/2011.

**2. Small Container Exemption**

ACA is concerned that eliminating the small container exemption, or eliminating the exemption for certain categories is problematic since the small container exemption is critical given the fact that the SCAQMD Rule 1113 limits are the most stringent in the US. This exemption provides a "safety valve" or a last resort option that allows for traditional products in problem situations when the limits in categories become more stringent or a category is eliminated. There are also a

D-4

host of niche coatings that manufacturers can now sell in small containers that would need to be categorized if the small container exemption is modified or removed. See attached ACA comments dated 2/4/2011.

3. **Application Techniques with Greater Transfer Efficiency**

ACA is concerned the District is imposing transfer efficiency requirements on equipment used to apply AIM coatings. With regards to the laser paint targeting system, ACA is concerned that the system is sold exclusively by Iowa University and has not been widely distributed throughout the US. While this technology may be useful for training contractors to properly apply coatings in an automotive refinish shop under controlled conditions, this technology may not be applicable to field applied coatings. As such, ACA is concerned that it may be difficult for the District to document and receive SIP credit for increased efficiency from the use of this technology. Further, this equipment is expensive – approximately \$100 per unit (not including replacement of the lithium battery that has a tested average life of only 20 hours). Also, ACA is concerned that this technology was designed for auto refinish coatings shops, and it may not work on AIM spray equipment that is used in the field (large areas, use of wands, rough texture substrates, sunny locations). Finally, it's unclear whether these units can be properly cleaned.

D-5

ACA is also concerned that if the laser paint targeting system control measure is abandoned for some reason the District will be forced to impose the 65% efficiency requirements for all AIM spray equipment, which is problematic.

**Lack of Technological or Economic Assessment**

ACA is also generally concerned with the absence of the following in the AQMP:

- (1) No assessment of technological or economic feasibility of the proposals, which may amount to pointless bans on useful products.
- (2) No assessment of potentially significant unintended adverse environmental impacts from either (a) substitution of inadequate alternatives, or (b) lack of adequate protective maintenance painting.
- (3) No demonstration that further reductions in VOC emissions from architectural coatings would be necessary or helpful in achieving ozone attainment under the increasingly NOx-limited conditions of the South Coast Air Basin.

D-6

Thank you for the opportunity to comment. If you have any questions or need any further information on the issues discussed here, please feel free to contact me at (202) 462-6272.

Sincerely,

/s/

David Darling, P.E.  
Director, Environmental Affairs

\*\* Sent via email \*\*



**Responses to Comment Letter D**  
**ACA**

**Response to Comment D-1:**

District staff recognizes the significant, cost-effective, and technologically-feasible VOC emission reductions that have been achieved from architectural coatings over the past 15 years, primarily with the success in reformulation and commercialization of low-VOC products by coating manufacturers. For CTS-01, District staff has revised the total baseline 2008 VOC inventory from architectural coatings to 21.9 tons per day (tpd), which includes: a) 16.1 tpd of VOC emissions as reported under Rule 314 reporting requirements for CY 2008. b) 2.8 tpd from thinning / cleaning / additives based on the California Air Resources Board (CARB) 2005 Architectural Coating Survey Final Report Appendix B - New Thinning and Cleanup Methodology and Rule 1143 rule development. c) 3.0 tpd from Colorants as detailed in the July 2011 amendments to Rule 1113. Further, emission reductions of 2.66 tpd from thinning / cleaning / additives, 2.8 tpd from colorants, and 1.6 tpd from Rule 1113 are also reflected in future year emissions summarized in revised CTS-01. The Draft 2012 AQMP utilizes the baseline emissions from CY 2008, and subsequent growth projections are estimated from the 2008 baseline for all measures. An analysis of data submitted pursuant to Rule 314 shows a decrease in sales volume and emissions, 15% and 30%, respectively, for CY 2009. However, the data does show a positive trend in terms of volume and a flattening of emissions for CY 2010 and 2011. This is consistent with the economic recovery and market-driven trends. There are no emission reduction commitments associated with Rule 314, which is strictly designed for the District to recover its program costs, and therefore this rule is not part of the State Implementation Plan (SIP). Hence, the District is unable to take credit for future emission reductions that may be associated with this fee rule. Nonetheless, total emissions from architectural coatings continues to reflect daily VOC emissions of more than 12 tpd, which is one of the largest sources of VOC emissions under the District's regulatory program. The District has not yet attained compliance with national air quality standards, and has a continued need to evaluate all technically-feasible and cost-effective reductions for criteria pollutants, including VOCs. Therefore, staff believes it would not be appropriate to implement CTS-01 only if emissions in 2012 are more than 12 tpd.

**Response to Comment D-2:**

Staff originally estimated that draft CTS-01 may potentially achieve VOC reductions of 4.4 tpd. The estimated emission reductions that were already achieved from past rule amendments are not part of the reduction estimates, but are reflected in the future year baseline emissions from architectural coatings. Nonetheless, based on the concern and subsequent discussions with the industry, CTS-01 has been revised to reflect potential emission reductions ranging from 2-4 tpd, with 2 tpd to be included in the SIP. As

clearly demonstrated in previous rule amendments to Rule 1113, District staff will evaluate technical feasibility during the rule development process, working closely with the manufacturers on any specific rule proposals.

**Response to Comment D-3:**

Staff agrees that an improved VOC test method is needed in order to fully document the achievement of further VOC reductions. Draft CTS-01 includes a proposal to lower VOC limits in conjunction with the adoption of a gas chromatographic test method for more accurately measuring of VOC content, and a change of the metric from VOC of coating to VOC of material. In addition, staff plans to perform a technology assessment, in conjunction with the industry, as part of the rule amendment process.

**Response to Comment D-4:**

Draft CTS-01 has been revised to reflect an evaluation of the potential for complete phase out of the Small Container Exemption. Staff does not agree that the small container exemption is a necessary safety valve for the VOC limits in Rule 1113. However, as part of any rule development activities, staff will evaluate the need for any niche categories with higher VOC limits that may be necessary for certain small volume uses. Based on a review of data submitted by manufacturers, there are ample products available in the market place that meet the VOC limits in Rule 1113. The District has not yet attained compliance with national air quality standards, and has a continued need to evaluate all technically-feasible and cost-effective reductions for criteria pollutants, including VOCs. With consideration of more stringent ozone standards in the near future including the required 2015 AQMP, it is vital to fully evaluate the need for any and all exemptions from VOC rules, including Rule 1113.

**Response to Comment D-5:**

Draft CTS-01 inclusion of transfer efficiency requirements does not focus solely on the laser paint targeting tool, but relies on any retrofit technology that increases the transfer efficiency or reduces the amount of overspray that occurs as a result of current spray application. The laser paint targeting system is one such useful device that assists painters to utilize the proper distance relative to the pressure to maximize transfer efficiency, with data supporting an increase in transfer efficiency by more than 30%. The use of the laser provides immediate feedback to the applicator with two dots which merge to one when the applicator maintains the optimal distance to the object being sprayed. The dot also provides a visual reference for conducting subsequent passes over previously painted areas so the applicator can maintain a 50% overlap. The use of the laser paint technology has been demonstrated to increase transfer efficiency by more than 30% (please see the following link <http://www.iwrc.org/index.cfm/products/laserpaint/product-info/>). Staff used a conservative estimate of an increase in transfer efficiency of 5% for this control measure. To date, this technology has been mainly implemented in the automotive

refinishing and aerospace uses, but it can easily be used to enhance the transfer efficiency from other spray applications, including architectural coatings.

The draft measure also includes the use of HVLP or other spray technology capable of achieving a minimum of 65% transfer efficiency, which is included in all other coatings rules. HVLP and other spray technology that meet the 65% transfer efficiency are readily available for most architectural coatings. While the retrofit and new spray gun technology does have an upfront cost, the transfer efficiency gains, ranging from a conservative estimate of 2% to 10%, can potentially result in significant reductions in volume of coating usage, estimated to be between 150,000 to 685,000 gallons annually. The savings from the reduced paint usage will more than offset the cost of retrofit or new spray units. Staff plans to conduct a thorough technical analysis, including evaluating cleaning and maintenance, during the rule development period.

**Response to Comment D-6:**

(1) The District has released socioeconomic and environmental analysis of the Draft 2012 AQMP. Further technology assessments and socioeconomic impact analysis will be conducted as part of the rule development process. (2) A comprehensive environmental assessment will be conducted as part of the rule development process. (3) The District has not yet attained compliance with national air quality standards, and has a continued need to evaluate all technically-feasible and cost-effective reductions for criteria pollutants, including VOCs.

E. David Darling, February 4, 2011

February 4, 2011

Ms. Heather Farr  
Office of Planning, Rule Development, and Area Sources  
South Coast Air Quality Management District (SCAQMD)  
21865 Copley Drive  
Diamond Bar, CA 91765

RE: January 20, 2011, SCAQMD Public Workshop on Proposed Amended Rule 1113: Architectural Coatings; ACA January 28, 2011 Comment Amendments

Dear Ms. Farr:

The American Coatings Association (ACA)<sup>1</sup> appreciates the recent changes that staff has made to the proposed rule amendments, and submits the following comments on the Draft January 12, 2011, Proposed Amended Rule 1113.

1. Given the unexpected massive reduction in VOC emissions from architectural coatings, drastic amendments to Rule 1113 are not needed at this time

ACA believes that given the reported Rule 314 emissions data for 2008 and 2009, SCAQMD has already met – and exceeded by half – its AQMP goal, so there is no reason or it is not necessary to enact stringent amendments to Rule 1113 at this time. If the District wants to amend Rule 1113, ACA suggests partnering with industry to amend the rule for the purposes of general cleanup, improving clarity and consistency, and harmonizing Rule 1113 with the ARB 2007 SCM in the manner we proposed at the working group meeting, and even possibly set reasonable limits for colorants. We see no necessity, however, for amending the rule at this time to impose lower limits on VOC content or restrict flexibility provisions, especially since the latest Rule 314 data indicate that emissions from this category are less than half the amount projected in the District's emissions inventory for this timeframe.

This trend is partly due to recessionary impacts on sales, but also due to market-driven low VOC technology transfer beyond what is required. Further, the trend in average material VOC content indicates that even if sales volumes increase, emissions will not return to former levels (2004

<sup>1</sup> The American Coatings Association (ACA) is a voluntary, nonprofit trade association working to advance the needs of the paint and coatings industry and the professionals who work in it. The organization represents paint and coatings manufacturers, raw materials suppliers, distributors, and technical professionals. ACA serves as an advocate and ally for members on legislative, regulatory and judicial issues, and provides forums for the advancement and promotion of the industry through educational and professional development services.

E-1

average MVOC: 97 g/L; 2008: 34 g/L; 2009: 30 g/L). Bottom line, the District has met its planning goals and industry should be given credit via less aggressive amendments to Rule 1113.

If, over ACA's objection, the District proceeds forward with the severe proposed amendments to Rule 1113, we respectfully submit the following comments for your consideration.

E-1

## **2. Small Container Exemption**

The small container exemption is critical given the fact that the SCAQMD Rule 1113 limits are the most stringent in the US. This exemption provides a "safety valve" or a last resort option that allows for traditional product in problem situations when the limits in categories become more stringent or a category goes away. It is important to note that district staff consistently mentioned that if companies cannot meet lower limits they can always use the small container exemption – this is not the case anymore – as limits get lower and lower end users need a "relief valve".

There are also a host of niche coatings that manufacturers can now sell in small containers that would need to be categorized if the small container exemption is modified or removed. These include:

- Tile touchup
- Porcelain tub/sink touchup
- Magnetic coatings (turns wall into magnet)
- Chalkboard coatings (turns wall into chalkboard)
- White board coatings (turns wall into a white board)]
- Camouflage coatings
- Projection TV. coatings (turns wall into projection TV. screen)
- Wood stains and wood stain markers
- Appliance touch-up
- Samples
- Touch-up for wood products (allow proper repairs following installation of kitchen cabinets, bathroom vanities, doors and millwork).
- Coatings that are not manufactured as architectural coatings but may become subject to Rule 1113 by virtue of being applied to stationary structures or their appurtenances; e.g., hobby paints, artist colors, marine varnish, and various kinds of touch-up paints.

E-2

An example is that many Original Equipment Manufacturing (OEM) product manufacturers will send small container "touch-up" product so that products can be touched-up in the field – this is very common since the shop applied product may be oil based and Rule 1113-compliant product is water based, so the coatings are not equivalent from a performance, application, and appearance perspective. This will result in a patchy appearance and increased corrosion of the

touched up areas. This could also result in a negative impact on the overall emissions due to an earlier repainting to address these performance and appearance problems.

Given the excess emission reductions, and the need for this “safety valve” ACA recommends the District not amend the small container exemption beyond adding “anti-bundling” language. ACA partnered with the District by providing suggested language, and we request the District partner with Industry and retain the small container exemption. If over ACA’s objection the District does amend the small container exemption, ACA requests the following needed changes to the proposed rule:

- Given the niche products above it is likely that additional categories will be needed, ACA suggests flat coatings and stains be added exempted as well.
- Bundling language is problematic: “or” should be “and” in (f)(1)(B).
- ACA suggests the following edit:

“The provisions of the Table of Standards and paragraph (c)(1) of this rule shall not apply to any architectural coatings in containers having capacities of one quart liter or less, excluding clear wood finishes and pigmented lacquers, until December 31, 2012, provided that the following conditions in Sections A and B below are met.” ..... and Waterproofing Concrete/Masonry Sealers, provided that the following conditions in Sections A and B below are met.”

- ACA requests the anti-bundling language allow small containers be sold in shipping boxes.
- For categories that may be excluded from small container exemption, a three-year sell through is needed so that products in the pipeline and on shelves can be sold and not disposed of as hazardous waste.
- If the amended rule were to require labeling of small containers, a minimum three-year transition period is needed.
- ACA suggests the rule be consistent with 2007 SCM – “one liter (1.057 quart) or less”.
- If the District does not add Conversion Varnish and Conjugated Oil Varnish categories to Rule 1113, ACA requests that these be included in the small container exemption.

3. Markets for Sale - this terminology is confusing. The definition of “market” is covered by current rule (to supply, sell, offer for sale). Since this could pull in Ebay, Craigslist, Amazon, where they notified of the change and implications? ACA is also concerned about national, state and regional TV, print and radio ad campaigns that could be problematic from a “markets for sale” perspective.

E-2

E-3

- 4. District deleted “for use” – the assumption that products sold in District are used in the District is problematic as a basis for enforcement – ACA believes that the District is overreaching and does not have authority to do so. We are especially concerned about warehouse materials/products being shipping through the District, these must be exempted. This deletion also pulls in homeowners into the rule – ACA does not believe that homeowners understand this implication. A full CEQA analysis should be performed to determine the fiscal impact and compliance cost for homeowners. E-4
- 5. Worksite Definition and “stores at worksite” - ACA suggests deleting “vehicle” from definition so this does not apply to contractor vehicles. Further, “regular maintenance” occurs at almost every building, and it does not seem logical that the District intended to pull in every building. Further, the definition should not apply to manufacturing sites and job shops (for example OEM surface coating operations). E-5
- 6. “Manufacturer” definition should exclude repackaging and relabeling at stores. E-6
- 7. Quick-Dry Enamel and Quick Dry Primer – needs to be transitioned like other CA Air Districts have done – ACA suggests the following:  

“Effective January 1, 2013, the Quick-Dry Primer, Sealer, and Undercoater category and Quick Dry Enamel category are eliminated and coatings meeting either definition will be subject to the VOC limit for the applicable category in the Table of Standards, except in [most restrictive and sell through provisions].”

E-7
- 8. Nonflat High Gloss Coatings – similar to the Quick-Dry Enamel and Quick-Dry Primer categories – ACA suggests the following transition language:  

“Effective July 1, 2011, the Nonflat High Gloss Coatings category is eliminated and coatings meeting this definition will be subject to the VOC limit for the Nonflat coatings category, except in [most restrictive and sell through provisions].”

E-8
- 9. Default Limit – this should be set at 50 g/L to eliminate the potential for arbitrary and capricious categorization of “default” products. Also ACA suggests dropping the language “and less any colorant added to tint bases until January 1, 2014, at which time the limit drops to 100 grams of VOC per liter of coating (0.83 pounds per gallon).” E-9
- 10. Section (c)(2) – ACA suggests deleting the language “except anti-graffiti coatings” E-10
- 11. Colorants – ACA suggests listing the limit for Solvent Borne Industrial Maintenance Coatings (600 g/L) first, then the limit for All Other Architectural Coatings (50 g/L) next. In E-11

addition, ACA suggests that the rule needs to be clarified that colorant limits apply only to colorants added at the point of sale.

ACA once again requests a higher colorant limits for IR Heat Reflective Pigment Colorant Dispersions, since heat reflective wall coating technology is based upon the use of Complex Inorganic Color Pigment Technology (CICP). The colorants that contain these unique pigments are only available from a few specialized colorant suppliers. The CICP pigments are very high in density and formulation of commercially viable machine dispensable colorants is very challenging. The CICP colorants have been found to be more prone to settling, caking, clogging, and canister collaring than conventional colorants when used in automated colorant dispensing equipment. This is the case even at conventional VOC levels of 450-550 grams per liter. Lowering the VOC level of these special colorants to below 50 grams per liter VOC will be very problematic. Because of the added environmental benefits of heat reflective coating (described below) and the fact that this a specialized niche, it is proposed that a limit of 400 grams per liter VOC be considered for this important class of colorants.

It is important to note that the performance of CICP pigment containing heat reflective wall coatings have been validated by the U.S. Department of Energy. The many benefits of this technology are becoming more widely known and accepted. By reducing the heat uptake of buildings, the cooling energy demands are reduced. This means less electricity needs to be generated by power plants for this purpose resulting in reduced power plant emissions. Also important is that this reduction occurs during the peak demand daylight hours. Because the CICP IR pigments are incredibly durable, these coatings do not need to be repainted due to color fading for many years longer than ordinary paint. This translates into eliminating the VOC emissions that would have occurred due to the skipped painting cycle requirements.

E-11

12. **Faux-Finishing/Japan** - ACA suggests setting the limit for the clear topcoat at 200 g/l then lowering this to 150 g/l since these clear coats are not "typical" they are required to provide long term color and gloss stability and protection for the color coats, also adequate open time is needed to create the faux finish appearances. In addition, there is a typo in Definition (17) Clear Topcoats - needs to be finished.

E-12

13. **Stone Consolidants (450 g/l)** - consistent with the 2007 SCM, this category and limits should be added to Rule 1113 since they are needed for preservation of historic buildings in the SCAQMD. The landmark Wilshire Boulevard Temple in downtown Los Angeles is a prime example of a historic structure in need of this technology. The exterior is literally falling apart one grain at a time. The California Office of Historic preservation has stated its opinion that they must be consulted as part of the Rule 1113 CEQA review due to the potential for substantial adverse change to historical resources under their jurisdiction. ACA will be submitting CEQA comments in this regard.

E-13



**14. Reactive Penetrating Sealers (350 g/l)** – The Reactive Penetrating Sealer niche category was created in the CARB 2007 SCM and needs to be added to Rule 1113 for infrastructure protection. ACA is aware that Caltrans has completed a report in April 2010 entitled “Report on Non-Film Concrete/Masonry Waterproofing Products”. This report indicates that Caltrans recently determined that Rule 1113 compliant alternatives lack the performance necessary for infrastructure protection and are requesting this category be adopted. ACA will be submitting CEQA comments in this regard since effective salt screening products are needed near the ocean in SCAQMD especially considering the use of pretensioned concrete structural components, in which it is vital to protect the reinforcement cables from corrosion. Since the Rule 1113 revision is a project with regional significance and has the potential to impact transportation infrastructure, we believe that the District is obligated to formally consult with Caltrans as well as the California Office of Historic preservation as part of its CEQA analysis.

E-14

**15. Conversion Varnish(725 g/l)/Conjugated Oil Varnish (450 g/l)** – These are very specialized small “niche” high-end coatings with unique properties that are needed in specific applications, and are generally applied only by professional contractors. ACA requests SCAQMD include these in Rule 1113. If can’t include in Rule 1113, ACA requests the District add these to small container exemption.

E-15

**16. Tub and Tile Refinishing (420 g/l)** – ACA suggests adding this category and limit consistent with the 2007 SCM, however please note that a manufacturer of these products is working on 150 g/l product. Staff has stated that these products fall under IM, however IM are prohibited from interior use.

E-16

**17. Primers, Sealers & Undercoaters (PSU)**

ACA is concerned that SCAQMD is considering whether to lower the VOC limit for the Primer, Sealer & Undercoater category, since products in this category are extremely important functional coatings that must perform well in adhering to substrates, and are often a last resort in solving difficult application issues. Also, these products are designed for a wide range of substrates and exposure conditions. While coatings manufacturers may be able to meet the 50 g/L limit for Flats and Non-Flats, they must have good PSU coatings to do so. Of course, when a primer fails, not only the primer must be replaced – new topcoats are necessary, too. This causes increased emissions and excess consumption of energy and material resources. ACA will be submitting CEQA comments with regards to this issue.

E-17

The District mentioned that when they lowered to PSU category limits to 100 g/l that they acknowledged the fact that lower VOC PSUs needed greater surface preparation, have less tolerance, and painters need to follow instructions that’s why they included a long

implementation timeframe. With 50 g/L topcoats, lowering the PSU limit further is very problematic.

While primers at lower VOC contents may be available for all substrates, their performance limitations make them inadequate as substitutes for higher VOC, better performing products. Consequently, such substitutions lead to higher rates of coating system failure or reduced longevity, or necessitate multiple primer coats that would otherwise be unnecessary. To the extent that better performing, lower VOC primers might be formulated with new technologies just becoming available, the lab work and field tests would require a period of time much longer than a year and a half.

Also, this category represents the 3<sup>rd</sup> largest category, and a limit of 50 g/l would eliminate 60% of available products on the market – nearly 550 products – in roughly a year and a half. This amount of time is insufficient to reformulate and test this number of products. District data also suggests that with every step lower in VOC content, performance attributes suffer accordingly. There is a tradeoff and we must expect a performance drop with lower VOC contents, but this is not acceptable with PSU coatings. It is clear from the bimodal data (or inverse bell curve) results indicate the need for higher VOC PSUs for specific applications including wood, metal, masonry and concrete tilt-up. Most PSUs at or below 50 g/L are applied to interior drywall. Critical substrates that need the 100 g/l limit include: non-bituminous roof primers, exterior wood (especially wood with high tannin extractives e.g., redwood and cedar); stucco; exterior concrete and masonry (especially with high alkalinity, efflorescence, or heavy surface chalking); and interior substrates that are smoke-, fire-, or water-damaged. Also, certain types of primers perform significantly better at higher VOC levels, including thin-film elastomeric primers, and the higher performing multi-purpose primers that can be used on various substrates including metal.

In addition, a review of the District selected products that meet the proposed 50 g/L limit (see Attachment A) there are several problematic issues with the 50 g/L products:

- several products are meant for interior use only
- several products require two coats are recommended for metals and wood with tannins;
- several products do not mention use on metal or wood
- several mention use on primed and previously painted metal
- several are two component epoxies which are problematic for consumer use (ease of use, pot life issues)
- several are elastomeric coatings
- several mention use of higher VOC block fillers for masonry, metal primers, and sealers for wood
- none are intended for use in a roofing or waterproofing environment

E-17

18. **Non-bituminous Roof Primer (100 g/l)** – If over ACA’s objection the District lowers the limit for the PSU category to 50 g/l, ACA supports the 3M comments and recommends the District include a new category for Non-bituminous Roof Primers since the 50 g/l PSU identified do not include any non-bituminous roof primers.

As noted above, several of the identified primers are intended for interior applications. As such, they are subjected to conditions that are significantly less harsh than those experienced outdoors. Of the products that are listed for exterior use, none are intended for use in a roofing or waterproofing environment. There are non-bituminous roof primers on the market for use on low-slope (*i.e.*, approximately horizontal, or “flat”) roofs, such as those on commercial and industrial buildings. These coatings are used to maintain and restore existing roof membranes. They extend the life of the existing roof for 10-20 years, thus delaying the cost and disposal issues associated with replacing a roof.

On low-slope roofs, ponding water occurs. Ponding water, combined with the thermal cycling that roofs undergo, can lead to coating and/or primer adhesion failure if the primer is not durable. The coating blisters and delaminates, and water can leak into the building at these failure points. In order for the primer/coating system to be effective, the primer must adequately adhere to the overcoat as well as to the existing roof membranes, the conditions of which are highly variable due to weathering effects. Because of the highly variable substrate conditions, achieving and maintaining the desired adhesion is very challenging and requires sufficient VOCs.

ACA requests the District create a product category of (non-bituminous) roof coating primers, with a VOC limit of 100 g/L. Overall, the volume of primers I question is relatively small but is important in order to ensure the successful performance of the low-VOC roof coating (and the delivering of the attendant cost and environmental benefits).

19. **Specialty Primers** – CARB is the process of completing a technology assessment to analyze any technical issues between new waterbased and traditional oil based products. This work is to be completed later this summer, ACA suggests adding a statement in the Board Resolution that staff address any CARB findings and recommendations.

As with the Primer Sealer category, specialty primers are critical to blocking stains. In addition, a review of the District selected products that meet the proposed 50 g/L limit (see Attachment A) there are several problematic issues with the 50 g/L products:

- several products do not mention use on metal or wood
- several products are meant for interior use only
- several mention use of higher VOC block fillers for masonry, metal primers, stain killer, and sealers for wood
- not for masonry, galvanized or zinc coated surfaces or use only on painted metal

E-18

E-19

20. **Sell Through Provision** – this provision should apply not only to changes in VOC limits, but also changes to definitions and labeling requirements. ACA suggest the following edit:
- “Any coating that is manufactured prior to the effective date of **a new rule provision** the applicable limit specified in the Table of Standards, and that was compliant at the date of **manufacture** has a VOC content above that limit (but not above the limit in effect on the date of **manufacture**), may be sold, supplied, offered for sale, or applied for up to three years after the specified effective date.....”
21. **Metallic Pigmented** - a review of the District selected products that meet the proposed 150 g/l limit (see Attachment A) there are several problematic issues with the 150 g/l products:
- One product is a high-solids mastic – 90% solids
  - One product is not a metal pigmented coating but a primer and the product says it’s less than 180 g/l.
  - Another is not a metallic pigmented coating it is a 2 part polyurethane
22. **Sanding Sealers** – ACA suggests the following transitional language:
- “SANDING SEALERS are clear wood coatings formulated for or applied to bare wood for sanding and to seal the wood for subsequent application of coatings. Until January 1, 2013, to be considered a sanding sealer a coating must be clearly labeled as such.”
23. **Retail Outlet Definition** – it is unclear what this term “supplied” means – we need additional clarification.
24. **Sale or Use of Stains and Lacquers in Areas above 4,000 feet** – ACA requests the District provide a list of zip codes where these products may be sold and used.
25. **Waterproofing Concrete/Masonry Sealers** – ACA suggests including “excluding stains” as follows:
- “WATERPROOFING CONCRETE/MASONRY SEALERS are clear or pigmented sealers, including concrete lacquers that are formulated for sealing concrete and masonry to provide resistance against water, alkalis, acids, ultraviolet light, and staining, or enhancing appearance **excluding stains.**”
26. **VOC Definition** - clarify that reporting is not for coatings manufacturers but for TBAC manufacturers.

- 27. **Economic burden** – district needs to consider cost per ton for categories in which less than 1 lb/day emission reductions would be achieved. Denominator very small – costs very high. Manufacturers have same reformulation costs for minor incremental changes as they do for major reformulations. E-27
- 28. **Addition of “fields and lawns”** is problematic – raises more issues than resolves and impact other AIM rules. E-28
- 29. **Enforcement** – what is the impact of adding the words “each gallon of” to the fine matrix E-29
- 30. **Concrete Lacquers** – this term should be defined E-30
- 31. **Swimming Pool Coatings** – the current limit is missing from Table 1 E-31
- 32. **Averaging** – the timing of when the various coatings can be averaged does not make sense, also the District should add Zinc Rich Primers since these are sold by the job. E-32
- 33. **Gonioapparent Characteristics for Coatings** – Method E284 only defines this term, it does not state how to determine it. E-33
- 34. **Exemption of TBAC and DMC**  
  
ACA once again requests exemption of TBAC and DMC for AIM coatings. With regards to TBAC, the survey indicated that 50% of manufacturers that are using TBAC in IM formulations; Those currently not using TBAC – 25% are conducting research; 54% are conducting research on using TBAC for other categories of coatings.  
  
If TBAC and DMC cannot be exempted for all AIM coatings at this time, ACA requests an initial limited exemption in those product categories such as exterior applications (Concrete Curing Compounds, Concrete Surface Retarders, Driveway Sealers, Form Release, Fire Proofing Exterior, Roof coatings and primers, swimming pool coatings, traffic coatings, waterproofing concrete/masonry) and in indoor application where vapors are vented outside the house and coatings are applied by licensed contractors wearing respiratory protection (such as the tub & tile refinishing category as well as others).  
  
DMC should be exempted for Industrial Maintenance coatings since these coatings are applied outside by professional contractors. TBAC/DMC should be exempted for Anti-Graffiti coatings since this category was pulled from the Industrial Maintenance category were TBAC was already exempted. E-34

It is important to note that many other CA Air Districts have exempted TBAC and DMC and others have exempted these compounds with requirements for permits and necessary information to perform a health risk assessment.

E-34

If SCAQMD has done any recent risk assessment analysis for Tbac or DMC for use in AIM coatings – ACA requests information on assumptions used in these assessments.

**35. Reactivity**

ACA suggests SCAQMD work with the coatings industry to develop a Reactivity-based Alternative Compliance Option (RACO) that would allow a company to achieve compliance with Rule 1113 VOC limits by means of a District-approved RACO program. A manufacturer's RACO program would apply reactivity criteria to the VOC content of covered products and ensure equivalent or lower ozone formation potential compared to products complying on a mass VOC basis. ACA suggests this discussion topic be added to a future working group meeting.

E-35

**36. Atmospheric Availability Credit**

ACA again requests that the District account for the fact that certain coatings components remain in the substrate or coating structure and therefore are not "available" for ozone formation. While the ACA PACES work continues and a draft report is expected soon, ACA would like to discuss how the atmospheric availability issues can be addressed in Rule 1113. Hopefully, either the VOC calculation or the VOC inventory can be adjusted accordingly.

E-36

Thank you for the opportunity to comment. If you have any questions or need any further information on the issues discussed here, please feel free to contact me at (202) 462-6272.

Sincerely,

David Darling, P.E.  
Senior Director, Environmental Affairs

*\*\* Sent via email \*\**

Attachment A

Review of Product Data Sheets

A. Specialty Primer and Undercoat

1. Benjamin Moore – Fresh Start – exterior use on previously coated ferrous metal surfaces, not recommended for sealing knots or over pine sap. In cases of severe bleeding, a solvent based primer should be used to prevent stains from reappearing. If surfaces to be painted exhibit severe tannin or smoke staining, an alkyd based Benjamin Moore primer may be your best choice for conquering these severe conditions. Recommends for masonry – Moorcraft Latex Block Filler, Unpainted metal - Ironclad metal and wood enamels.
2. Richards Product Number 7-44
  - a. VOC content – “not to exceed 50 g/l”
3. Richards Product Number 705
  - a. VOC content – “not to exceed 50 g/l”
  - b. Limitations – “not for masonry, galvanized or zinc coated surfaces”
4. Kilz – maybe used on “painted metal”
5. ICI Dulux Trade
  - a. Suitable for use on interior walls and ceilings
  - b. Has EU VOC content and has a range of between 0.3% and 7.99%
6. Smart Hide – Concrete block filler is recommended, and unpainted metal must be primed with metal primer. This product may be used on previously painted metal only.
7. Zinsser Bulls Eye – Spot primer knots and sap streaks with Zinsser BIN Primer-Sealer.
8. Valspar – does not mention recommended use on metal
9. UGL – Ecolock – does not mention use on exterior metal
10. Rust Oleum Smart Prime - Spot primer knots and sap streaks with Zinsser BIN Primer-Sealer.
11. Duron Terminator Stain Killer – Use Terminator oil based stain killer over water sensitive stains.
12. Insl-X Aqua Lock Plus – galvanized metal and aluminum – ferrous metal not mentioned.

B. Metal Pigmented

1. Carboline Carbomastic 15 – high-solids mastic – 90% solids
2. Modern Masters Acid Blocking Primer – not metal pigmented but a primer. Metallic paints are considered under faux finish and are less than 180 g/l.
3. Deft 36 Series Acrylic Polyurethane – not a metallic paint – 2 part polyurethane.

**C. Primer, Sealer, Undercoat**

1. Frazee Paint 172 Grip-N-Seal – two coats are recommended for metals and wood with tannins
2. Frazee Paint 168 Prime+Plus – 2 coats for metal and wood with tannins
3. Frazee Paint 066 Envirokote – Interior only - Not for wood prone to tannin bleeding. Metal not mentioned.
4. Frazee Aqua Seal – Interior only – metal not mentioned.
5. Benjamin Moore Latex Block Filler 160 – Block Filler not primer, sealer, undercoater
6. Benjamin Moore Latex Block Filler 285 – Block Filler not primer, sealer, undercoater
7. Frazee 262 Acrylic Block Filler - Block Filler not primer, sealer, undercoater
8. Sherwin Williams PrepRite Block Filler - Block Filler not primer, sealer, undercoater
9. Vista Paint 018 Acrylic Block Filler - Block Filler not primer, sealer, undercoater
10. Davlin – Butylseal 572 – elastomeric coating
11. Frazee 063 PVA Wall Sealer – Interior only, no metal or wood.
12. Westcoat EC-11 Water-based epoxy – two component epoxy – IM
13. Westcoat EC-12 Epoxy primer - two component epoxy – IM
14. Benjamin Moore Auro Color Foundation – primed and previously painted metal, for bleeding use FreshStart, rough or pitted masonry use Moorcraft Block Filler, Unpainted metal use metal and wood enamel
15. Benjamin Moore Moorcraft Super Hide 284 - rough or pitted masonry use Moorcraft Block Filler
16. Frazee Paint - 266 Exterior Epoxy - two component epoxy
17. Frazee Paint - 061 Aqua Seal – Interior Wall Sealer
18. Glidden – Stain Blocker – does not mention ferrous metal
19. ICI Prep and Prime Stain Jammer – mentions use of block filler and metal primer



**Responses to Comment Letter E**  
**David Darling**

**NOTE: The following were prepared in 2011 in response to the original letter dated February 4, 2011.**

**Response to Comment E-1:**

Staff concurs that the coatings industry has made great strides in lowering the VOC emissions from architectural coatings. Staff agrees that this can in part be attributed to market demands as well as the financial incentives in Rule 314. Table 1 of the Staff Report summarizes sales and emissions data for 2008 and 2009, and clearly shows that in addition to the reduction in the VOC content, the coatings industry has experienced several years of depressed sales due to the economic recession. Even with these reduced emissions, the coatings industry is one of the largest sources of VOC emissions under the AQMD's purview. The colorants alone, which are currently not included in the emission inventory for architectural coatings, account for 3 tons per day of VOC emissions. Due to the extreme non-attainment status for the AQMD, staff is under a directive to achieve all feasible emission reductions, as included in the 2007 Air Quality Management Plan (AQMP), specifically Control Measure CM# 2007 MCS-07 – Application of All Feasible Measures. This control measure explicitly lists coatings and solvents rules to achieve additional VOC reductions. During the rule development process, staff has conducted considerable outreach and research to determine reductions that are feasible and achievable. Through this process, staff received extensive and well supported comments that resulted in extended implementation dates and the elimination of several coating categories from the proposed VOC limit reductions. The current proposal is reasonable, achievable, and cost-effective and it reflects full implementation of currently available technology.

**Response to Comment E-2:**

Staff spent considerable time and effort in studying and evaluating the small container exemption (SCE), and recognizes the benefits of the SCE for manufacturers and end users for niche products, as well as repair, touch-up and maintenance. Based on comments received, staff has revised the rule language and is not proposing to further limit the categories that can use this exemption or to phase out the exemption at this time. This change addresses the concerns pertaining to additional categories, as well as the touch-up and issues represented by original equipment manufacturers. Staff does not agree that this exemption is a necessary safety valve for the VOC limits in Rule 1113. Aside from a few niche categories or new categories that may be developed, there are ample products available in the market place that meet the VOC limits in Rule 1113. Staff will continue monitoring the sales of products in small containers, and plans to revisit either limiting or phasing out the exemption in the future. Over the years, enforcement staff has encountered considerable rule circumvention due to this exemption, resulting in removal of the clear wood finish category from the SCE in

2006. Based on comments received, staff has revised the initial proposal which would have limited the eligible categories, and is proposing to clarify that while coatings in small containers do not need to comply with the VOC limit requirements, they do need to comply with other rule requirements, such as the labeling requirements. Further the proposal prohibits bundling of containers practiced by some manufacturers to sell multiple small containers in one package. The current proposal further incorporates additional clarifications to address comments from industry.

**Response to Comment E-3:**

Staff has included a definition for the term ‘market’ that limits the term to third-party vendors who solely bring together buyers and sellers, including but not limited to catalogs, and e-commerce businesses (e.g., EBay, Amazon). The definition also explicitly indicates that for the purpose of Rule 1113, ‘market’ does not include promoting or advertising coatings. Staff has contacted potential affected parties (Grainger, EBay, Craigslist, McMaster-Carr, & Amazon) and forwarded PAR 1113 for their information.

**Response to Comment E-4:**

Staff feels that it is indeed reasonable to assume that a coating sold in retail outlets within the District will be used in the District. However, that assumption is rebuttable for situations where a local manufacturer or distribution warehouse makes or stores a coating, staff has further clarified that when evidence shows coatings supplied, sold, offered for sale, marketed for sale, manufactured, blended, repackaged or stored in the District are for shipment outside of the District, they would be exempt. This exemption fully covers the coatings industry’s concern regarding coatings stored in the AQMD. In regard to the comment on the implication of the rule change on homeowners, Rule 1113 has always applied to any person who specifies or uses architectural coatings, including homeowners. Based on limited enforcement resources, which are more efficiently utilized where a large amount of coatings are sold, stored or may be used, inspectors generally do not make compliance stops at private residences; however, enforcement staff would investigate if there were public nuisance complaints regarding odors from the use of architectural coatings at a private residence, and based on the findings from the investigation, may issue notices to homeowners. As a result, staff does not anticipate any environmental impacts resulting from this rule change due to any fiscal impacts on homeowners.

**Response to Comment E-5:**

An exemption for non-compliant coatings stored in work trucks would create a loophole in the proposed rule language. Worksites frequently store their coatings in trailers which could be interpreted as a work truck. Worksites could simply store all coatings in a truck or trailer to circumvent the rule language. Staff is not proposing to exempt work trucks but did include clarification in the staff report regarding who would

be responsible for non-compliant coatings stored in work trucks. Further, the definition of worksite has been revised to indicate any location where architectural coatings are stored and applied, based on comments from the public. Staff is not proposing to exempt manufacturing sites or job shops considering that coatings operations for maintenance purposes are performed at those facilities. The building that houses a manufacturing operation where non-Rule 1113 coating operations occur would still need to be painted and maintained. The provision would apply to the architectural coatings that are used to paint the building e.g. floors, wall, doors, etc. Non-compliant products that are not for use at the facility but are stored for sale or shipment outside the AQMD, would be exempt under paragraph (f)(2)(A):

**Response to Comment E-6:**

Staff addressed industry's concern with the definition of manufacturer by exempting retail outlets where labels or stickers may be affixed to containers or where colorant is added at the point of sale. Staff does not feel that a further exemption for repackaging or re-labeling is necessary. It is a common practice for manufacturers to repackage or re-label (add their own label) coatings that were produced by another manufacturer (e.g., toll manufactured coatings). In those instances, whomever's name is on the label is considered the manufacturer. When a non-compliant coating is found in the field, it is the manufacturer whose name is on the label that is ultimately responsible for that coating. For this reason, staff does not intend to exempt repackaging or relabeling in the definition of a manufacturer.

**Response to Comment E-7:**

Staff addressed the concern regarding Quick Dry Enamels and Quick Dry PSUs by including an effective date of July 1, 2011. While the change is proposed to take place shortly after rule adoption, it will not result in a change in the VOC limit or the labeling of the products. Coatings can still be labeled as quick dry enamels, but for the purpose of Rule 1113, those coatings will be considered non-flat coatings effective July 1, 2011. Since there are no impacts of this change, a longer implementation period is not included.

**Response to Comment E-8:**

The comment includes a request for a phase-in period of July 1, 2011 for the elimination of the non-flat high gloss category. Since there is no VOC or labeling implication for the removal of the non-flat high gloss category, staff is not proposing any phase out period. Coatings can still be labeled as non-flat high gloss coatings, but for the purposes of Rule 1113, those coatings will be considered non-flat coatings. The proposed change is for rule simplification since there are currently no differences in the VOC limits or labeling requirements between non-flat coatings and non-flat high gloss coatings.

**Response to Comment E-9:**

Staff agrees with industry's proposal to lower the VOC limit for the default category to 50 g/L and has revised the proposed rule language accordingly.

**Response to Comment E-10:**

For rule clean up purposes, the requirement which was included in paragraph (c)(2) has been moved to paragraph (c)(7). This requirement states that industrial maintenance coatings, except non-sacrificial anti-graffiti coatings, shall not be applied or solicited for residential use unless they would be exposed to the extreme environmental conditions described in the definition of an industrial maintenance coating. The comment is to remove the clause "except non-sacrificial anti-graffiti coatings" since a separate category has been established for those coatings. Since the Non-Sacrificial Anti-Graffiti Coating category is included as a subcategory for Industrial Maintenance Coatings, staff feels this language is still necessary to be included.

**Response to Comment E-11:**

Based on the comment regarding the Table of Standards 2, revised PAR 1113 includes proposed VOC limits for architectural coatings, excluding IM, Waterborne IM Coatings and Solvent-Based IM coatings. In addition, staff has added language to clearly state that the VOC limits for colorants only apply to colorant added at the point of sale. Staff contacted several manufacturers of heat reflective or complex inorganic color pigment (CICP) technology who stated that these colorants can be formulated and are available with a VOC content of less than 50 g/L. Furthermore, based on a discussion and subsequent emails with the manufacturer that expressed concern about the VOC content of colorants with CICPs, they do not add these colorants at a point of sale, so PAR 1113 would not apply to their specific use. Lastly, staff agrees with the energy savings benefits of heat reflective coatings.

**Response to Comment E-12:**

Based on feedback from industry, staff has proposed to increase the proposed VOC limit for clear topcoats used in Faux Coatings System from 50 g/L to 100 g/L. Staff has received feedback that this limit is feasible. In addition, the omission in the definition has been addressed. The missing language was for the labeling requirements for clear topcoats.

**Response to Comment E-13:**

PAR 1113 includes a definition for Stone Consolidants that limits the use of these products only when used for restoration and/or preservation projects on registered historical buildings that are under the purview of a restoration architect. This category also includes a proposed VOC limit of 450 g/L, as requested. Staff intends to monitor this category through the Rule 314 Annual Quantity and Emissions Reports to ensure

that sales do not exceed the estimated usage, and may consider sales caps for this category if actual sales are well above the estimated usage.

**Response to Comment E-14:**

PAR 1113 includes a definition for Reactive Penetrating Sealers that limit the use of these products only when used for restoration and/or preservation projects on registered historical buildings that are under the purview of a restoration architect or for use on reinforced concrete bridge structures for transportation projects located within 5 miles of the coast or above 4,000 feet elevation. Staff shared the proposed definition with the interested parties and did not receive any negative feedback. This category also includes a proposed VOC limit of 350 g/L. Staff intends to monitor this category through the Rule 314 Annual Quantity and Emissions Reports to ensure that sales do not exceed the estimated usage, and may consider sales caps for this category if actual sales are well above the estimated usage.

**Response to Comment E-15:**

Staff has conducted research on the need for an additional coating category with a higher VOC limit for specific types of Clear Wood Finishes referred to as Conversion Varnishes. There has been extensive research on this coating category, including a technology assessment conducted in 2004 and 2005. The results of that assessment supported the 275g/L VOC limit, which was implemented on July 1, 2006. Details of that study can be found on the AQMD website at:

<http://www.aqmd.gov/hb/2006/February/060236a.html>. In addition, staff has received feedback from manufacturers that there are compliant waterborne clear wood finishes that perform as well if not better than the high-VOC counterparts. One reason for this request is that Clear Wood Finishes are not allowed under the Small Container Exemption. They were excluded from this exemption due to rule circumvention that resulted in significant excess emissions. Since conversion varnishes were one of the major coating types utilized for coating hardwood floors in the past, allowing this type of clear wood finish to again be sold in the AQMD would, eliminate the emission reductions achieved by removing these coatings from the small container exemption. In addition, the application of conversion varnishes releases formaldehyde, and therefore has some health and safety issues that would be created compared to the waterborne products in use today. For these reasons, staff is not proposing to add a high-VOC category for conversion varnishes. Staff also considered the need for an additional category for conjugated oil varnishes. These are solvent-based, high-VOC Clear Wood Finishes that cannot be reformulated to a lower-VOC limit due to the nature of the oils of which they are composed. Based on research conducted, including reviewing variance requests seeking relief, staff did not find sufficient evidence that a high-VOC Clear Wood Finish is needed at this time since there are sufficient compliant waterborne technologies available. This is demonstrated by the fact that there have not

been any variance requests for Clear Wood Finishes with a VOC content higher than the Rule 1113 limit.

**Response to Comment E-16:**

Staff has researched the tub and tile category and has not found sufficient evidence of the need for a separate category. These coatings currently fall under the IM category with a VOC limit of 100 g/L. Previous staff analysis clearly shows a preponderance of acrylic, epoxy, and urethane-based coatings that can be used for tub and tile refinishing. In addition, these coatings are typically sold in small containers, since most tub and tile coverage area is limited to no more than 100 square feet. Coatings sold in small containers are exempt from the VOC limits in Rule 1113, thus providing additional flexibility for manufacturers of these coatings. The rule language that prohibits the application of IM coatings for residential use only applies to coatings that do not meet the extreme environmental conditions described in the definition of IM coatings. Since tub and tile coatings do meet the definition of IM coatings, especially under the abrasion resistance requirements, they are permitted for use in residential settings. If the small container exemption is eliminated in future rule development, staff will consider whether there is a need for additional niche categories with higher VOC limits.

**Response to Comment E-17:**

Based on comments received pertaining to the originally-proposed VOC limit of 50 g/L for PSUs, staff has reconsidered the proposal and is not proposing any additional VOC reductions limit for PSUs at this time.

**Response to Comment E-18:**

See response to E-1 through E-17.

**Response to Comment E-19:**

Based on comments received pertaining to the originally-proposed VOC limit of 50 g/L for specialty primers (SP), staff has reconsidered the proposal and is not proposing any additional VOC reductions limit for SPs at this time.

**Response to Comment E-20:**

Based on feedback received during working group meetings, staff extended effective dates for rule changes sufficiently such that an additional sell through period is not necessary. In regard to the labeling requirements, manufacturers requested a three year period to implement the change so they could use their current labels. If the rule included an additional three years to sell through of old labels, the rule change would not be effective for six years. Staff feels that the proposed three years to implement the change is sufficient without an additional sell through period. A similar change is the

labeling change for sanding sealers. This change will re-categorize coatings from the PSU category to the Clear Wood Finish category. Since 2006, Clear Wood Finishes are no longer included in the small container exemption. Staff proposed an effective date of July 1, 2013 for this change to allow a two year transition, which should be sufficient to sell through products that are currently on retail shelves.

**Response to Comment E-21:**

The list of coatings provided for review only encompass a selection of the coatings currently available at the proposed VOC limit and should not be considered all-inclusive. As presented in the numerous working group meetings, there are 18 manufacturers that have reported the sales of 63 products that are categorized as metallic pigmented coatings. Staff can provide the comprehensive list of these products upon request. As for the 3 products mentioned, the coating that is referred to as a mastic in the product data sheet does not meet the Rule 1113 definition of a mastic. The coating is applied at a maximum of 7 – 10 mils in one or two coats. The Rule 1113 definition specifies that the coating is applied at least 10 mils dry in a single coat. That coating would fall under the metallic pigmented coating (MPC) category. The primer is not a metallic pigmented coating, but an acid blocking primer specified for certain metallic pigmented coatings, that page was inadvertently included with the other coatings. The last product mentioned is a high performance, zero VOC acrylic polyurethane which can include metallic pigments resulting in a coating that meets the definition of a metallic pigmented coating. Those coatings have been in use at local theme park to create metallic effects. Staff has reevaluated the last coating included in the list and interprets that coating to be an IM coating. Even though this coating could meet the definition of a MPC based on the metallic content, the coating is a polyurethane which could be tinted to several colors, including a clear or a metallic, the specified usage is for IM applications. The product data sheet states that the intended application is for theme parks, industrial maintenance and heavy equipment applications. Many of the products used at theme parks are IM coatings due to the extreme conditions created by the number of daily visitors, typically requiring coatings that withstand “repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial solvents, cleaners, or scouring agents” as well as “exterior exposure of metal structures”.

**Response to Comment E-22:**

PAR 1113 includes language to address the necessary transition time for the proposed change to the definition of sanding sealers. This change will re-categorize some PSUs to sanding sealers; therefore, they will no longer fall under the small container exemption. The extended transition time will allow ample time for those select coatings to be phased out.

**Response to Comment E-23:**

Staff agrees with the comment and has removed the word ‘supplied.’

**Response to Comment E-24:**

The following list includes the cities and communities within the AQMD that may qualify for the exemption in paragraph (f)(2)(D):

Lancaster, 93536  
Castaic, 91384  
Angelus Oaks, 92305  
Valyermo, 93563  
Mentone, 92359  
Idyllwild, 92549  
Cabazon, 92230  
Banning, 92220  
Lebec, 93243  
Big Bear City, 92314  
San Bernardino, 92407  
Lytle Creek, 92358  
Cedarpines Park, 92322  
Sylmar, 91342  
Yucaipa, 92399  
Crestline, 92325  
Palmdale, 93550  
Mt Baldy, 91759  
Lake Hughes, 93532  
Forest Falls, 92339  
Acton, 93510  
Running Springs, 92382  
Wrightwood, 92397  
San Bernardino, 92404  
Santa Clarita, 91390  
Newhall, 91321  
Tujunga, 91042  
La Canada Flintridge, 91011  
Morongo Valley, 92256  
White Water, 92282  
Mountain Center, 92561  
Palm Springs, 92264  
Palm Springs, 92262

Note: Most of the zip codes listed are not completely above 4,000 feet, therefore, a more precise indication of the areas above 4,000 feet can be found by referencing the



map included as Appendix B. An interactive map will also be included on the website [www.aqmd.gov](http://www.aqmd.gov)

**Response to Comment E-25:**

Staff concurs with the comments and has revised the definition for waterproofing concrete/masonry sealer.

**Response to Comment E-26:**

Staff has provided clarification in the staff report (Definitions section, page 9) regarding the implications of the change in the VOC definition pertaining to reporting of TBAC.

**Response to Comment E-27:**

Based on comments pertaining to possible costs of lower-VOC limits, as well as the associated environmental benefits, staff has revised PAR 1113 to include only those categories that are cost-effective. The 2007 AQMP, Control Measure MCS-07, indicates that cost-effectiveness cannot be determined because “all feasible” measure are not known. Nonetheless, MCS-07 commits that the District will continue to analyze the potential cost impact associated with implementing the control measure, conduct research on the newest control technologies, and provide cost effectiveness information. A thorough cost-effectiveness of the proposed amendments was conducted and a summary of overall cost-effectiveness is included in the Staff Report. More detailed data is included in the Socioeconomic Impact Analysis Report.

**Response to Comment E-28:**

Staff included the phrase ‘including but not limited to’ in regard to the inclusion of fields and lawns. This addition is for rule clarification, as this is a frequently asked question of staff, and is not expected to have any implications on other architectural coatings rules.

**Response to Comment E-29:**

The change in Appendix A subdivision (J) is to clarify that the penalties for violating the provisions of the averaging compliance option (ACO) apply to every gallon of each product line sold above the VOC limit and not just for each product line sold above the limit. This proposed revision is for clarification, since based on discussions during the development of the ACO Guidance document, staff always intended the violation to apply to each and every gallon of coating sold above the VOC limit if a manufacturer violates any provisions of the ACO.

**Response to Comment E-30:**

Based on the comment, staff has removed the phrase ‘concrete lacquer’ from the proposed amended definition of waterproofing concrete/masonry sealers.

**Response to Comment E-31:**

Staff has addressed the omission in the proposed amended rule language.

**Response to Comment E-32:**

Staff has addressed the inconsistency in the proposed phase out dates in the ACO. Staff is not proposing to include zinc rich primers to the list of categories that can be averaged since no manufacturer has, or is currently listing zinc rich primers in their averaging plan. Manufacturers must submit the coatings they are proposing to average at the beginning of an ACO period. New coatings must be submitted for review and approval prior to averaging them, and would be considered a modification to the previously approved plan. The ACO provision does not work well when a manufacturer adds coatings on a job-by-job basis and the ACO needs to be well planned to ensure that the actual emissions at the end of the compliance period are below the allowable emissions.

**Response to Comment E-33:**

Staff is still proposing to keep the method which defines the term gonioapparent; the ASTM method provides a technical definition of gonioapparent which can be measured in a laboratory. The definition states that gonioapparent material change in appearance with change in illumination angle or viewing angle. This can be demonstrated in a laboratory by using multi-angle color measurements.

**Response to Comment E-34:**

Current Rule 1113 – Architectural Coatings considers tertiary butyl acetate (tBAC) as an exempt VOC when used to formulate industrial maintenance coatings only, considering that these coatings are typically applied by professional painting contractors that use personal protective equipment (PPE), including appropriate respirators. At this time, staff does not believe that it is necessary to expand the categories that can use tBAC as an exempt VOC. Staff is not confident that contractors applying the suggested broad range of coatings are trained in the use of PPE, and would use the appropriate respirators. Further, in regards to Dimethyl Carbonate (DMC), staff is not proposing any exemptions since, in September 2009, the AQMD’s Governing Board rejected delisting DMC due to potential health concerns expressed by the public. Additionally, AQMD staff is working with the California Air Resources Board staff on a consumer/worker exposure health assessment for DMC, which is still in the draft stage. If and when this final health assessment recommends the exemption of DMC as a VOC, the AQMD will consider a proposal to exempt DMC. In regard to the comment

that permits could be required prior to allowing the use of DMC for architectural coatings operations, currently, the use and application of architectural coatings does not require any AQMD permits, thus this approach would not be feasible.

**Response to Comment E-35:**

Over the past 15 years, AQMD staff has been, and continues to participate in discussions at the federal and state level, to discuss alternative ozone control strategies, including the use of a reactivity-based approach. However, as discussed over the past two years, uncertainty in some Maximum Incremental Reactivity (MIR) values, enforcement, toxics, and formation of fine particulate less than 2.5 micrometers in diameter (PM<sub>2.5</sub>) continue to be areas that need additional assessment. Staff is studying the viability of a reactivity-based ozone control strategy by actively participating in research projects pertaining to establishing maximum incremental reactivity (MIR) values for different VOCs. For example, staff is actively participating in the North American Research Strategy for Tropospheric Ozone (NARSTO) work related to reactivity. Staff also continues to participate in the following committees: Applications Benefits, Near Term Science, Toxics, Atmospheric Chemistry and PM. Further, staff recognizes the low MIR values associated with the compounds that are considered exempt under the traditional VOC mass-based regulatory scheme as well as the potential flexibility of an alternate ozone control strategy. In concept, staff is not opposed to a reactivity-based approach to control ozone, but based on the state of the science and other comments received, there are several concerns. For example, one of the main concerns is that there may be toxicity associated with some VOC-containing compounds that have a relatively low MIR value. Other issues that need to be considered include the potential for secondary organic aerosol formation, specific consensus methodology, and enforceability. Further, CARB staff has indicated that, effective and efficient enforcement of the aerosol coatings rule, which is a reactivity-based control approach, has been an issue over the past few years, especially with regard to formulation data and analytical limitations. The EPA is also in the process of developing a “toolkit” that will address SIP equivalency and will include additional enforceability guidelines for a reactivity-based approach. Thus, staff plans to continue working closely with CARB, U.S. EPA, the American Chemistry Council, other industry members and the public to address and resolve these issues prior to proposing a reactivity-based ozone control strategy.

**Response to Comment E-36:**

The AQMD appreciates the opportunity to continue working with industry on the Paint and Coatings Exposure Study (PACES), and closely monitors the progress. As these studies fully evaluate the fate and availability of solvents used in architectural coatings, and are finalized, the AQMD staff is open to discussions as to how the results may be incorporated into future planning activities and/or regulations.

**F. Mitchell M. Tsai, March 28, 2012**

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BY HAND DELIVERY AND ELECTRONIC DELIVERY

March 28, 2012

Dr. Phillip Fine  
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Mr. Joe Cassmassi  
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RE: 2012 Air Quality Management Plan – Santa Monica Airport

Dear Dr. Fine and Mr. Cassmassi,

I am writing on behalf of Concerned Residents Against Airport Pollution (“Concerned Residents”) regarding Santa Monica Municipal Airport (“SMO”) located at 3223 Donald Douglas Loop South, Santa Monica, California 90405. Concerned Residents is composed primarily of residents who live and/or work near SMO. We request that South Coast Air Quality Management District (“SCAQMD”) review, propose, approve, and submit to California Air Resources Board (“CARB”) an Indirect Source Review Rule regulating air pollution emissions originating from activities at SMO.

F-1

SMO has a disproportionate environmental health impact on local residents. SMO is unique in having dense residential development less than 300 feet from the east and west ends of the runway. Unlike other Southern California airports, SMO has almost no buffer zone between the runway ends and the surrounding community. Adrian Castro, et al, Santa Monica Airport Health Impact Assessment (2010). A UCLA study noted that “[s]mall airports in heavily populated areas do not necessarily have ... buffers ... so residents may be more directly exposed to aircraft emissions.” Shishan Hu, et al *Aircraft Emissions Impacts in a Neighborhood Adjacent to a General Aviation Airport in*

F-2

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*Southern California*, 43 Environ. Sci. Technol. 8039, 8039 (2009). The UCLA study went on to conclude that the residential neighborhoods surrounding SMO have “markedly high concentrations of air pollutants ... suggesting ... [that the] buffer areas around ... [SMO] may be insufficient.” The proximity between the airport and the surrounding community creates a dangerous health risk for local residents.

Local residents living in proximity with the airport face an elevated risk of cancer. According to a study sponsored by the Los Angeles Unified School District, cancer risk arising from maximum exposure to air pollution generated by activities at SMO for local residents ran thirteen to twenty-six in one million. Bill Piazza, Santa Monica Municipal Airport: A Report on the Generation and Downwind Extent of Emissions Generated From Aircraft and Ground Support Operations 2 (1999). Cancer risks to local residents from SMO significantly exceed the guideline lifetime cancer risk of one in a million individuals for cancer risk from maximum exposure to a source of air pollutants under the Federal Clean Air Act. 42 U.S.C. § 7412.

**I. South Coast Air Quality Management District is Legally Obligated to Implement an Indirect Source Review Rule Regulating Emissions from Santa Monica Airport.**

SCAQMD is legally required to implement an Indirect Source Review rule controlling emissions from Santa Monica Airport. The California Clean Air Act requires that SCAQMD “provide for indirect source controls in those areas of the south coast district in which there are high-level, localized concentrations of pollutants ....” Cal. Health & Safety Code § 40440(b)(3).

Multiple studies have demonstrated that there are elevated levels of air pollutants such as lead, black carbon, and ultrafine particulate matter on Santa Monica Airport property as well as in neighboring residential areas. *Infra*.

Modeling studies have shown that concentration of ambient lead levels near, at and exceeding the National Ambient Air Quality Standard (“NAAQS”) at Santa Monica Airport as well

F-2

F-3

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as at nearby residential neighborhoods. Studies conducted by the U.S. Environmental Protection Agency (“USEPA”) and SCAQMD found areas on Santa Monica Airport’s runway with lead levels violating the current lead NAAQS. U.S. Environmental Protection Agency, Development and Evaluation of an Air Quality Modeling Approach for Lead Emissions from Piston-Engine Aircraft Operating on Leaded Aviation Gasoline 72 (2010); South Coast Air Quality Management District, General Aviation Airport Air Monitoring Study 20–21 (2010). In addition, both studies found elevated ambient lead levels that often exceeded, but averaged near the NAAQS in surrounding residential neighborhoods. *Id.*

F-3

Lead can have irreversible brain and nerve damage, severe developmental impacts on children as well as adverse impacts on adults. Lead has been found to have neurological impacts on children, leading to behavioral problems, learning problems, and lowered IQ. Adults, when exposed to lead, can suffer cardiovascular problems such as high blood pressure, and heart disease. Finally, lead exposure has also been found to have negative impacts on the nervous system, kidney function, immune systems, and reproductive ability. U.S. Environmental Protection Agency, Lead in Air: Health (2011), <http://www.epa.gov/airquality/lead/health.html> (last visited Nov. 11, 2011).

Elevated levels of Black Carbon have also been found to have been generated by activities at SMO. Jet takeoffs at SMO have been found to result in large spikes in concentrations of Black Carbon in and around the airport. Hu, 43 Environ. Sci. Technol. at 8039 (2009); South Coast Air Quality Management District, General Aviation Airport Air Monitoring Study: Follow-up Monitoring Campaign at the Santa Monica Airport 3 (2011).

F-4

Black carbon, as a component of particulate matter, has been linked to increased risk of cardiovascular disease, respiratory disease, cancer, and premature death. United Nations

Concerned Residents Against Airport Pollution  
2012 Air Quality Management Plan – Santa Monica Airport  
March 28, 2012

Environmental Program, World Meteorological Organization Integrated Assessment of Black Carbon and Tropospheric Ozone (2011) 113–15.

F-4

Very high levels of ultrafine particulate matter have also been found at SMO. Studies conducted by the University of California, University of Southern California, CARB, and SCAQMD found elevated ultrafine particle concentrations in the downwind residential areas directly attributable to SMO aircraft operations. South Coast Air Quality Management District, General Aviation Airport Air Monitoring Study (2010); South Coast Air Quality Management District, General Aviation Airport Air Monitoring Study: Follow-up Monitoring Campaign at the Santa Monica Airport (2011); Shishan Hu et al, Aircraft Emissions Impacts in a Neighborhood Adjacent to a General Aviation Airport in Southern California, 43 Environ. Sci. Technol. 8039 (2009).

F-5

Ultrafine particles have been linked to premature death from respiratory and cardiovascular disease. University of California Los Angeles Community Health and Advocacy Training PGY-2 Pediatric Residents, Santa Monica Airport Health Impact Assessment 10 (2010). Ultrafine particulate matter may pose a greater health risk than other, larger forms of particulate matter due to their tendency to penetrate deeper into the body. Ning Li et al, Ultrafine Particulate Pollutants Induce Oxidative Stress and Mitochondrial Damage 111 *Envt'l Health Perspectives* 455, 455 (2003).

Airports are a significant source of emissions of Volatile Organic Compounds (VOCs) as well as Nitrogen Oxides (NOx), both of which are ozone-forming pollutants. Colleen Callahan, The Plane Truth: Air Quality Impacts of Airport Operations and Strategies for Sustainability: A Case Study of the Los Angeles World Airports 7–10 (2010); U.S. EPA, Documentation for Aircraft Component of the National Emissions Inventory Methodology (2011).

F-6

Ozone has been shown to cause decreased lung function, chest pain, as well as aggravate existing respiratory illnesses such as asthma, pneumonia, and bronchitis. U.S. EPA, Ground Level

Concerned Residents Against Airport Pollution  
2012 Air Quality Management Plan – Santa Monica Airport  
March 28, 2012

Ozone: Health, <http://www.epa.gov/air/ozonepollution/health.html> (accessed on March 25, 2012).

SMO is located in Northwest Coastal LA County, which exceeded both the State and Federal Ozone standards in 2010 and 2009. South Coast Air Quality Management District, 2010 Air Quality (2011); South Coast Air Quality Management District, 2009 Air Quality (2010).

F-6

The California Clean Air Act requires SCAQMD to promulgate Indirect Source controls to regulate pollution from SMO. SCAQMD is required to impose Indirect Source controls in areas where there are “high level, localized concentrations of pollutants.” A study concluded that there are “high concentrations of air pollutants in the residential neighborhoods downwind of SM[O] due to aircraft activities ....” Hu at 8039. SCAQMD should act to regulate emissions from Santa Monica Airport.

F-7

**II. South Coast Air Quality Management District has the Authority under the Federal Clean Air Act to Impose Indirect Source Controls on Santa Monica Airport.**

Arguably, SCAQMD is federally preempted from imposing Indirect Source controls on SMO. Both the Federal Aviation Agency and the USEPA have exclusive federal authority over aircraft operations, design, and manufacture. However, SCAQMD has the authority to regulate pollution from SMO with the approval of CARB with its delegated authority under the Federal Clean Air Act. Federal courts have found that states may regulate *emissions* from aircraft engines under the Federal Clean Air Act as long as it does not directly regulate aircraft operations, design, or manufacturing. *California v. Navy*, 431 F.Supp. 1271 (1977). SCAQMD and CARB have federally delegated authority to impose Indirect Source controls on facilities such as airports. 42 U.S.C. § 7410(a)(5).

F-8



Concerned Residents Against Airport Pollution  
2012 Air Quality Management Plan – Santa Monica Airport  
March 28, 2012

**III. Santa Monica Airport Could Implement Reasonably Available Control Measures to Reduce its Environmental Health Impact on Local Residents.**

SMO could implement control measures to abate its impact on the surrounding community and comply with an Indirect Source Rule. Possible control measures could include reduced idling and holding times for jet aircraft as well as re-directing the exhaust from pre-flight run up tests.

F-8

**IV. South Coast Air Quality Management District Should Impose Indirect Source Controls on Air Pollutant Emissions from Santa Monica Airport.**

SCAQMD should impose an Indirect Source Review Rule on SMO. In light of SCAQMD's legal obligations, the significant public health risks and the feasibility of control measures that could be adopted, SCAQMD should act to abate SMO's impact on its surrounding communities.

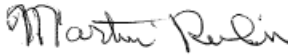
F-9

Thank you for considering these comments. Please put the undersigned on the mailing list for the 2012 AQMP. Should you have any questions or need more information, please contact Mitchell Tsai at (714) 881-4876 or tsai.mitchell@gmail.com.

Sincerely,



Mitchell M. Tsai, Esq.



Martin Rubin  
Concerned Residents Against Airport Pollution

**Responses to Comment Letter F**  
**Mitchell M. Tsai**

**Response to Comment F-1:**

AQMD staff and counsel met with the commenter and the Concerned Residents representative to discuss potential Indirect Source rules regulating activities at Santa Monica Airport. AQMD has not observed elevated levels of PM<sub>2.5</sub> in neighborhoods near the airport so this plan does not include a measure specific to the airport. AQMD will continue to explore possible ways of reducing emissions at the airport.

**Response to Comment F-2:**

Thank you for the references. The health effects of air pollutants are addressed in Appendix I. Regarding cancer risk, the AQMD's MATES III study estimates lifetime risk for air toxics near the Santa Monica Airport at about 930 per million which is less than the regional average of 1194 in a million.

**Response to Comment F-3:**

The commenter asserts that AQMD must implement an indirect source rule regulating Santa Monica Airport based on H&S §40440(b)(3) calling for indirect source controls “in those areas of the south coast district in which there are high-level, localized concentrations of pollutants. The comment cites levels of lead, black carbon, and ultrafine particulate matter. AQMD monitoring studies have not detected exceedances of lead standards either on the runway area or in neighboring residential areas. US EPA modeling studies did not project exceedances in neighboring residential areas but did project exceedances at the blast fence. This was not confirmed by AQMD studies. The statement that both studies found levels often exceeding the NAAQS but averaging at the NAAQS is misleading because the NAAQS itself is in the form of a three month average. The NAAQS itself was not exceeded. AQMD has not observed elevated levels of PM<sub>2.5</sub> near the airport. There is currently no NAAQS or SAAQS for ultrafines. So, it is not feasible to determine a level to which emissions should be reduced. Therefore, the cited statute does not require regulation.

**Response to Comment F-4:**

Thank you for the references. We note that one of the citations is a AQMD report. Additional discussion of health effects of particulate matter are in Appendix I.

**Response to Comment F-5:**

Thank you for the references. We note that two of the citations are AQMD reports. Additional discussion of health effects of particulate matter are in Appendix I, and additional discussion of ultrafine particulate matter health effects and sources is contained in Chapter 9.

**Response to Comment F-6:**

Thank you for the references. Additional discussion of the health effects of ozone and nitrogen dioxide are in Appendix I.

**Response to Comment F-7:**

The commenter states that AQMD must adopt an indirect source rule for the airport because state law calls for indirect source rules in areas where there are “high-level, localized concentrations of pollutants” and a study by Hu concluded that there were “high concentrations of air pollutants in the residential neighborhoods “ downwind of the airport. However, this study referred to levels of black carbon and ultrafine particles, which are not criteria pollutants for which a NAAQS has been established. Neither EPA nor CARB has yet developed any ambient standards for these particular pollutants. Therefore, it is uncertain what levels of such pollutants would be considered unacceptably “high.” The 2012 AQMP contains a chapter discussing the emerging science relating to ultrafine particles and AQMD staff will continue to monitor the situation.

**Response to Comment F-8:**

The AQMD staff agrees that it has the authority under state and federal law to adopt indirect source controls. Such authority is not preempted by the Clean Air Act, as held in *National Association of Home Builders vs. San Joaquin Valley APCD*, 627 F. 3d 730 (9th Cir. 2010). Whether any other federal statute would have preemptive effect would likely depend on the particulars of any proposed indirect source rule.

**Response to Comment F-9:**

For the reasons stated earlier, AQMD staff does not believe that this request for an indirect source rule for SMO should be addressed as part of the 2012 AQMP, but will continue to consider whether such an approach would be necessary or viable to reduce emissions in the future.

G. Mar Vista Community Council, May 20, 2012



May 20, 2012

South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar CA 91765

**Mar Vista  
Community Council**  
P.O. Box 56871  
Mar Vista, CA 90066

**Board of Directors  
2011-2012**

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scommins@marvista.org

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**Community Director**

Alex Thompson



Certified Neighborhood Council  
August 13, 2002

At the regular monthly meeting held May 8, 2012, The Mar Vista Community Council approved the following policy motion unanimously:

**POLICY MOTION: The Mar Vista Community Council requests that the South Coast Air Quality Management District Implement an Indirect Source Review Rule regulating emissions from the Santa Monica Airport as per the California Clean Air Act (Cal. Health and Safety Code 40440(b)(3) Please see the attached letter**

} G-1

Sincerely,  
  
Sharon Commins, Chair  
Mar Vista Community Council,

**Responses to Comment Letter G**  
**Mar Vista Community Council**

**Response to Comment G-1:**

AQMD staff does not believe that this request should be addressed as part of the 2012 AQMP, but will continue to consider whether such an approach would be viable to reduce emissions in the future.

**H. Harvey Eder, July 17, 2012**

**COMMENT LETTER #1**

Harvey Eder  
July 17, 2012

**From:** Harvey Eder [<mailto:harveyederpspc@yahoo.com>]  
**Sent:** Tuesday, July 17, 2012 3:26 PM  
**To:** CEQA\_Admin  
**Cc:** [harveyederpspc@yahoo.com](mailto:harveyederpspc@yahoo.com)

**Subject:** Part 1 of Comments 2012 AQMD Plan & Public Review Draft Vision for Clean Air 6/27/2012  
From Harvey Eder PSPC Solar Conversion Plan 7/17/12

Howdy SCAQMD/Steve Smith,

July 17,2012

This is the first /Part 1 of several submittals commenting on the Notice Of Preparation Of A Draft Program Environmental Impact Report Project Title 2012 Air Quality Management Plan (AQMP) as well as comments on the June 27,2012 Public Review Draft Vision for Clean Air: A Framework for Air Quality and Climate Planning & Appendix Actions for Development, Demonstration, and Deployment of Needed Advanced Technologies from Harvey Eder, & from PSPC, the Public Solar Power Coalition as part of a Draft Immediate Total Solar Conversion Plan for the South Coast District and California. This is in addition to comments made in Santa Monica last Friday July 13, 2012 at the City of Santa Monica Main Library from 2-5 PM etc.

This part 1 of several contains information and linke from a fracking call heald Thursday July 12, 2012 and incorporates all of the information and links into the record herein, including the recording of the call and papers by Howarth et al on ghg of methane natural gas fracking from 2010, 2011, and February 25, 2012 which have been shared with SCDistrict Staff in the pastas well as the information submitted to staff and the board with the December 2009 cover article of Scientific American and the follow up articles in Energy Policy on a 20 year solar conversion plan / proposal by Drs. Jacobson and Delucci of Stanford and UC Davis etc. The time for action is now.

H-1

Thanks ,take care

Harvey Eder & PSPC Public Solar Power Coalition (310) 393-2589

**Fracking Call: Recording and Resources**  
Monday, July 16, 2012 4:48 PM  
From:  
"Allison Fisher" <[afisher@citizen.org](mailto:afisher@citizen.org)>  
[Add sender to Contacts](#)  
To:  
"Energy Public Citizen" <[energy@citizen.org](mailto:energy@citizen.org)>  
Thank you for joining us! Please send along any suggestions you have for future call topics/presenters. -Allison

**July 12, 2012: The Fracking Movement and Climate Change: Current Strategies**  
Recording: <https://www.freeconferencerecallhd.com/playback.html?u=64-17-65-6712-17-65-6766-17-65-6710141-17-65-6755-52-75-17-65-67-17-65-67587:00TMzNDY4MDI=1>

Presenters:  
Robert Howarth has been the David R. Atkinson Professor of Ecology & Environmental Biology at Cornell University since 1993  
<http://www.eeb.cornell.edu/howarth/Marcellus.html>  
Jennifer Krill, Executive Director of EARTHWORKS  
[krill@earthworksaction.org](mailto:krill@earthworksaction.org)  
office: 202-887-1872 x. 103  
<http://earthworksaction.org>

**Fracking Climate Change Impacts:**  
Methane and the greenhouse-gas footprint of natural gas from shale formations:  
<http://www.sustainablefuture.cornell.edu/news/attachments/Howarth-EtAl-2011.pdf>

"The take-home message of our study is that if you do an integration of 20 years following the development of the gas, shale gas is worse than conventional gas and is, in fact, worse than coal and worse than oil," Howarth said. "We are not advocating for more coal or oil, but rather to move to a truly green, renewable future as quickly as possible. We need to look at the true environmental consequences of shale gas."

The study is the first peer-reviewed paper exploring the greenhouse gas footprints of conventional gas drilling. Most studies have used EPA emission estimates from 1996, which were updated in November 2010 when it was determined that greenhouse gas emissions of various fuels are higher than previously believed.

Feb. 2012 background paper on methane and the natural gas industry for the National Climate Assessment:  
<http://www.eeb.cornell.edu/howarth/Howarth%20et%20al%20-%20National%20Climate%20Assessment.pdf>

**Scope:**

- 830,000 operating oil and gas wells in U.S.
- 34 oil and gas producing states
- In 2012, 2,000 wells drilled every month, 90% of well are fracked
- Already fracking: AK, CO, WY, NM, CA (does not track production from fracking), MT, TX (news regs coming next year), OK, LA, AR, AL, MI, OH and PA (among worst regs)
- Prevention states: NY, MD, NC

**Successful Strategies:**

- Community Rights/ Home Rule
- Zoning Laws
- Property Rights – has provided an opportunity to work with a new constituency
- Documentary on this issue: Split Estate (this film is streaming and available on Netflix)
- People's Assembly and People's Resolution - OH

**Protective Regulations and Harm Reduction Strategies:**

- Production set-back from homes/structures
- Liners and covers for waste pits
- End Goal: Federal Regulations – fracking is exempted from 7 environmental laws, creating an inadequate patchwork of state-based regulations

**Other resources:**

1) Enforcement of existing laws is woefully lax. Earthworks is releasing a series of reports on enforcement in 6 states: the first two on Colorado and New Mexico, are here: [http://www.earthworksaction.org/library/detail/enforcement\\_report\\_cogcc](http://www.earthworksaction.org/library/detail/enforcement_report_cogcc) and [http://www.earthworksaction.org/library/detail/nm\\_enforcement\\_report](http://www.earthworksaction.org/library/detail/nm_enforcement_report). Upcoming reports will focus on Texas, Ohio, Pennsylvania and New York.

2) Earthworks' report *Flowback, the Dark Side of the Boom* outlines some of the health impacts in the Barnett Shale in Texas. [http://www.earthworksaction.org/library/detail/natural\\_gas\\_flowback](http://www.earthworksaction.org/library/detail/natural_gas_flowback)

3) The federal loopholes in 7 environmental laws enjoyed by the oil and gas industry are outlined here: [http://www.earthworksaction.org/library/detail/loopholes\\_for\\_polluters](http://www.earthworksaction.org/library/detail/loopholes_for_polluters). This fact sheet is incredibly handy if you find yourself explaining to folks why fracking is such a boom right now.

4) NY: <http://www.grassrootsinfo.org/fracking.html>  
<http://amillionfrackingletters.com/>

**Upcoming Events:**

Stop the Frack Attack – Washington, D.C. July 25- 28  
Learn more: <http://www.stopthefrackattack.org/>  
Get the word out and join the discussion: Follow on Twitter ([twitter.com/stopfrackattack](https://twitter.com/stopfrackattack)) and like us on Facebook ([www.facebook.com/stopthefrackattack](https://www.facebook.com/stopthefrackattack)) for even more information about the rally!

Stop Fracking with California – Join us in Sacramento July 25



Your voice is urgently needed at an upcoming demonstration and fracking workshop run by the Department of Conservation to solicit input on potential regulations. Please join us in demanding a ban that will protect our environment from this industry, which is associated with more than 1,000 documented cases of water contamination across the country.

What: Demonstration & Workshop on fracking regulations held by the California Department of Conservation  
When: Wednesday, July 25 Demonstration at 5:30 p.m., Workshop at 7 p.m.  
Where: California Environmental Protection Agency Headquarters, Byron Sher Auditorium  
1001 I Street, Sacramento, CA 95814

And, you can also submit your written comments to the state through our action alert:  
[http://action.biologicaldiversity.org/o/2167/t/5243/p/dia/action/public/?action\\_KEY=10572](http://action.biologicaldiversity.org/o/2167/t/5243/p/dia/action/public/?action_KEY=10572)

RSVP to Rose Braz, Center for Biological Diversity, Climate Campaign Director  
[rbraz@biologicaldiversity.org](mailto:rbraz@biologicaldiversity.org)

**Allison Fisher**  
Outreach Director  
Public Citizen's Energy Program

Blog: [www.energyvox.org](http://www.energyvox.org)  
Contact: 202-454-5176

More to follow before the 5pm submittal deadline tomorrow 7/18/12

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**Subject:** FW: Part 2 Comments Draft 2012 AQMP Plan & Draft Vision for Clean Air/Harvey Eder & PSPC  
7/17/12 ITSCP Immediate Total Solar Conversion Plan SCD & CALIFORNIA

Howdy Steve Smith etc,

July 17, 2012

This is Part 2 of Comments for the Draft 2012 Air Quality Management Plan and Public Review Draft June 27, 2012 Vision for Clean Air: A Framework for Air Quality and Climate Planning and Appendix: Actions for Development, Demonstration and Development of Needed Advanced Technologies / Immediate Total Solar Conversion Plan for the South Coast Air Quality Management District and the State of California etc, by Harvey Eder & PSPC the Public Solar Power Coalition July 17, 2012 before the 5pm deadline July 18, 2012. Stream of consciousness style sorry, hope to mark comments on the Final more organized." The Quantum Inigma: Physics

H-2



8) The SCD committee on BACT and BARCT plus more stringent federal standards should meet and declare various solar technologies as such and include them in various rule makings and in the 2012 AQMP Plan as part of the 5 year ITSCP, Immediate Total Solar Conversion Plan. This committee needs to meet and do this now and incorporate reports and records from Technology Advancement on Solar etc into the record as well as NREL the National Renewable Energy Lab (which was the SERI the Solar Energy Research Institute under Carter all reports and studies on the technology solar etc herein the record as well as that of other countries and companies incorporated herein by reference. We're headed for hell in a handbasket and there's no time to wait.

9) This is a proposal for a 5 year total solar conversion plan ITSC Now The Solar Future is now. This includes solar cogeneration with solar process heating space heating and cooling (absorption) and solar district CHIP. We may have to tear up the streets to lay the pipes and it won't be easy but it can be done and seasonal solar storage using the earth as has been proven in the past can be done and fast putting people to work doing this. Unemployment is over 10% in the SCD Southern Cal and will soon hit 15% if the economy continues to falter with underemployed at 20-25% and youth unemployment at 25-50%. Action is needed now. Climate change with GHG/ and criteria and toxics worst than previously thought with an exponential increase in methane CH4 with 90% of the wells new wells fracked and the tundra melting with arctic warming faster and faster and the oil companies wanting with the Russians planting their flag at the bottom of the north pole getting ready with our oil and gas companies to drill in the arctic for fossil fuels on last gasp, grasp for the final demon. It's insane. Like Einstein said doing the same thing over and over again and getting no different result is crazy. He also said that the most powerful thing is the power of compound interest. We need to invest in a solar future. it is now...

The economy is slowing in China and the developing world with mounting problems in Europe, Greece, Spain, Italy etc and the Germans to bail them out remember the German inflation of the 20s after WW1 there worried about inflation like the fight and the Teaparties are here the gold bugs and the anti feds. with the LIBOR scandal with Bernanke testifying today before congress the world economy and the world is slowing down

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**Subject:** Part 3 Comments on 2012 Draft AQMP Plan & Public Review Draft June 27, 2012 Vision for Clean Air & Addendum.. This is Part 3A part 3 B will follow. From Harvey Eder and Public Solar Power Coalition 7/18/12 8:06 am

Howdy Steve Smith et al.,

7/18/12 8:15 am

This is part 3 of comments on the Public Review Draft June 27, 2012 Vision for Clean Air: a Framework for Air Quality and Climate Change Planning and its' Appendix Actions for

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Development, Demonstration, and Deployment of Needed Advanced Technologies and Notice Of Preparation Of A Draft Program Environmental Impact Report, 2012 Air Quality Management Plan (AQMP) from, by Harvey Eder and Public Solar Power Coalition.

This supplemental is in addition to Parts 1 and 2 submitted yesterday 7/17/12.

10. The documents here emphasize biofuels which emit criteria and toxic pollutants which is not the case with direct solar or wind and hydro. It is true that in manufacturing the solar systems if not done on a solar breeder there are some emissions and this will have to be studied further some work has been done on this already as well as net energy work and the solar systems perform well in comparison to fossil fuels and biomethane and biofuels solar hydrogen is also proposed as well as solar electric ( a Santa Cruz man Paul Scott has an electric car that he has driven over 100,000 miles on with solar energy/electricity as one example as have many other people that have testified on the record in the past to SCAQMD etc members of Plug In American has many members that do this in the District and are featured in the documentary Who Killed The Electric Car, which is also hereby herein placed in the record in these proceedings by reference !%@

this shows the past record of SCD and CARB about electric cars etc..

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**Subject:** Part 4 Comments Testimony for on the 2012 Air Quality Management Plan (Notice of Preparations of a Draft Program) under ceqa as well as for Public Review Draft June 27, 2012 Vision for Clean Air: A Framework for Air Quality and Climate Pla...

Howdy Steve Smith et al.,

This is Part 4 of Comments/testimony for on the 2012 Air Quality Management Plan (AQMP subject: Notice of Preparation of a Draft Program Environmental Impact Report and for the Public Review Draft June 27, 2012 Vision for Clean Air: A Framework for Air Quality and Climate Planning and its' Appendix: Actions for Development, Demonstration, and Deployment of Needed Advanced Technologies for by Harvey Eder and the Public Solar Power Coalition at 9:13 am July 18, 2012 continuing etc timely submitted.

12 I/we hereby, herein incorporate by reference all submittals in writing and orally to the SCAQMD since 1985 made by Harvey Eder and PSPC Public Solar Power Coalition in reference to solar energy as well as all written and oral statements and or comments made to the CPUC, CEC, NRC, CASIO, including all state and federal government incorporate into the record in this proceeding CEQA Drafts etc July 18, 2012, EPA etc..

13 This is a 5 year immediate total solar conversion plan by 2017 which allows the federal government to pay for 1/2 ( through Federal 30% tax credits and an additional 20-30% present value for accelerated depreciation ACRS or with AQCRS 10% etc.) of the cost of the conversion

H-2

to solar as fast, as soon as possible in the alternative as soon as possible in the alternative 10 year immediate total solar conversion plan by 2023 or in the worst case a 20 year immediate total solar conversion plan by 2032 only if the Plan can not be implemented in a 5 year, or in the alternative 10 year etc. This may also use the Federal R&D tax credit for some of it etc..

14 Ten Years ago AB 117 was made law in the State of California and recently supported by AB790 last year which allows cities and counties as in 790 special districts like SCAQMD and or SCAG etc to form CCAs Community Choice Aggregations which allow local governments to form public solar power entities and or municipalities like LADWP or regionals like SMUD Sacramento Public Utility Districts as well as coops to provide immediate total solar conversion, CCA the IOU Investor Owned Utility owns the transmission and distribution system but bills for the power like PG&E and MEA MARIN ENERGY AUTHORITY ( there is also being implemented a CCA in San Francisco as well as activity in the East Bay with East Bay MUD municipal utility District ( also activity in Sonoma and possibly in San Diego county as well as Santa Monica etc)

PG&E spent over \$40 million trying to defeat this law about 2 years ago with the pro CCA folks spending only a couple hundred thousand dollars and their initiative Prop 16 lost ! and CCA move on. This was proposed over a year ago to SCD in a meeting on forming the Energy Plan and is herein Proposed now. Also as proposed to the meeting on the Integrated Energy Plan Report last month at the CALTRANS building by Eder and PSPC a Cal State wide entity Solar Cal was proposed which would own the transmission and distribution electric system in California etc. along with a 100% oil and gas tax ( paying only cost plus 10% for oil and gas ( the 3rd largest state for O&G production with the money used for buying the T&D system from the IOU as taken over by eminent domain for Solar Cal as well as facilitating system ownership utilizing the federal tax advantages etc. and low interest rates along with any state and or federal infrastructure bond etc that has been established or will be in the future. Low and low Middle income people will be assisted by Solar Cal . If this does not pass the state legislature an initiative in 2014 will be circulated to implement it. Boulder Colorado has just passed a law to buy out the IOU there and is home to the UOC and the ASES Am Solar Energy Society . There are several laws being proposed in Ca including AB843 for solar community gardens which needs to support more smaller systems and low income low middle income, also AB1990 is going through the state Solar For All these bills and laws need to be supported by SCD and are incorporated into the record here by reference as well as other environmental justice and solar conversion bills etc. Will check in again in a few hours. He& Pspc

H-2

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**Subject:** Part 5 Comments etc, SCAQMD AQMP 2012 Draft and Vision...Draft & appendix..June 27,2012 by from Harvey Eder & Public Solar Power Coalition

Howdy Steve Smith et al.,

July 18,2012 1:57 PM

This is Part 5 Comments on Draft 2012 Air Quality Management Plan (AQMP) due today by 5pm 7/18/12 as well as comments for Public Review Draft June 27, 2012 Vision for Clean Air: A Framework for Air Quality and Climate Planning from Harvey Eder & PSPC Public Solar Power Coalition.

15 The Natural Gas and all methane programs /subsidies for using ch4 ie Moyer Program and school bus funding etc power plants etc by SCAQMD and other Districts and CARB must be stoped at once and Immediate Total Solar Conversion Plan must be implemented at once. Over a 20 year time frame see documents in Part 1 of Comments etc. Howarth et al. incorporated into the record herein by reference natural gas and or methane ch4 has 100 times the GWP Global Warming Potential /Impact of co2 equalivent and the numbers used by SCD and CARB are wrong for trading cap and trade CPUC, CEC etc EPA, LCFS Low Carbon Fuel Standfard and are enjoined by writ of mandamus to stop subsidizing by all government entities now for solar electric, hydrogen etc solar xyz...This was illegally with held by SCAQMD and CARB as well as the CPUC GHG proceedings and is entered bby reference in those proceedings in pastt and present and future proceedings etc.

16 Subsidies for solar (tax incentivesd etc. must be made through progressive taxes on the weathy (like Obamas tax increase and more). Federal Income Taxes have been over 70-90% for vast majority of the past centruy and should be increases to fund the solar conversion plan and help the poor and low, and low middle income which is Environmental Justice. Even with the low rate of apx 40% under Clinton which was reduced by Bush to apx. 35% 10 years ago the economy was better and unemployment was less under the higher rate in the 1990 than over the past 10 years (and job creation) This is also true since the end of WW2 in the late 40s and in the 50s and 60 etc which was a boom period which negates the reactionary right wing arguments that higher taxes on the wealthy will hurt the economy. This if false the US Economy performed just fine with double the Fed Income Tax on the Rich like Romney. As cited in the July 13 SCD meeting in Santa Monicalast week the Republicans support coal while the Democrates support natural gas while 4 years ago Obama supported Solar/renewables which is needed now . tens and 100s or biooions of dollars are spent supporting climate changing dirty oil coal and gas fossil fuels while polling proves that 80-90% plus of voters and the US Public supports Solar Energy., and are solar "energy voters".

17 The CCA law was passed when Enron was gaming the state for outrageous profit and they caused blackouts in CA and they went bankrupt like PG&E and So Cal Edison was withing days or rather hours from not also going bankrupt as well, Theirs is a wrong and bankkrupt policy cupporting fossil fuels and nuclear energy (Diablo and SONGS etc)  
Global warming Climate Change melting the Artic sea ice etc...

H-2

**Subject:** Part 6 Comments draft CEQA 2012 Air Quality Management Plan & Public Review Draft June 27,2012 vision for Clean Air: A Framework for Air Quality and Climate Planning & Appendix..from/by Harvey Ederand PSPC Public Solar Power Coalition 7/18/12

Howdy Steve Smith et al.,

July 18,2012 4:40PM

Part 6 Comments on Notice Of Preparation Of A Draft Program Environmental Impact Report, 2012 Air Quality Management Plan (AQMP) and Public Review Draft June 27,2012 Vision for Clean Air: A Framework for Air Quality and Climate Planning of,by from Harvey Eder and PSPC the Public Solar Power Coalition and the Appendix....Vision for Clean Air.

18 Solar Cal was presented to the joint meeting on the Integrated Energy Policy Report Last month at the Cal Trans Building in LA where in the afternoon Dr. Walerstein presented for the District information. There was comissioners from the CPUC , the CEC , Cal ISO and the Director goldstene from CARB and others present. The state would own the transmission and distribution system now controlled by the IOUs and they would operate and manage the system as they do now on a cost plus 10% basis. 10 years the whole system could has been bought for apx \$10 billion now it will sell with eminate domaine for \$12-15 Billion for the T&D and the CPUC will regulate the operation of the systemlike they are doingtoday at cost plus 10% . The IOUs were also at the IEPR meeting as well along with other groups and citizens.

At the meeting on July 13 in Santa Monica MTBE pollution was brought up which increased the efficiency of engineswhich mentless emissions in the air but gas tanks leaked into the ground water contaminating the City of Santa Monicas' warter. This resulted in \$100s million in litigation paid by the oil companies to clean the water. Now fracing for oil and gas 1/3 to 1/2 plus of which comes from fracked wellsss in California from Texas, Lousiana NM and wyoming and Colorado threaten the ground water. the Resources Agency and its Department of Conservation and its DOGGR Division Of Oil Gas and Geothermal Resources is holding meetings around the state that will lead to regulations. As Marshal of DOC stated Fracking in CA is "Regulated but not reported.

Existing law covers this now but nothing is being done about, so the Sierra Club and Center for Biological Diversity have gone to court over an estimated 10-15 billion barrels of oil in the Monterey Shale ( the biggest field in the USA / Prudo Bay in Alaska was about the same size as this and there is a gold/oil rush going on to develope this. At todays prices its worth a trillion dollars or two plus which if developed and produced should be used for the ITSCP the Immediate Total Solar Conversion Plan just 86 ground water or ? This could be done through a 90% severence tax ( Alaska has a 25% tax - the state did own all of the oil but took 1/8 in royalties / tax which went to Alaska Permanant Fund) in California to help finance ITSCP which should help fund low and low middle income ITSCPPlan cited herein. There is a meeting

H-2

which it was mentioned that the District should be at of the Water Agencies on July 24th in Long Beach on Fracking, the day before DOGGRs last meeting in Sacramento on July 25th 2012. Regulations for the state wouldn't be implemented until mid 2013 for CA just as federal EPA regulations and studies won't be released until after the Fall November elections. The District is planning a meeting on fracking in September with Doggr and EPA etc.

The District should not wait until 2015 to submit a SIP on PM 2.5 to the feds but do it now as well as cover ultra fines which the District has had a meeting on a few years ago. This must be part of the AQMP this year 2012 as part of the ITSC Plan cited herein etc for 5 year conversion Plan etc..

GHG Howarth et al must be googled ( natural gas fracking 2011 and 2012 both papers are in onlinks submitted with Comment Part 1 shows as submitted to the District in the past that 105 times the ghg impact of co2e using a 20 yr time frame for methane/natural gas rather than 21 used by SCAQMD or 25 used by CARB or 33 used by James Hanson NASA Gottard Institute several years ago over a 100 year time frame. With all of the rush to frack (Howarth states on the attached recording of last Thursday June 12, 2012 fracking phone call that oil fracking is as bad (value \_ yeilds as much methane as fracking for gas incorporated herein hereby in the record by reference as well) Warming as happening much faster in the Artic than science predicted and if the tundra melts methane ch4 will be released in a great amount ( a negative positive feedback loop).

Gov Brown wants 12 GW of distributed generation solar to be on line in Ca by 2020. At the IERP meeting in LA last month Commissioner (CPUC) Florio stated that there is already more that 33% of the load/ solar signed for use by 2020 . There has been for several years now. This is too modest a program. That's why ITSCPlan presented here needs to be implemented now.

H-2



**Responses to Comment Letter H**  
**Harvey Eder**

**Response to Comment H-1:**

We appreciate the references and information sent over on the environmental impacts from hydraulic fracturing. These concerns are something we have been monitoring and tracking carefully and are informing the public along with addressing these issues with industry. Recently at AQMD we held a forum focused on the environmental impacts of hydraulic fracturing and provided policy level discussions. In addition, we are working with both the state and federal government in developing regulations and enforcement policies. Finally, staff will be working on development of fracking regulations, if feasible and appropriate.

**Response to Comment H-2:**

The AQMD recognizes the clean air benefits renewable energy provides to both the electric power grid and other services such as hot water heating. Chapter 10 of the AQMP addresses the implementation of the states 33% renewable portfolio standard along with the benefits increased efficiency provides on reducing fuel and energy demands. This chapter shows the total energy consumption in Sothern California was near 2.1 quads in 2008 and is expected to show a slight 0.1 quad increase by 2023. However, the slight increase in projected energy use in Southern California will be met with an increase in energy prices; in 2008 close to \$54 billion was spent on energy and the projected cost of energy consumption in 2023 is \$74 billion. Overall the projected 5% increase in energy consumption is going to be met with a 27% increase in energy prices. As mentioned within this chapter, significant implementation of renewable energy coupled with the transportation system will help lower emissions, reduce impacts from volatile energy prices, help localize dollars spent on energy, and provide some isolation from increasing energy costs.

The AQMD endorses solar power as a clean air solution to help provide emission free electricity to residences and businesses whenever feasible. We have been an early supporter of implementing new solar technologies. At the AQMD headquarters, we currently have over 180kW of solar panels installed that are demonstrating three different solar technologies. Additionally, we are funding and undertaking several technology demonstration projects that help address the limitations of solar, such as, coupling solar power production with energy storage to help with intermittency. We also promote the benefits electrification technologies provide to clean the air such as electric vehicles, and as mentioned earlier, advocate for the electrical supply to be from clean air sources such as renewables.

The prices of solar panels have come down nearly a third in the past couple of years due to less expensive ways to manufacture polysilicon, an increase in solar

manufacturers, and expiring solar incentives in other countries. Resulting price declines have made PV solar very competitive with conventional generating technologies. This decline in prices has helped implement this technology in Southern California as there are now many solar installation companies that employ thousands in this sector. The recent increase of roof-top solar PV installations does not show any indication of slowing down in the near future since financing mechanisms have become available along with local incentives and federal tax credits. Additional incentives for solar installations are also likely in the near future as a portion of the revenues utilities start to receive from the CARB GHG Cap and Trade program under AB 32.

Unfortunately, solar power does not currently provide a standalone solution to providing all the electrical generation needs for Southern California. Until the intermittency problem is addressed, large storage technologies, and increased panel efficiencies become more cost effective, existing natural-gas fired power generating technologies are required to provide base loads, ramp rates, and other ancillary services such as frequency regulation. Additionally, the clean air benefits renewable energy sources such as solar power provides in Southern California will be best realized as transportation technologies such as electrification are implemented at a faster rate.

In a Vision for Clean Air: A Framework for Air Quality and Climate Planning biofuels was presented as a one component among several to meet the GHG goals of the State. The use of biofuels does not typically provide an advantage in reducing criteria pollutants if they are combusted in standard IC engines such as diesels. Therefore in the document it was stated “In the longer-term, to meet the greenhouse gas targets, any combustion-based heavy-duty trucks would rely predominantly on efficiency and renewable and biofuel solutions. However, to achieve the air quality standards in the South Coast, a technology transition to zero- and near-zero emission trucks (e.g., electric, fuel cell, or hybrid with all electric range) to reduce NOx emissions is also needed.” In summary, staff supports the development and implementation of solar energy technologies to the maximum extent feasible and cost-effective. These technologies are not needed to attain the PM2.5 standards, but staff will continue to support solar technologies for attaining the ozone standards in the future.

**I. Neighbors of Santa Monica Airport, July 28, 2012**

Neighbors of Santa Monica Airport  
P.O. Box 643033 Los Angeles, California 90064

BY ELECTRONIC DELIVERY

July 28, 2012

Dr. Phillip Fine  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765  
pfine@aqmd.gov

Mr. Joe Cassmassi  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765  
jcassmassi@aqmd.gov

RE: 2012 Air Quality Management Plan – Santa Monica Airport

Dear Dr. Fine and Mr. Cassmassi,

We are writing on behalf of Neighbors of Santa Monica Airport (“NoSMO”) regarding Santa Monica Municipal Airport (“SMO”) located at 3223 Donald Douglas Loop South, Santa Monica, California 90405. NoSMO is a coalition composed of residents and community leaders from Santa Monica and Los Angeles neighborhoods impacted by SMO. We request that South Coast Air Quality Management District (“SCAQMD”) review, propose, approve, and submit to California Air Resources Board (“CARB”) an Indirect Source Review Rule regulating air pollution emissions originating from activities at SMO.

SMO has a disproportionate environmental health impact on local residents. SMO is unique in having dense residential development less than 300 feet from the east and west ends of the runway. Unlike other Southern California airports, SMO has almost no buffer zone between the runway ends and the surrounding community. Adrian Castro, et al, *Santa Monica Airport Health Impact Assessment* (2010). A UCLA study noted that “[s]mall airports in heavily populated areas do not necessarily have ... buffers ... so residents may be more directly exposed to aircraft emissions.” Shishan Hu, et al *Aircraft Emissions Impacts in a Neighborhood Adjacent to a General Aviation Airport in Southern California*, 43 Environ. Sci. Technol. 8039, 8039 (2009). The UCLA study went on to conclude that the residential neighborhoods surrounding

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Neighbors of Santa Monica Airport  
P.O. Box 643033 Los Angeles, California 90064

SMO have “markedly high concentrations of air pollutants ... suggesting ... [that the] buffer areas around ... [SMO] may be insufficient.” The proximity between the airport and the surrounding community creates a dangerous health risk for local residents.

Local residents living in proximity with the airport face an elevated risk of cancer. According to a study sponsored by the Los Angeles Unified School District, cancer risk arising from maximum exposure to air pollution generated by activities at SMO for local residents ran thirteen to twenty-six in one million. Bill Piazza, Santa Monica Municipal Airport: A Report on the Generation and Downwind Extent of Emissions Generated From Aircraft and Ground Support Operations 2 (1999). Cancer risks to local residents from SMO significantly exceed the guideline lifetime cancer risk of one in a million individuals for cancer risk from maximum exposure to a source of air pollutants under the Federal Clean Air Act. 42 U.S.C. § 7412.

I. **South Coast Air Quality Management District is Legally Obligated to Implement an Indirect Source Review Rule Regulating Emissions from Santa Monica Airport.**

SCAQMD is legally required to implement an Indirect Source Review rule controlling emissions from Santa Monica Airport. The California Clean Air Act requires that SCAQMD “provide for indirect source controls in those areas of the south coast district in which there are high-level, localized concentrations of pollutants ....” Cal. Health & Safety Code § 40440(b)(3).

Multiple studies have demonstrated that there are elevated levels of air pollutants such as lead, black carbon, and ultrafine particulate matter on Santa Monica Airport property as well as in neighboring residential areas. *Infra*.

Modeling studies have shown that concentration of ambient lead levels near, at and exceeding the National Ambient Air Quality Standard (“NAAQS”) at Santa Monica Airport as well as at nearby residential neighborhoods. Studies conducted by the U.S. Environmental Protection Agency (“USEPA”) and SCAQMD found areas on Santa Monica Airport’s runway with lead levels violating the current lead NAAQS. U.S. Environmental Protection Agency, Development and Evaluation of an Air Quality Modeling

I-1

I-2

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Approach for Lead Emissions from Piston-Engine Aircraft Operating on Leaded Aviation Gasoline 72 (2010); South Coast Air Quality Management District, General Aviation Airport Air Monitoring Study 20-21 (2010). In addition, both studies found elevated ambient lead levels that often exceeded, but averaged near the NAAQS in surrounding residential neighborhoods. *Id.*

Lead can have irreversible brain and nerve damage, severe developmental impacts on children as well as adverse impacts on adults. Lead has been found to have neurological impacts on children, leading to behavioral problems, learning problems, and lowered IQ. Adults, when exposed to lead, can suffer cardiovascular problems such as high blood pressure, and heart disease. Finally, lead exposure has also been found to have negative impacts on the nervous system, kidney function, immune systems, and reproductive ability. U.S. Environmental Protection Agency, Lead in Air: Health (2011), <http://www.epa.gov/airquality/lead/health.html> (last visited Nov. 11, 2011).

Elevated levels of Black Carbon have also been found to have been generated by activities at SMO. Jet takeoffs at SMO have been found to result in large spikes in concentrations of Black Carbon in and around the airport. Hu, 43 Environ. Sci. Technol. at 8039 (2009); South Coast Air Quality Management District, General Aviation Airport Air Monitoring Study: Follow-up Monitoring Campaign at the Santa Monica Airport 3 (2011).

Black carbon, as a component of particulate matter, has been linked to increased risk of cardiovascular disease, respiratory disease, cancer, and premature death. United Nations Environmental Program, World Meteorological Organization Integrated Assessment of Black Carbon and Tropospheric Ozone (2011) 113-15.

Very high levels of ultrafine particulate matter have also been found at SMO. Studies conducted by the University of California, University of Southern California, CARB, and SCAQMD found elevated ultrafine particle concentrations in the downwind residential areas directly attributable to SMO aircraft operations. South Coast Air Quality Management District, General Aviation Airport Air Monitoring Study

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(2010); South Coast Air Quality Management District, General Aviation Airport Air Monitoring Study: Follow-up Monitoring Campaign at the Santa Monica Airport (2011); Shishan Hu et al, *Aircraft Emissions Impacts in a Neighborhood Adjacent to a General Aviation Airport in Southern California*, 43 Environ. Sci. Technol. 8039 (2009).

Ultrafine particles have been linked to premature death from respiratory and cardiovascular disease. University of California Los Angeles Community Health and Advocacy Training PGY-2 Pediatric Residents, Santa Monica Airport Health Impact Assessment 10 (2010). Ultrafine particulate matter may pose a greater health risk than other, larger forms of particulate matter due to their tendency to penetrate deeper into the body. Ning Li et al, *Ultrafine Particulate Pollutants Induce Oxidative Stress and Mitochondrial Damage* 111 *Env'tl Health Perspectives* 455, 455 (2003).

Airports are a significant source of emissions of Volatile Organic Compounds (VOCs) as well as Nitrogen Oxides (NOx), both of which are ozone-forming pollutants. Colleen Callahan, The Plane Truth: Air Quality Impacts of Airport Operations and Strategies for Sustainability: A Case Study of the Los Angeles World Airports 7-10 (2010); U.S. EPA, Documentation for Aircraft Component of the National Emissions Inventory Methodology (2011).

Ozone has been shown to cause decreased lung function, chest pain, as well as aggravate existing respiratory illnesses such as asthma, pneumonia, and bronchitis. U.S. EPA, Ground Level Ozone: Health, <http://www.epa.gov/air/ozonepollution/health.html> (accessed on March 25, 2012). SMO is located in Northwest Coastal LA County, which exceeded both the State and Federal Ozone standards in 2010 and 2009. South Coast Air Quality Management District, 2010 Air Quality (2011); South Coast Air Quality Management District, 2009 Air Quality (2010).

The California Clean Air Act requires SCAQMD to promulgate Indirect Source controls to regulate pollution from SMO. SCAQMD is required to impose Indirect Source controls in areas where there are "high level, localized concentrations of pollutants." Cal. Health & Safety Code § 40440(b)(3). A study

I-2

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concluded that there are "high concentrations of air pollutants in the residential neighborhoods downwind of SM[O] due to aircraft activities ...." Hu at 8039. SCAQMD should act to regulate emissions from Santa Monica Airport.

I-2

**II. South Coast Air Quality Management District has the Authority under the Federal Clean Air Act to Impose Indirect Source Controls on Santa Monica Airport.**

Arguably, SCAQMD is federally preempted from imposing Indirect Source controls on SMO. Both the Federal Aviation Agency and the USEPA have exclusive federal authority over aircraft operations, design, and manufacture. However, SCAQMD has the authority to regulate pollution from SMO with the approval of CARB with its delegated authority under the Federal Clean Air Act. Federal courts have found that states may regulate *emissions* from aircraft engines under the Federal Clean Air Act as long as it does not directly regulate aircraft operations, design, or manufacturing. *California v. Navy*, 431 F.Supp. 1271 (1977). SCAQMD and CARB have federally delegated authority to impose Indirect Source controls on facilities such as airports. 42 U.S.C. § 7410(a)(5).

I-3

**III. Santa Monica Airport Could Implement Reasonably Available Control Measures to Reduce its Environmental Health Impact on Local Residents.**

SMO could implement control measures to abate its impact on the surrounding community and comply with emissions limits imposed under an Indirect Source Rule. SMO could adopt a number of measures under its proprietary authority to reduce the amount of air pollutant emissions from its facility, including increased landing fees, reducing available parking spaces for large aircraft, etc.

I-4

**IV. South Coast Air Quality Management District Should Impose Indirect Source Controls on Air Pollutant Emissions from Santa Monica Airport.**

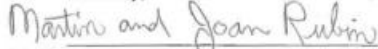
SCAQMD should impose an Indirect Source Review Rule on SMO. In light of SCAQMD's legal obligations, the significant public health risks and the feasibility of control measures that could be adopted, SCAQMD should act to abate SMO's impact on its surrounding communities.

I-5

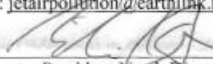
Neighbors of Santa Monica Airport  
P.O. Box 643033 Los Angeles, California 90064

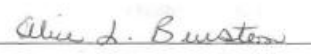
Thank you for considering these comments. Please put the undersigned on the mailing list for the 2012 AQMP. Should you have any questions or need more information, please contact Mitchell Tsai at (714) 881-4876 or [tsai.mitchell@gmail.com](mailto:tsai.mitchell@gmail.com).

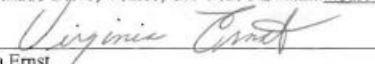
Sincerely,

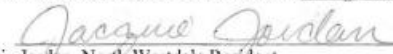


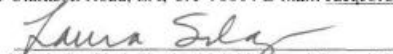
Martin and Joan Rubin, Co-founders and Director, Concerned Residents Against Airport Pollution  
P.O. Box 643033 Los Angeles, California 90064;  
E-mail: [jetairpollution@earthlink.net](mailto:jetairpollution@earthlink.net) Phone: (310) 479-2529

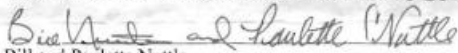
  
Bill Koontz, President North Westdale Neighborhood Association  
2647 S. Barrington Ave. #4, LA, CA 90064 [chillywilly00@msn.com](mailto:chillywilly00@msn.com)

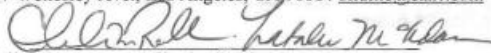
  
Alice Burston,  
703 Machado Drive, Venice, CA 90291 E-mail: [alburston@hotmail.com](mailto:alburston@hotmail.com)

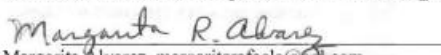
  
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Margarita Alvarez [margaritarafaela@aol.com](mailto:margaritarafaela@aol.com)



**Responses to Comment Letter I**  
**Neighbors of Santa Monica Airport**

**Response to Comment I-1:**

AQMD has not observed elevated levels of PM<sub>2.5</sub> in neighborhoods near the airport so this plan will not include a measure specific to the airport. AQMD will continue to explore possible ways of reducing emissions at the airport. The health effects of air pollutants are addressed in Appendix I. Regarding cancer risk, The AQMD's MATES III study estimates life time risk for air toxics near the Santa Monica Airport at about 930 per million which is less than the regional average of 1194 in a million.

**Response to Comment I-2:**

See Response F-3. Also, although some airports are significant sources of VOC and/or NO<sub>x</sub>, which are precursors to ozone, ozone is not a “localized” pollutant and is not the target of H&S Code §40440(b)(3).

**Response to Comment I-3:**

The AQMD staff agrees that it has the authority under state and federal law to adopt indirect source controls. Such authority is not preempted by the Clean Air Act, as held in *National Association of Home Builders v San Joaquin Valley APCD*, 627 F. 3d 730 (9th Cir. 2010). Whether any other federal statute would have preemptive effect would likely depend on the particulars of any proposed indirect source rule.

**Response to Comment I-4:**

In the absence of high-level localized emissions of criteria air pollutants, an indirect source control measure for Santa Monica Airport is not required. While airports in general produce VOC and NO<sub>x</sub> emissions, which contribute to ozone, there is no technical basis to single out Santa Monica Airport in an effort to reduce ozone pollution. As efforts to implement ozone measures and reduce the size of the “black box” for ozone, staff will continue to explore methods of reducing emissions of NO<sub>x</sub> at a variety of sources including airports.

**Response to Comment I-5:**

AQMD staff does not believe that this request should be addressed as part of the 2012 AQMP, but will continue to consider whether such an approach would be viable to reduce emissions in the future.

## J. CA Trucking Association, August 30, 2012

August 30, 2012



Dr. William A. Burke, Chairman  
Members of the SCAQMD Governing Board  
South Coast Air Quality Management District  
21865 Copley Dr.  
Diamond Bar, CA 91765

### RE: 2012 Draft Air Quality Management Plan

The California Trucking Association (CTA) is a nonprofit trade association representing thousands of trucking companies operating in and out of California, including the many residing in the vital goods movement, manufacturing and trade hub contained in the South Coast Air Basin (SCAB). We thank you for the opportunity to offer comments on the South Coast Air Quality Management District's ("the District") 2012 Draft Air Quality Management Plan (AQMP).

Demonstrating attainment of future ozone standards in the South Coast is a challenge that will require an open and ongoing dialogue between local business owners and the District.

### CTA Recommends Additional Evaluation of On-Road Control Measures for NOx

We request that ONRD-03, ONRD-04, and ONRD-05 be subject to additional evaluation to review the following:

- i. Cost-effectiveness
- ii. Commercial availability and scope of Best Available Control Technology (BACT) to achieve goals of ONRD-05
- iii. Unprecedented nature of mobile source "black box" control measures, possible jurisdictional issue with ARB

#### Cost Effectiveness

We would like to specifically address ONRD-05 to express frustration, no doubt similar to other stakeholders, with regards to lack of time and available data to assess cost-effectiveness of proposed control measures as required by California Health and Safety Code 40922.

Given the entirely reasonable expectation that technology used to achieve the reductions targeted in ONRD-05 will be the first commercially available of their kind, the CTA recommends a robust economic analysis be conducted to ensure that the near-dock rail drayage market will support adoption of high incremental cost advanced technologies.

J-1

As previously expressed to staff at both the District and ARB, CTA has offered to help facilitate meetings with motor carriers who currently service the ICTF rail facility to open a dialogue over achieving emission reductions in this sector and realistic pathways and timelines forward to zero and near-zero emission technologies.

J-1

BACT Not Commercially Available; ONRD-05 Language Vague

The District specifically names “battery-electric trucks, fuel cell trucks, hybrid-electric trucks with all electric range (AER) and zero-emission hybrid or battery-electric trucks with —wayside power (such as electricity from overhead wires)...zero-emission fixed guideway systems such as electric, maglev or linear synchronous motor propulsion or any other technologies that result in zero-emission track miles” as possible technology pathways towards satisfying ONRD-05.

The District further states “such systems are not currently in use for full-scale port to railyard operations and, depending on the technology, may require different levels of additional development and optimization” and that measures such as ONRD-05 should “create a positive signal to technology developers by requiring the use of zero-emission technologies”.

CTA would like to ask that the District elaborate further on the expected performance standard called for by ONRD-05. For instance, it is unclear whether a traditional diesel engine retrofit with a hybrid electric system compatible with overhead catenary would meet the performance standard if that configuration resulted in “zero-emission track miles” only while receiving wayside power. In order to create a clear signal to technology developers, it is incumbent on the District to specify what parameters it expects these technologies to achieve.

J-2

Also, because none of the named technologies are commercially available, we question the utility of including this measure in the 2012 AQMP given that the District is committing the ARB to enforceable implementation deadlines. Forced advancement, for what the District acknowledges is about 1000 trucks, is unlikely to result in vendors producing reliable, stable technology for this important segment of port drayage operations, setting economics completely aside. Near-dock rail facilities are currently responsible for 10% of all throughput<sup>1</sup>, a figure surely to increase once construction of the Southern California Intermodal Gateway is completed. Reliable near-dock drayage service is vital to the economy of the SCAB.

Unprecedented Nature of Mobile Source Control Measures

We would like to note that the nature of ONRD-05 (and, by extension, ADV-01) is unique in the recent history of the District’s AQMP adoption in that the District is calling for a control measure that would require ARB to adopt a mobile sources control measure prior to ARB initiating a rulemaking in conformance with California’s Administrative Procedures Act.

J-3

While we do not enter into the question of what authority is granted the District by 182(e)(5) of the Clean Air Act (CAA), we simply note the ARB's traditional role as the State's primary regulator of mobile source emissions.

Further discussion should be held regarding the role of local air districts in setting or suggesting mobile source emission reduction strategies as extreme non-attainment areas attempt to shrink the "black box". Mobile sources are, by their nature, more exposed to interstate and inter-district commerce and, thereby, must be able to maintain the operational flexibility to serve a vast and diverse set of economic interests and geographies. While the pursuit of local mobile source reduction goals are understandable in the scope of the AQMP, the State and Federal role in establishing mobile source emission reduction goals, including their unique ability to achieve economies of scale, cannot be overlooked.

J-3

**CTA Supports the Southern California Business Coalition's Comments**

CTA was a co-signatory to a letter representing the concerns of a diverse base of local business interests. Specifically, we support the call to focus the current AQMP on PM2.5 attainment, which would allow the District and impacted stakeholders additional time to assess proposed 182(e)(5) control measures. As noted in this letter, the vast majority of cost associated with the AQMP is derived from additional, early measures to address ozone to the extent that cost estimates have been provided by the District.

J-4

**CTA Encourages the District to Engage in More Industry Outreach and Partnership**

California's trucking industry has repeatedly shown a willingness to demonstrate heavy duty natural gas, hybrid, all-electric and fuel cell pilot vehicle projects. In 2012, CTA staff reviewed its current "technology and fuel neutral" policy to assess the developmental states of multiple advanced heavy duty alternative technology trucks and came to a similar conclusion as the District has in the AQMP with regards to zero and near-zero emission technologies; while multiple promising technologies are in developmental stages, the pathway to zero or near-zero emissions is still uncertain.

Little to no outreach was done to the trucking industry prior to the District's proposal of ONRD-05. We cannot envision how the District's goals of technology advancement can be achieved without a full and committed engagement with the actual end users of this technology. Through our initial conversations with District staff, we believe we have begun a dialogue on the technological, operational and economic challenges that ONRD-05 will encounter, but those discussions, to date, have barely scratched the surface of what is needed to make such a program successful.

J-5

We would encourage the District, if it chooses to act on the Southern California Business Coalition's recommendation to solely focus the 2012 AQMP on PM2.5 attainment, to use this

additional time to seek additional trucking industry input on ONRD-05 prior to adopting a new proposed control measure.

Thank you for the opportunity to comment on the 2012 Draft AQMP and we would like to reaffirm our commitment to continue work with the District on this project, and others, in the future.

J-5

Thank You,



Eric Sauer, Vice President of Policy and Regulatory Development  
2012 AQMP Advisory Group Member  
California Trucking Association  
(916)373-3562

**Responses to Comment Letter J**  
**California Trucking Association**

**Response to Comment J-1:**

Many of the control measures proposed in the AQMP recognize the potential for the development of advanced vehicle technologies to be commercially available in the near-term. As such, ONRD-05 recognizes that the current state of development of trucks operating in a "zero-emission" mode may be realized in the next few years and the "commercial" cost is not available at this time. As part of the implementation of the measure, whether through a regulatory process or other enforceable mechanism), a technology assessment will be made to determine commercial availability and a cost-effective analysis will be conducted.

**Response to Comment J-2:**

See Response to Comment J-1. In addition, ADV-01 is provided to complement ONRD-05, in that the measure calls for actions that will lead to development of zero- and near-zero emission trucks.

**Response to Comment J-3:**

The control measure/regulatory development process is not unprecedented. Prior AQMPs and SIPs included control measures which led to regulatory development by CARB. ONRD-05 recognizes CARB's authority to develop regulations for on-road mobile sources. As part of CARB's assessment on the need for a regulation, other actions that lead to deployment of zero-emission vehicles will be assessed. Such actions could be similar to the San Pedro Bay Ports Clean Truck Program or funding incentives to deploy such trucks. As such, the Ports of Los Angeles and Long Beach as well as the AQMD are listed as implementing agencies.

**Response to Comment J-4:**

Since the 182(e)(5) measures are part of the 2007 Ozone SIP for the South Coast Air Basin, the AQMD staff believes that it is appropriate to identify actions that practically fulfill the emission reduction commitments of the 182(e)(5) measures. Waiting until the next plan revision will severely limit the time frame to attain the ozone air quality standard by 2023 and would place a greater burden on all sources to reduce emissions within a shorter timeframe.

**Response to Comment J-5:**

Staff appreciates CTA's effort to outreach on the development of zero- and near-zero emission trucks. Staff believes as the region moves forward with implementation of the 2012 AQMP that there will be opportunities to continue such dialogue with all affected stakeholders.

K. City of Santa Clarita, August 31, 2012



City of  
**SANTA CLARITA**

23920 Valencia Boulevard • Suite 300 • Santa Clarita, California 91355-2196  
Phone: (661) 259-2489 • FAX: (661) 259-8125  
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August 31, 2012

Mr. Michael Krause  
South Coast Air Quality Management District  
21865 East Copley Drive  
Diamond Bar, CA 91765

Dear Mr. Krause:

Subject: 2012 Draft Air Quality Management Plan Comments

Thank you for the opportunity to comment on the Draft Air Quality Management Plan (AQMP). While ozone air pollution is improving in the Santa Clarita Valley, this valley continues to have air quality that rests amongst the worst in the country. The area's air quality may be further threatened by the Soledad Canyon mine proposed by CEMEX. If permitted and constructed, as proposed, the sand and gravel mine would likely result in significant amounts of fugitive dust and emissions being released into the air. The City of Santa Clarita respectfully requests fugitive dust rules included in the new AQMP be appropriately reflective of potential emissions from the proposed mining operation.

I am grateful for the South Coast Air Quality Management District's efforts to help reduce air pollution affecting the Santa Clarita Valley and the South Coast region. By working together, we can help protect the health of this community and others by assisting to provide clean air for current and future generations.

Sincerely,

  
Travis Lange  
Environmental Services Manager

TL:HM:kms  
S:\ENV\SVCS\AIR\AQMP\2012 AQMP\AQMP Comment lr.doc

cc: Ken Pulskamp, City Manager  
Michael Murphy, Intergovernmental Relations Officer  
Robert Newman, Director of Public Works and Community Development

K-1

**Responses to Comment Letter K**  
**City of Santa Clarita**

**Response to Comment K-1:**

The AQMD currently has several rules on the books that are applicable to the Soledad Canyon sand and gravel mining project. In fact, since the December 2000 comments provided by this agency on the draft Environmental Impact Report for the project, the AQMD Governing Board adopted a rule directly aimed at such operations. Specifically, Rule 1157 – PM10 Emission Reductions from Aggregate and Related Operations was adopted in January 2005 and establishes requirements regarding control of fugitive dust emissions from sources that include, but are not limited to: internal paved and unpaved roads; material storage piles; loading/unloading/transfer of material; conveyors; screening and crushing equipment; and track-out onto public roadways. The rule also established opacity limits from any activity, equipment, storage pile, or disturbed surface area, and limits any visible fugitive dust plume from traveling 100 feet in any direction from these sources.

Other applicable rules include Rule 403 – Fugitive Dust, which among other applicable requirements, includes a requirement that no fugitive dust shall cross the facility property line and the rule requires facility operators to take an AQMD taught Fugitive Dust Class to ensure applicable requirements are adhered to. In addition, Rule 1155 – PM Control Devices, adopted in December 2009, establishes a no-visible emissions threshold from any particulate matter control device or dust collector, such as a baghouse, cyclone, wet scrubber, and electrostatic precipitator (ESP), and requires demonstration of proper operation and maintenance and that the largest filtration devices be equipped with detection systems to ensure repair/replacement of filters before visible emissions are seen from the device.

Therefore, staff feels that the necessary requirements are in place to minimize fugitive dust from the mine and is willing to work with the city to ensure the mine is held in compliance with all applicable rules and regulations, including those that go beyond fugitive dust (e.g., off-road equipment).



## L. ISSA, August 31, 2012

August 31, 2012

Dr. Elaine Chang  
Deputy Executive Officer, Planning, Rules & Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765  
via e-mail - [echang@aqmd.gov](mailto:echang@aqmd.gov)

Subject: 2012 Air Quality Management Plan (AQMP)

Dear Dr. Chang:

ISSA appreciates the opportunity to offer initial comments on the South Coast Air Quality Management District's ("South Coast's" or "AQMD's") Draft 2012 Air Quality Management Plan (AQMP), which was issued for comment on July 25, 2012. The comments focus on the Stationary Source Control Measures for Coatings and Solvents numbered CTS-01, CTS-02, CTS-03 and CTS-04. ISSA strongly objects to the inclusion of these measures in the draft AQMP, and urges that the measures not be included in the final 2012 AQMP. As such, ISSA supports the comments submitted by the American Coating Association and the Consumer Specialty Products Association on the AQMP.

### Statement of Interest

ISSA is the Worldwide Cleaning Industry Association that represents the institutional and industrial cleaning industry. ISSA members manufacture, formulate, distribute, and market cleaning products, in addition to providing cleaning services. Our association represents over 6,000 manufacturer, distributor, building service contractor, and in-house cleaning service provider members worldwide. In the aggregate, ISSA member companies employ hundreds of thousands of workers. As such, ISSA is concerned with the implications raised by the draft 2012 Air Quality Management Plan and the ultimate impact it would have on its members.

There are close to 400 ISSA members located in California employing tens of thousands of employees across the state. Over the years, ISSA formulator members have worked diligently to reduce the VOC content in their cleaning products by making substantial investments in reformulating the dozens of products that are covered by CARB Consumer Product Regulations as well as the AQMD VOC regulations.

### Comments

ISSA is concerned with the proposal to include further reductions in VOCs from consumer products as well as the elimination of the LVP exception in this AQMP because those actions are neither necessary nor cost effective. In addition, these proposed approaches are technologically and commercially infeasible. In effect, the proposed AQMP would not significantly reduce ozone levels, but would impose substantial costs and other burdens upon the institutional and industrial cleaning industry.

ISSA and its membership are particularly concerned with the four control measures that will have a potential impact on consumer products: CTS-01, Further VOC Reductions from Architectural Coatings; CTS-02 Further Emission Reduction from Miscellaneous Coatings, Adhesives, Solvents, and Lubricants; CTS-03 Further VOC Reductions from Mold Release Products; and CTS-04 Further VOC Reductions from Consumer Products.

L-1

These CTS measures are neither effective nor necessary for ozone attainment. Air modeling demonstrates that further VOC reductions from consumer products will not significantly reduce ozone. As NOx levels and ozone levels are lower and lower, VOC reductions become less effective in reducing ozone. Any VOC reductions needed in the short term should be focused on where they often can be attained with the NOx reductions and not the VOCs in consumer products. Moreover, the elimination of the LVP exception will do nothing to further the goal of ozone attainment. LVPs have minimal impacts on VOC emissions and ozone formation, and have become part of the solution and not part of the problem as treated in the AQMD proposal.

ISSA formulator members have collectively spent millions of dollars over the years in research and development in order to produce cleaning products with an overall superior environmental profile. A significant part of this effort was dedicated to reformulating cleaning products to reduce the VOC content in order to comply with CARB and AQMD VOC limitations. Additional VOC limits and the elimination of the LVP exception will necessitate additional research and development and ultimately the reformulation of hundreds of products that will impose substantial costs upon industry at a time when it is economically most vulnerable. Moreover, we are concerned that the AQMD proposals may result in the substitution of materials that may degrade the overall environmental profile of numerous cleaning products at the same time the AQMD proposals would do little to reach the goal of ozone attainment.

The AQMD proposals are also likely to result in numerous products being dropped from the marketplace. Many institutional and industrial cleaners are produced and sold in low volumes to meet the specialty needs of their commercial customers. It is common for many of these products to generate sales within California that are well below \$10,000 per year. While these products serve a valuable function in maintaining a healthy indoor environment, they do not generate sufficient revenues to justify the potential investment needed to reformulate such products to meet the unique requirements proposed by AQMD. Consequently, we believe many products will simply be dropped from the market because of sheer economic reaction to the AQMD proposals.

Furthermore, in many cases, institutional and industrial cleaning products have been reformulated to the point where any further reduction in VOC content or elimination of the LVP exception will significantly impact the efficacy of the product. In fact, ISSA members who provide cleaning services have noticed deterioration in the performance of certain product formulations. Consequently cleaning service providers are concerned with further degradation of product efficacy due to additional VOC reductions and the adverse impact it will have on their ability to deliver effective cleaning services to their customers such as hospitals, schools, hotels, food processing plants, and other institutional and industrial facilities whose thousands of occupants and operations depend on effective cleaning products and services to render their facility in a clean and sanitary condition.

Summary and Conclusions

ISSA appreciates the opportunity to comment on the 2012 Air Quality Management Plan (AQMP). We point to the SCAQMD goal statement: "We are committed to protecting the health of residents, while remaining sensitive to businesses" when analyzing the impact of these control measures on the consumer products industry and our ability to develop and market commercially and technologically feasible products. The control measures impacting consumer products noted in the draft 2012 AQMP are not feasible, necessary or cost-effective. In addition, the AQMD proposals will impose substantial and unnecessary costs on industry that will artificially lead to the elimination of many products critical to the quality of the indoor environment and the health and well being of those who occupy institutional and industrial facilities. Lastly, these proposals could have the unanticipated consequence of degrading

L-1

the overall environmental profile of those products subject to the AQMD proposals. Therefore, ISSA urges AQMD to exclude the aforementioned proposals from its final 2012 AQMP.

Sincerely,

Bill Balek  
ISSA  
Director of Legislative Affairs  
(800) 225-4772  
[bill@issa.com](mailto:bill@issa.com)

cc: James Goldstene, Executive Officer, CARB, via email: [jgoldste@arb.ca.gov](mailto:jgoldste@arb.ca.gov)  
Caria Takemoto, PTSD, CARB, via email: [ctakemot@arb.ca.gov](mailto:ctakemot@arb.ca.gov)

**Responses to Comment Letter L**  
**ISSA**

**Response to Comment L-1:**

The commenter supports, and provides similar comments, to comments submitted by the Consumer Specialty Products Association. Please refer to the responses to comments for the Consumer Specialty Products Association (Comment Letter SS). Staff appreciates the efforts made by ISSA formulator members to comply with CARB and AQMD VOC limitations. While there will be some need for reformulation of products, the District, through the implementation of the Certified Clean Air Cleaners Program and Rule 1143 – Consumer Paint Thinners and Multi-Purpose Solvents, has identified alternative low-VOC, cost-effective technologies that are currently commercially available and used that do not rely upon the LVP-VOC exemption. Contrary to the assertion that these products may degrade the environmental profile, many of the products that do not rely on the LVP-VOC exemption are specifically designed to meet stringent environmental profiles. Many are certified as environmentally preferred products through programs like Certified Clean Air Choices Cleaners and U.S. EPA’s Design for the Environment or third party certification organizations like Green Seal and EcoLogo. When already environmentally preferable certified products were tested, less than ten percent relied on the LVP-VOC exemption to meet the VOC limits. See table below.

**Environmentally Preferable Products VOC Content (No LVP-VOC Exemption)**

<b>Product Type</b>	<b>Dilution Rate</b>	<b>VOC (g/l)</b>
Air Freshener	RTU	24
Bathroom Cleaner	RTU	19
Bathroom Cleaner	1:18	5
Bathroom Cleaner	1:20	2
Carpet Cleaner	1:20	1
Carpet Cleaner	1:64	1
Dishwashing Soap	1:1536	1
Disinfectant	1:64	1
Floor Polish	1:24	2
General Purpose Cleaner	1:10	1
General Purpose Cleaner	1:08	1
General Purpose Cleaner	1:64	1
General Purpose Cleaner	1:12	1
General Purpose Cleaner	1:15	1
General Purpose Cleaner	1:512	1
Glass and General Purpose Cleaner	RTU	1
Glass and General Purpose Cleaner	1:128	1
Glass and General Purpose Cleaner	1:128	1
Glass Cleaner	1:20	1
Glass Cleaner	1:64	1
Glass Cleaner	1:15	5

RTU = Ready to Use

M. LA County Sanitation District, August 30, 2012



COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

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GRACE ROBINSON CHAN
Chief Engineer and General Manager

August 30, 2012

Elaine Chang, Dr. P.H.
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Dear Dr. Chang:

2012 Draft Air Quality Management Plan Comments

Thank you for this opportunity to review and comment on the 2012 Draft Air Quality Management Plan (Draft Plan). The document is generally very well written, understandable and very ambitious. We think the episodic strategies for control of directly-emitted PM2.5 are a viable means of efficiently meeting most of the PM2.5 target. We are not completely clear how the anticipated 1-hour ozone SIP call will impact the Section 182 (e)(5) measures specified within the draft plan and are concerned about any potential changes that might occur to the draft plan when that action does occur. We have divided our comments below into a) general thoughts and remarks and b) specific comments on individual control measures.

General Remarks

- 1. The discussion of threshold costs and procedures to be followed in the event they are exceeded described on Page 4-42 of the Draft Plan appear to be reasonable, however, there is no ultimate ceiling or maximum cost at which point Congress should be petitioned in accordance with the spirit of the Legislative Committee agenda for 2012. We believe this is a critical policy issue that needs to be addressed. The final plan should not simply assume that the attainment endpoint is a given irrespective of the cost and impacts to the regulated community.
2. Table 4-1: Criteria for Evaluating Control Measures. This table ranks "technical feasibility" of a control measure dead last. Even the more nebulous "public acceptability" is ranked higher. It seems to us that even before cost effectiveness can be determined, there needs to be a basic determination that the proposed control measure has a chance of accomplishing what it will be

M-1
M-2



- designed to do. We suggest moving the technical feasibility criteria to the second position. } M-2
3. The "All Feasible Measures" control measures seek to apply BARCT, potentially across all source categories, a one size fits all approach, without any specifics as to technology availability, affordability etc., potentially leading to a situation similar to the current implementation of existing Rule 1147. The lack of any control measure description or explanation (beyond the generic application of BARCT) does not allow for any intelligent feedback during this comment period by any potentially regulated sources. This control measure might be best suited to a two-phase rulemaking procedure to first confirm the existence, feasibility and affordability of the rule-dependent technology, followed by the command and control rule, after the technology assessment has been completed. } M-3
4. We believe the focus net of the EDU measures should be more broadly cast. This measure should be expanded to include aggressive general household education on the nexus between human activity and air pollution. While consumer education about energy efficiency and the other ideas are generally good, the average citizen still is very much unaware of their personal connection and contributions to poor air quality. While some members of the community might be aware of rideshare programs and HOV lanes and lawnmower/blower exchange programs, etc., most probably do not think in terms of their personal connection to air quality. Former Board member Jane Carney made this point during a 2011 Legislative Committee meeting. Perhaps one form of such education could be a video or movie where a family might be followed throughout the course of a normal day and the air quality consequences of their activities, individually and collectively, pointed out by a commentator with suggestions to lowering the impacts. Such an approach spreads the burden of attaining the goals of the Draft Plan to the broader population base where it better belongs. } M-4
5. We are unclear as to the impacts of the imminent 1-Hour ozone SIP call on the proposed Section 182 (e)(5) measures are and would like to see more explanation of what could happen in that event. } M-5
6. CEQA: Enhanced Environmental Analysis: Impact of the Environment on a Project (Pages 9-26, 27): We hope that the decision to require these additional analyses and mitigations, if necessary, in your reviews as a responsible agency will not further increase the likelihood of litigation. } M-6

7. Renewable energy sources such as biogas seem to be at odds many times with criteria pollutant control measures. While the Sanitation Districts appreciated the SCAQMD's support on renewable energy legislation in the 2012 legislative season, our attempts to influence CARB, the CEC and the CPUC with respect to favorable treatment of renewable biogas have largely failed, in essence making the economic viability of many future energy development projects questionable. We remain of the opinion that the productive use of biogas renewable fuels is a judicious way to go in terms of air quality planning and hope to continue our partnership with the District in this area.

M-7

Short Term PM 2.5 Measure Comments

1. BCM-04 Further Ammonia Reductions from Livestock Waste (Page IV-A-31). While the Chino area may have an operative desalter project, other areas of the air basin may not. Accordingly, soil and groundwater salt content for the water and wastewater agencies could be an issue.
2. EDU-01: Please see our general comment above.
3. MCS-01( formerly Facility Modernization, now All Feasible Measures aka Application of All Feasible Measures aka All Feasible Measures for All Pollutants aka All Feasible Measure Application)( Page IV-A-44): The name of this control measure should be consistent throughout the document. The balance of our comments on this control measure are in the general comments above.

M-8

M-9

Section 182 (e)(5) Ozone Measures

1. CMB-02 NOx Reductions from Biogas Flares (IV-A-61): The \$20,000 per ton estimate for this control measure is probably low given that very little biogas is actually flared. This could change however as other biogas combustion-related control measures require higher and higher control efficiencies making it difficult to sustain cost-effective onsite distributed generation. Biogas producers should not be penalized for flaring if that is their only recourse. We also look forward to seeing the emissions estimates for this control measure in the final plan.
2. MCS-01 (Page IV-A-76): We have the same comment as on MCS-01 above.

M-10



- 3. MCS-02 Further Emissions Reductions from Greenwaste Processing-Chipping and Grinding Operations Not Associated with Composting (Page IV-A-77): Cal Recycle is currently raising the AB 939 landfill diversion goal through the implementation of AB 341 from 50% to 75% by 2020. Composting is seen as a logical outlet for biodegradable material no longer going to a landfill. We believe your disclaimer that AB 939 diversion goals will not be impacted requires more examination as part of the background to this measure.
- 4. MCS-03 Improved Start-up, Shutdown and Turnaround Procedures (Page IV-A-81): As a holder of many SCAQMD permits, we are very concerned about regulations limiting start-up and shutdown procedures and flexibility. We believe that most equipment operators strive to bring equipment up and down slowly to avoid stresses, to confirm it is operating properly before bringing it to the next level of operation, and to prolong its life as far as practicable. Many of the larger equipment items we operate have CEMS installed and these reflect startup and shutdown history. Combustion equipment on landfill or digester gas may also have many start cycles because of the variable nature of the renewable fuels i.e., the quantity and quality changes frequently.
- 5. INC-01 Economic Incentives to Adapt Zero and Near Zero Technologies (Page IV-A-84): We support the concept of funding renewable energy projects but we are unclear as to the source of funding for this control measure.
- 6. EDU-01 (Page IV-A-91): See our general comment above.

M-11

M-12

M-13

Appendix IV-B Proposed Section 182(e)(5) Implementation Measures

We wish you every success trying to accomplish the ambitious agenda included in this appendix.

- 1. Page IV-B-83: The Baltic Sea comment may not be appropriate.
- 2. Page IB-B-88: The Sanitation Districts would appreciate a position on the off-road equipment working group. The Sanitation Districts operates a large fleet of heavy duty off-road equipment and we have provided test sites and equipment platforms for many CARB control technology studies.

M-14

M-15

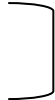
Elaine Chang, Dr. P.H.

- 5 -

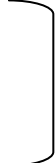
August 30, 2012

Miscellaneous Comments

- 1. AQMP Pages 3-12 & 13: We appreciate the formation of a working group to explore the landfill emissions data. There was insufficient time to review the CARB input to these data prior to the finalization of the emissions inventory.
- 2. The relative importance of pre-cursor emissions reductions of ammonia could use some more explanation. Page 4-5 of the draft AQMP is one of the few places in the report where ammonia is mentioned. More explanation would help as to how the concentration of ammonia is embedded in the NOx and SOx factors. We also wonder if better episodic enforcement of permit conditions dealing with ammonia emissions in the Chino area might help to mitigate localized ammonium sulfate and nitrate emissions.



M-16



M-17

Again, we appreciate this opportunity to comment and think the Draft Plan represents a remarkable effort.

Very truly yours  
Grace Robinson Chan

*Gregory M. Adams*

Gregory M. Adams  
Assistant Departmental Engineer  
Air Quality Engineering  
Technical Services Department

GMA:bb

**Responses to Comment Letter M**  
**LA County Sanitation District**

**Response to Comment M-1:**

The Socioeconomic Report on the 2012 AQMP was released on September 28, 2012, and includes the costs, benefits, and employment impact from implementing the Plan. Most of the proposed control measures (see Appendix IV-A and Appendix IV-B) include cost effectiveness values in dollars per ton of emission reduction, and the proposed control measures are ranked (see Chapter 6 of the Plan) based on these cost effectiveness values. As noted in Chapter 4 of the Plan, the District proposes to establish a cost effectiveness threshold of \$16,500 per ton of VOC reduction and \$22,500 per ton of NOx reduction. This threshold will trigger further evaluation and a pre-hearing at the District Board prior to the final rule being proposed. Only one control measure, CTS-01, has the potential to exceed the VOC threshold on the upper end of the cost effectiveness range. All the other proposed control measures have a cost effective value less than the threshold. Regardless, it should be noted that during rule development a public review and decision process is instituted to seek lower viable cost alternatives.

**Response to Comment M-2:**

Table 4-1 was not intended to imply any ranking or priority of the evaluation criteria. The text and table title have been modified to clarify that no ranking is intended.

**Response to Comment M-3:**

The control measure MCS-01 (Application of All Feasible Measures Assessment) is intended to focus on new technology developed in the future subsequent to the Plan approval, so the specific description of the future actions under the control measure is not possible at this time. However, the triggering of the control measure is likely to occur when new feasible cost-effective best available retrofit control technology is developed and made available. The implementation of MCS-01 could take place in two phases if a technology study is warranted. However, if an assessment of the feasibility, cost effectiveness, and availability of new technology has already been prepared and properly peer-reviewed, a two phase approach might not be necessary.

**Response to Comment M-4:**

Suggestion noted in EDU-01 measure.

**Response to Comment M-5:**

U.S. EPA recently proposed to require a new 1-hour ozone attainment demonstration for the South Coast Air Basin. In order to demonstrate attainment with this revoked

standard by 2022, all feasible measures must be included in the SIP revision. Making enforceable emissions reductions commitments based on specific measures as they are identified is the best way to demonstrate that the District is dedicated to realizing the emission reductions necessary to achieve the 8-hour and 1-hour ozone standards. The attainment demonstration for the 1-hour ozone standard will be analyzed and the results provided in a separate attachment to the 2012 AQMP for consideration of the Governing Board at the same time. Future AQMPs will need to further identify specific measures and associated emissions reductions that will allow the “black box” commitments to shrink to zero by 2019 for the 1-hour ozone or 2020 for the 8-hour ozone.

**Response to Comment M-6:**

The "enhanced environmental analysis" noted by the commenter is not required under any AQMD rules or CEQA statute (with the exception of new school sites). However, lead agencies retain the authority to conduct an analysis of potential health effects on project occupants either within a CEQA document, or outside of it prior to making a decision on the project. The AQMD staff has previously reviewed residential development projects where the lead agency has analyzed and presented the potential health effects to their project, so decision makers were aware of potential impacts on future residences. Text has been added to Chapter 9 to clarify that AQMD staff recommendations for enhanced environmental analysis will continue to be consistent with existing guidance from both the CARB Air Quality and Land Use Handbook and the AQMD Clean Communities Plan.

**Response to Comment M-7:**

The AQMD will continue to support efforts to encourage the productive use of biogas without its air quality objective.

**Response to Comment M-8:**

AQMD staff agrees that it could be an issue and intends to assess the potential impact of salt loading on groundwater from the land spreading of manure treated with SBS. Although the incremental increase is expected to be low, the overall impact relative to Regional Water Quality Control Board threshold requirements will need to be examined. Staff intends to work with stakeholders at the water board relative to the potential ground water impacts.

**Response to Comment M-9:**

The title of the control measure MCS-01 (Application of the All Feasible Measures Assessment) has been made consistent throughout the 2012 AQMP to avoid any confusion.

**Response to Comment M-10:**

The cost-effectiveness of this control measure will be subject to further refinements during the rulemaking process. In addition, recent staff analysis of the Rule 1110.2 amendment indicated that the control options for biogas internal combustion engines were very cost-effective. Such cost-effective control equipment should help in maintaining the sustainability of onsite distributed generation. The funding for the deployment of the potentially cost-effective alternative of selective non-catalytic reduction emission control technologies as well as subsequent technology assessments should provide further means of maintaining the sustainability of onsite distributed generation.

**Response to Comment M-11:**

Implementation of the measure is intended to be in harmony with not only the AB 939 diversion goals in the future, but also the amendments to Title 14 currently under development. This measure is meant to focus on the disposition of green material by determining its volume and intended in use. This measure is intended to focus on emission reductions from chipping and grinding operations and should not impact composting and associated operations governed under Rule 1133.3 – Emission Reductions from Greenwaste Composting operations adopted in July 2011. The control measure has been expanded to include a greater discussion of AB 939 requirements.

**Response to Comment M-12:**

Control measure MCS-03 is carried over from the 2007 AQMP. Although the initial scope of review for startup, shutdown and turnaround activities is likely focus on the minimization of potential flaring emissions at refineries, staff believes that it is possible to develop procedures that can lead to optimization, operational efficiency and emission minimization opportunities applicable to other industries.

The District approach under MCS-03 would be to initially focus on better quantifying emission impacts from startup, shutdown and turnaround activities at refineries, as well as analyzing emission reduction potential. Should the results of these analyses and emission assessments warrant further investigation, a review of potential emission reduction efforts would follow, including a determination of the applicability to other industries. Any subsequent rulemaking efforts would include technical feasibility, socioeconomic impact, and environmental impact assessments, including safety considerations, and certainly involve outreach to affected stakeholders.

**Response to Comment M-13:**

Funding sources will be from multiple sources such as grants, state program funding, and sources of AQMD funds.

**Response to Comment M-14:**

The reference to the "Baltic Sea region" is to indicate that such technologies are currently in use. Staff will clarify that such technologies could be transferred to vessels operating at California ports.

**Response to Comment M-15:**

As provided in ADV-06, a working group will help provide input on technology development and demonstration. The details will be developed after the AQMP is adopted. Staff appreciates the Sanitation Districts efforts in demonstrating advanced control technologies and look forward to working with the Sanitation Districts and other off-road vehicle stakeholders to bring about cleaner off-road vehicles.

**Response to Comment M-16:**

AQMD staff consistently seeks ways to improve the emission estimation methodology. As it relates to this particular category, we have provided the LA County Sanitation District staff with our inventory methodology, calculation worksheet, and emission factors which were used to estimate the landfill's fugitive emissions. As we have previously discussed, these emissions are the emissions that are not collected by the landfill's collection system and are considered non-permitted emissions. These emissions should have been reported in the Annual Emission Report (AER) as non-permitted emissions, but they were not. We did incorporate the Sanitation District staff's review and recommendations on using the 2008 CARBs GHG emission inventory data for the landfills, however, we were unable to accommodate the request on updating the emission factors, as sufficient information is not available at this time. Additionally, as noted in the comment, we have a mutual agreement to initiate a Landfill Gas Emission Task Force to study all the available documents and develop emission factors that could give a better estimate of the ROG/TOG fugitive emissions. We look forward to a successful partnership.

**Response to Comment M-17:**

As to the last sentence in page 4-5: It is assumed that the ammonia sources referenced in the Chino area are dairies, which would be the single largest source of ammonia in that area. The primary permits for dairies in the region are only on those that meet the definition of Large Confined Animal facility. Fewer than 30 of the more than one hundred dairies in the Basin are permitted in that way, which excludes a large number of dairies in the region as not subject to the same requirements as in AQMD Rule 223 – Emission Reduction Permits for Large Confined Animal Facilities. Each farm subject to permit is required to meet a menu of requirements outlined in the Rule. Dairies under permit are required to submit rule 223 compliance plans when obtaining a permit and are subject to annual permit renewals. Compliance plans only need to be resubmitted if changes to the plans occur (i.e., change is menu options under the rule).

In that respect, this is the reason for proposed control measure BCM-04 – Further Ammonia Reductions from Livestock Waste which outlines how staff intends to conduct an assessment of using Sodium Bisulfate to treat manure and reduce ammonia emissions, which will include an evaluation of the potential for episodic-only application requirement to focus on poor air quality days.

It should be noted that all dairies are required to report under the Annual Emissions Reporting (AER) Program for PM, VOC, and ammonia. Reports summarize manure production and give emissions credit depending on the manure disposal practice. Use of sodium bisulfate can be reported in the AER Program. At this time, no significant issues with existing requirements exist.

**N. Concerned Residents Against Air Pollution, et al, August 28, 2012**

Mitchell M. Tsai, Esq. P.O. Box 4643, Diamond Bar, California  
tsai.mitchell@gmail.com 714-881-4876

BY ELECTRONIC DELIVERY

August 28, 2012

Dr. William A. Burke  
Members of the SCAQMD Governing Board  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

RE: 2012 Air Quality Management Plan – Santa Monica Airport

Dear Chairman Burke and Governing Board Members,

I am writing on behalf of the Westside Neighborhood Council, the Mar Vista Community Council, the Venice Neighborhood Council, the West Los Angeles Neighborhood Council, the North Westdale Neighborhood Association, the Neighbors of Santa Monica Airport, and Concerned Residents Against Airport Pollution (“Supporting Organizations”) regarding Santa Monica Municipal Airport (“SMO”) located at 3223 Donald Douglas Loop South, Santa Monica, California 90405. The Supporting Organizations are primarily local neighborhood associations who represent more than 100,000 residents and others who live and/or work near SMO. Moreover, the Santa Monica Airport Commission, an advisory governmental body to the Santa Monica City Council, recently voted to recommend that this letter be adopted by Santa Monica City Council.

The Supporting Organizations request that South Coast Air Quality Management District (“SCAQMD”) review, propose, approve, and submit to California Air Resources Board (“CARB”) an Indirect Source Review Rule regulating air pollution emissions originating from activities at SMO. An Indirect Source Review Rule for SMO should be integrated as a potential control measure in the 2012 Air Quality Management Plan (“AQMP”).

} N-1

While a number of these groups have previously contacted South Coast Air Quality Management District (“SCAQMD”) requesting that SCAQMD impose regulations on SMO, the Supporting Organizations have voted to support this letter to show that there is widespread support



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among these communities for SCAQMD to take action in order to abate the air pollution health impacts that ravage the communities impacted by SMO. The communities have been particularly affected by an increase in jet traffic at the airport over the past 20-plus years that has markedly increased the amount of pollution that is affecting the surrounding community. Martin Rubin, SMO Jet Operations Growth From 1983 (2012) (Exhibit 12).

SMO has a disproportionate environmental health impact on local residents. SMO is unique in having dense residential development less than 300 feet from the east and west ends of the runway. Unlike other Southern California airports, SMO has almost no buffer zone between the runway ends and the surrounding community. Adrian Castro, et al, Santa Monica Airport Health Impact Assessment (2010). A UCLA study noted that “[s]mall airports in heavily populated areas do not necessarily hav . . . buffers . . . so residents may be more directly exposed to aircraft emissions.” Shishan Hu, et al Aircraft Emissions Impacts in a Neighborhood Adjacent to a General Aviation Airport in Southern California, 43 Environ. Sci. Technol. 8039, 8039 (2009) (Exhibit 1). The UCLA study went on to conclude that the residential neighborhoods surrounding SMO have “markedly high concentrations of air pollutants . . . suggesting . . . [that the] buffer areas around . . . [SMO] may be insufficient.” The proximity between the airport and the surrounding community creates a dangerous health risk for local residents.

Local residents living in proximity with the airport face an elevated risk of cancer. According to a study sponsored by the Los Angeles Unified School District, cancer risk arising from maximum exposure to air pollution generated by activities at SMO for local residents ran *thirteen to twenty-six in one million*. Bill Piazza, Santa Monica Municipal Airport: A Report on the Generation and Downwind Extent of Emissions Generated From Aircraft and Ground Support Operations 2, (1999) (Exhibit 2). Cancer risks to local residents from SMO significantly exceed the guideline lifetime

N-2

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cancer risk of one in a million individuals for cancer risk from maximum exposure to a source of air pollutants under the Federal Clean Air Act. 42 U.S.C. § 7412.

N-2

I. South Coast Air Quality Management District is Legally Obligated to Implement an Indirect Source Review Rule Regulating Emissions from Santa Monica Airport.

SCAQMD is legally required to implement an Indirect Source Review rule controlling emissions from Santa Monica Airport. The California Clean Air Act requires that SCAQMD “provide for indirect source controls in those areas of the south coast district in which there are high-level, localized concentrations of pollutants . . .” Cal. Health & Safety Code § 40440(b)(3).

Multiple studies have demonstrated that there are elevated levels of air pollutants such as lead, black carbon, and ultrafine particulate matter on Santa Monica Airport property as well as in neighboring residential areas. *Infra*.

Modeling studies have shown that concentration of ambient lead levels near, at and exceeding the National Ambient Air Quality Standard (“NAAQS”) at Santa Monica Airport as well as at nearby residential neighborhoods. Studies conducted by the U.S. Environmental Protection Agency (“USEPA”) and SCAQMD found areas on Santa Monica Airport’s runway with lead levels violating the current lead NAAQS. U.S. Environmental Protection Agency, Development and Evaluation of an Air Quality Modeling Approach for Lead Emissions from Piston-Engine Aircraft Operating on Leaded Aviation Gasoline 72 (2010) (Exhibit 3); South Coast Air Quality Management District, General Aviation Airport Air Monitoring Study 20–21 (2010) (Exhibit 4). In addition, both studies found elevated ambient lead levels that often exceeded, but averaged near the NAAQS in surrounding residential neighborhoods. *Id*.

N-3

Lead can have irreversible brain and nerve damage, severe developmental impacts on children as well as adverse impacts on adults. Lead has been found to have neurological impacts on children, leading to behavioral problems, learning problems, and lowered IQ. Adults, when exposed

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to lead, can suffer cardiovascular problems such as high blood pressure, and heart disease. Finally, lead exposure has also been found to have negative impacts on the nervous system, kidney function, immune systems, and reproductive ability. U.S. Environmental Protection Agency, Lead in Air: Health (2011), <http://www.epa.gov/airquality/lead/health.html> (last visited Nov. 11, 2011).

Elevated levels of Black Carbon have also been found to have been generated by activities at SMO. Jet takeoffs at SMO have been found to result in large spikes in concentrations of Black Carbon in and around the airport. Hv at 8039; South Coast Air Quality Management District, General Aviation Airport Air Monitoring Study: Follow-up Monitoring Campaign at the Santa Monica Airport 3 (2011) (Exhibit 5).

Black carbon, as a component of particulate matter, has been linked to increased risk of cardiovascular disease, respiratory disease, cancer, and premature death. United Nations Environmental Program, World Meteorological Organization Integrated Assessment of Black Carbon and Tropospheric Ozone (2011) 113–15 (Exhibit 6).

Very high levels of ultrafine particulate matter have also been found at SMO. Studies conducted by the University of California, University of Southern California, CARB, and SCAQMD found elevated ultrafine particle concentrations in the downwind residential areas directly attributable to SMO aircraft operations. South Coast Air Quality Management District, General Aviation Airport Air Monitoring Study at 50–55; South Coast Air Quality Management District, General Aviation Airport Air Monitoring Study: Follow-up Monitoring Campaign at the Santa Monica Airport at 22; Hv at 8039.

Ultrafine particles have been linked to premature death from respiratory and cardiovascular disease. University of California Los Angeles Community Health and Advocacy Training PGY-2 Pediatric Residents, Santa Monica Airport Health Impact Assessment 10 (2010) (Exhibit 7).

N-3

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Ultrafine particulate matter may pose a greater health risk than other, larger forms of particulate matter due to their tendency to penetrate deeper into the body. Ning Li et al, *Ultrafine Particulate Pollutants Induce Oxidative Stress and Mitochondrial Damage* 111 *Env'tl Health Perspectives* 455, 455 (2003) (Exhibit 8).

Airports are a significant source of emissions of Volatile Organic Compounds (VOCs) as well as Nitrogen Oxides (NOx), both of which are ozone-forming pollutants. Colleen Callahan, The Plane Truth: Air Quality Impacts of Airport Operations and Strategies for Sustainability: A Case Study of the Los Angeles World Airports 7–10 (2010) (Exhibit 9); U.S. EPA, Documentation for Aircraft Component of the National Emissions Inventory Methodology (2011) (Exhibit 10).

Ozone has been shown to cause decreased lung function, chest pain, as well as aggravate existing respiratory illnesses such as asthma, pneumonia, and bronchitis. U.S. EPA, Ground Level Ozone: Health, <http://www.epa.gov/air/ozonepollution/health.html> (accessed on March 25, 2012). SMO is located in Northwest Coastal LA County, which exceeded both the State and Federal Ozone standards in 2009 and 2010. South Coast Air Quality Management District, 2010 Air Quality (2011); South Coast Air Quality Management District, 2009 Air Quality (2010).

The California Clean Air Act requires SCAQMD to promulgate Indirect Source controls to regulate pollution from SMO. SCAQMD is required to impose Indirect Source controls in areas where there are “high level, localized concentrations of pollutants.” Cal. Health & Safety Code § 40440(b)(3). A study concluded that there are “high concentrations of air pollutants in the residential neighborhoods downwind of SM[O] due to aircraft activities ....” Hu at 8039. SCAQMD should act to regulate emissions from Santa Monica Airport.

N-3

N-4

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II. South Coast Air Quality Management District has the Authority under the Federal Clean Air Act to Impose Indirect Source Controls on Santa Monica Airport.

Arguably, SCAQMD is federally preempted from imposing Indirect Source controls on SMO. Both the Federal Aviation Agency and the USEPA have exclusive federal authority over aircraft operations, design, and manufacture. However, SCAQMD has the authority to regulate pollution from SMO with the approval of CARB with its delegated authority under the Federal Clean Air Act. Federal courts have found that states may regulate *emissions* from aircraft engines under the Federal Clean Air Act as long as it does not directly regulate aircraft operations, design, or manufacturing. *California v. Navy*, 431 F.Supp. 1271 (1977) (Exhibit 11). SCAQMD and CARB have federally delegated authority to impose Indirect Source controls on facilities such as airports. 42 U.S.C. § 7410(a)(5).

N-5

III. Santa Monica Airport Could Implement Reasonably Available Control Measures to Reduce its Environmental Health Impact on Local Residents.

SMO could implement control measures to abate its impact on the surrounding community and comply with an Indirect Source Rule. Possible control measures could include reduced idling and holding times for jet aircraft as well as re-directing the exhaust from pre-flight run up tests.

N-6

IV. South Coast Air Quality Management District Should Impose Indirect Source Controls on Air Pollutant Emissions from Santa Monica Airport.

SCAQMD should impose an Indirect Source Review Rule on SMO. In light of SCAQMD's legal obligations, the significant public health risks and the feasibility of control measures that could be adopted, SCAQMD should act to abate SMO's impact on its surrounding communities.

N-7

Thank you for considering these comments. Please put the undersigned on the mailing list for the 2012 AQMP. Should you have any questions or need more information, please contact Mitchell Tsai at (714) 881-4876 or tsai.mitchell@gmail.com.

Concerned Residents Against Airport Pollution  
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Sincerely,

A handwritten signature in black ink, appearing to read "Mitchell M. Tsai". The signature is written in a cursive, flowing style.

Mitchell M. Tsai, Esq.

**Responses to Comment Letter N**  
**Concerned Residents Against Air Pollution, et al**

**Response to Comment N-1:**

The AQMD has not observed elevated levels of PM<sub>2.5</sub> in neighborhoods near the airport so this plan will not include a measure specific to the airport. AQMD will continue to explore possible ways of reducing emissions at the airport.

**Response to Comment N-2:**

The health effects of air pollutants are addressed in Appendix I. Regarding cancer risk, the AQMD's MATES III study estimates lifetime risk for air toxics near the Santa Monica Airport at about 930 per million, which is lower than the regional average of 1194 per million.

**Response to Comment N-3:**

The comment cites levels of lead, black carbon, and ultrafine particulate matter. AQMD monitoring studies have not detected exceedances of lead standards either on the runway area or in neighboring residential areas. US EPA modeling studies did not project exceedances in neighboring residential areas but did project exceedances at the blast fence. This was not confirmed by AQMD studies. The statement that both studies found levels often exceeding the NAAQS but averaging at the NAAQS is misleading because the NAAQS itself is in the form of a three month average. The NAAQS itself was not exceeded. Additional discussion of health effects of particulate matter, ozone and nitrogen dioxide are in Appendix I, and additional discussion of ultrafine particulate matter health effects and sources is contained in Chapter 9. AQMD has not observed elevated levels of PM<sub>2.5</sub> near the airport. There is currently no NAAQS or SAAQS for ultrafines. So, it is not feasible to determine a level to which emissions should be reduced. Therefore, the cited statute does not require regulation.

**Response to Comment N-4:**

The commenter states that AQMD must adopt an indirect source rule for the airport because state law calls for indirect source rules in areas where there are “high-level, localized concentrations of pollutants” and a study by Hu concluded that there were “high concentrations of air pollutants in the residential neighborhoods “ downwind of the airport. However, this study referred to levels of black carbon and ultrafine particles, not criteria pollutants. Neither EPA nor CARB has yet developed any ambient standards for these particular pollutants. Therefore, it is uncertain what levels of such pollutants would be considered unacceptably “high.” Accordingly, the cited statute does not require regulation. The 2012 AQMP contains a chapter discussing the emerging science relating to ultrafine particles and AQMD staff will continue to monitor the situation.

**Response to Comment N-5:**

The AQMD staff agrees that it has the authority under state and federal law to adopt indirect source controls. Such authority is not preempted by the Clean Air Act, as held in *National Association of Home Builders vs. San Joaquin Valley APCD*, 627 F. 3d 730 (9th Cir. 2010). Whether any other federal statute would have preemptive effect would likely depend on the particulars of any proposed indirect source rule.

**Response to Comment N-6:**

See Response to Comment N-5.

**Response to Comment N-7:**

AQMD staff does not believe that this request should be addressed as part of the 2012 AQMP, but will continue to consider whether such an approach would be viable to reduce emissions in the future.



## O. LA Department of Public Works, Cynthia Holguin, August 14, 2012

### COMMENT LETTER

Claudia Holguin

August 14, 2012

**From:** Holguin, Claudia [<mailto:cholguin@dpw.lacounty.gov>]  
**Sent:** Tuesday, August 14, 2012 1:30 PM  
**To:** Joe Cassmassi  
**Subject:** Questions about AQMD draft plan and landfill and composting questions

Hello again Joe,

I would like to ask about a few additional AQMD's **stationary source control measures**, and thank you again for your help.

**Multiple Component Sources:**

**MCS-03** (formerly MCS-06 on 2007 AQMP) Improved Start-up, Shutdown, and Turnaround Procedures [All Pollutants].

- *Would this apply to equipment used at landfills and composting facilities? Does it apply to waste-to-energy processes or facilities?*

**Incentive Programs:**

**INC-01** Economic Incentive Programs to Adopt Zero and Near Zero Technologies [NOx]

- *Would this apply to waste to energy facilities at landfills or other processes at landfills?*

**INC-02** Expedited Permitting and CEQA Preparation Facilitating the manufacturing of Zero and Near-Zero Technologies

- *Would this apply to something like new conversion technology facilities?*

Thank you again, enormously, for your help!!

Claudia Holguin

[Claudia Holguin wrote]:

Hello Joe,

Your colleague Chris Hynes has recommended that I contact you regarding my question about the AQMD's Draft EIR Master Plan. I am an intern in L.A. County's DPW Environmental Programs Division.

May I ask about the AQMD's **stationary source control measures**? Specifically, I would like to ask about the 2012 Air Quality Management Plan Combustion Sources reductions **CMB-01 phases I and II**. Do the proposed **NOx reductions from RECLAIM apply to landfills as well as other sources**? (This information is found in Table 1-3).

Thank you very much for your time!

Claudia Holguin

} O-1  
} O-2  
} O-3

} O-4

**Responses to Comment Letter O**  
**LA County DPW, Cynthia Holguin**

**Response to Comment O-1:**

Control measure MCS-03 is carried over from the 2007 AQMP. Although the initial scope of review for startup, shutdown and turnaround activities will likely focus on the minimization of potential flaring emissions at refineries, staff believes that it is possible to develop procedures that can lead to optimization, operational efficiency and emission minimization opportunities applicable to other industries.

The District approach under MCS-03 would be to initially focus on better quantifying emission impacts from startup, shutdown and turnaround activities at refineries, as well as analyzing emission reduction potential. Should the results of these analyses and emission assessments warrant further investigation, a review of potential emission reduction efforts would follow, including a determination of the applicability to other industries. Any subsequent rulemaking efforts would include technical feasibility, socioeconomic impact, and environmental impact assessments, including safety considerations, and certainly involve outreach to affected stakeholders.

**Response to Comment O-2:**

These incentives can apply to waste to energy processes or other landfill processes as long as they are not needed to comply with current regulation or other legally-enforceable requirement.

**Response to Comment O-3:**

The incentive program, INC-02, has yet to be developed so specific qualifications for the incentives have not yet been determined. However, the intent of the control measure is to encourage the manufacturing of zero and near-zero emission technologies, such as fuel cells and electric batteries, to be used by a variety of stationary and mobile source applications resulting in zero end-use emissions. This can be accomplished with the manufacturing of either advanced technology or control equipment. Conversion technology could be considered advanced technology converting post-recycled solid waste into useful products. The process has beneficial effects as compared to incineration or sending materials to the landfill. However, the inclusion into the program would depend on whether this process is generating products producing zero or near-zero end-use emissions. For example, the renewable energy produced would reduce greenhouse gases, and air emissions would be comparatively lower, but it would need to be determined if the resulting emissions are zero or approaching zero. A stakeholder working group will be established to discuss and propose program designs so the commentator is encouraged to participate.

## P. American Coatings Association (ACA), David Darling, August 31, 2012



August 31, 2012

Dr. Elaine Chang  
Deputy Executive Officer, Planning, Rules & Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

**RE: South Coast Air Quality Management District Draft 2012 Air Quality Management Plan; ACA Comments**

Dear Dr. Chang:

The American Coatings Association (ACA)<sup>1</sup> submits the following comments on the South Coast Air Quality Management District's (SCAQMD or the District) Draft 2012 Air Quality Management Plan (Draft 2012 AQMP) released on July 18, as well as incorporates by reference its earlier comments on proposed elements of the AQMP. Please see the attached documents for reference to ACA's previous comments.

### I. Introduction

ACA believes that the SCAQMD should remove the proposed VOC reduction control measures – CTS-01, CTS-02, CTS-03, and CTS-04 – from the Draft 2012 AQMP for the following reasons:

- The coatings industry has made significant strides in reducing its products' VOC emissions in the past, and the District should focus on other sources for further emissions reductions instead of unfairly targeting the coatings industry.
- The District should take credit for the emissions reductions outlined in the 2007 AQMP CTS-02 "Clean Coating Certification Program" emission credits resulting from the Rule 314 AIM fee rule, which amount to more than double the emission estimates from the current draft CTS-01. Given these credits, the 2012 AQMP CTS-01 is not needed.
- Reducing VOC emission will have no appreciable impact on ozone formation since the SCAQMD region is NOx limited. ACA urges the District to continue to focus on NOx reductions and remove the proposed VOC measures from the AQMP, especially since VOC measures are not cost effective for reducing ozone compared to NOx reductions.

P-1

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<sup>1</sup> The American Coatings Association (ACA) is a voluntary, nonprofit trade association working to advance the needs of the paint and coatings industry and the professionals who work in it. The organization represents paint and coatings manufacturers, raw materials suppliers, distributors, and technical professionals. ACA serves as an advocate and ally for members on legislative, regulatory and judicial issues, and provides forums for the advancement and promotion of the industry through educational and professional development services.

- The District should remove CTS-01 to CTS-04 from the 2012 AQMP, or at the very least, remove the hard VOC targets from the Plan.
- ACA has a number of particular concerns with the individual control measures outlined in CTS-01, CTS-02, and CTS-03. These concerns are described in detail below in section IV.
- ACA respectfully requests additional time to comment on the Draft 2012 AQMP and additional time for the District to fully address and respond to stakeholder input concerning this crucial planning document.

P-1

**III. The Coatings Industry and VOC Reductions**

The coatings industry has made substantial progress in reducing the level of VOCs in its products in the South Coast Air Basin as a result of regulatory pressure, increased demand for green products, and individual corporate sustainability initiatives. ACA seeks to assure that appropriate inventory credit is given for the significant reductions already achieved in mass and reactivity of VOC emissions from architectural and associated coatings. Even given this significant progress, the coatings industry continues to be the target for further VOC reduction measures in the Draft 2012 AQMP. Continuing to target the paint and coatings industry and imposing further VOC reduction commitments is unreasonable, and ACA urges the District to focus on different options and sources, especially a NOx heavy approach, to reduce ozone in the South Coast Air Basin.

The coatings industry has been one of SCAQMD’s primary targets for VOC reductions over the course of the last three decades as the District continues to impose increasingly stringent rules on the coatings industry. Recently, the District estimated emissions from the coatings industry were lowered from 49 tons per day (tpd) in 2002 to 22 tpd in 2008, including colorants. The District estimates that this level will be further reduced to just 15 tpd by 2014, including colorants, reflecting a drop of approximately 37 to 40 tpd from architectural coatings alone in the past 12 years. This drop represents over 70% of the VOC emissions inventory from this source category – a severe cut by any standards.

P-2

ACA believes that the coatings industry has contributed a significant amount to reducing ozone in the South Coast Air Basin and should not be a constant “bull’s eye” for further reductions. Just since the 2007 AQMP, the District has obtained nearly 26 tpd of VOC emission reductions at a cost of \$73.8 million, as documented in the table below.

Rule	Adoption Date	Summary	VOC Reductions	Estimated Costs
Rule 314	June 6, 2008	AIM Fee Rule	10 tpd*	\$13.65 Million
Rule 1143	March 6, 2009	Consumer Paint Thinners and MPS	9.75 tpd	\$41.4 Million
Rule 1113	June 3, 2011	AIM Rule Amendments	4.4 tpd	\$10 Million
Rule 1107	November 2012	Coating of Metals Parts and Products Amendments	2.21 tpd	\$8.7 Million
Total			26.36 tpd	\$ 73.8 Million

\* ACA Estimated

The District even acknowledges that “[w]ithout an adequate and fair-share level of reductions from all sources, the emissions reduction burden would unfairly be shifted to sources that have already been doing their part for clean air.” Draft 2012 AQMP, pg. 4-6. The coatings industry has been doing its part for clean air, and the District should explore other options to obtain further ozone reductions; for example, the District and its partner agencies at the local, state, and federal levels should focus on passenger cars, off-road equipment, light duty trucks, recreational boats, and petroleum marketing, among other sources.

Furthermore, it is critical that the AIM inventory is accurate and reflects the significant VOC reductions from the coatings industry since the AQMP and all future regulatory actions are based on these estimates. In our July 5, 2012 AQMP comments, ACA suggested that the District take credit for emission reductions from the Rule 314 AIM Fee Rule (see Attachment A). Initial reactions from the District suggest that the District would need to review this concept with EPA. ACA believes that since the 2007 CTS-02 control measure “Clean Coating Certification Program”, has already been approved in the State Implementation Plan (SIP), there should be no hurdles in the District taking credit for emission reductions as the result of the Rule 314 AIM Fee Rule. The following is a description of CTS-02 from the 2007 AQMP:

**“PROPOSED METHOD OF CONTROL**

First, a certification criteria would be established for distinguishing products that are considered super compliant (i.e. low-, ultra low-, or zero-VOC content levels), from other compliant products. Secondly, a certification process would be established for those products meeting the ‘Clean Air Coating’ criteria. Certified products would be allowed to use the District certification and promote the products as being ‘environmentally friendly.’ *Should the District produce fee related programs for VOC products, consideration will be given to promote super compliant products.*

**EMISSIONS REDUCTION**

This voluntary certification program's objective is to positively influence industrial, commercial, and consumer behavior in selecting ultra-low volatile organic compound (VOC) coatings and foster the marketing of ultra-low polluting technologies in an overall effort to reduce VOC emissions. *Any VOC reductions due to promoting the use of ultra-low VOC coatings will be quantified via future SIP revisions.”*

While the District did not develop a coating certification program under Rule 314 (please note that ACA does not support a certification system), the District did set a threshold in Rule 314 – 5 g/l material VOC – at which fees would not be assessed, and the District also maintains a Super-Compliant Architectural Coatings Manufacturers and Industrial Maintenance Coatings List on the District website. ACA also suggests that the fees imposed under Rule 314 likely resulted in more emission reductions than a certification program. Based on Rule 314 data (see below), ACA believes that the District should quantify and take credit for at least 10 tpd of emission reductions as a result of Rule 314.

P-2

	2008	2014	2019/2020	2023
2007 AQMP	22.65	24.19	26.55	25.81
2012 AQMP (table A-1 – A-5)	21.9	15.46	16.17	16.71
Additional colorant reduction	3.0	3.0	3.0	3.0
Excess emission reductions	3.75	11.73	13.38	12.1

P-2

The emissions credits from Rule 314 amount to more than double the emission estimates from the proposed 2012 AQMP CTS-01 control measure. For these reasons, the District can quantify and demonstrate further VOC reductions from coatings, and CTS-01 is, therefore, unnecessary.

**III. VOC Reduction Measures in the Draft 2012 AQMP**

ACA strongly objects to the inclusion of the VOC reduction measures contained in CTS-01, CTS-02, CTS-03 and CTS-04 in the 2012 AQMP since SCAQMD has failed to provide an adequate justification for incorporating these VOC reduction commitments in the SIP. The District readily admits that reducing VOCs will not reduce ozone. The District should focus solely on NOx reductions measures. Without a showing of necessity, the District should remove these specific VOC measures from the 2012 AQMP and refrain from locking in VOC emissions targets for these particular sources.

ACA questions SCAQMD’s decision to include ozone attainment provisions in the 2012 AQMP. Even if SCAQMD finds a continuing need to include ozone reduction measures in California’s SIP, the District has failed to demonstrate why further VOC reductions, in particular, are necessary to achieve its ozone attainment goals. According to the federal Clean Air Act (CAA), States are only required to submit SIPs that “include enforceable emissions limitations, and such other control measures, means or techniques...as may be necessary or appropriate to provide for attainment of such standards...” CAA § 172(a)(6); § 110(a)(2)(A). Nothing in the Draft 2012 AQMP or CTS-01 to CTS-04 explains why VOC reductions are necessary. SCAQMD provides one statement in the AQMP in defense of the VOC reductions, arguing that “VOC reductions are, however, still needed to provide additional benefits, especially in the western areas of the Basin.” Draft 2012 AQMP, pg. ES-4. This assertion is not substantiated by any further information or explanation as to why these VOC reductions are deemed necessary to reduce ozone. The District should explain in detail why the VOC reductions are necessary to achieve ozone attainment in the South Coast Air Basin or should remove these VOC reduction measures from the 2012 AQMP and California SIP submittal.

P-3

Reducing VOC emission in the South Coast Air Basin will not reduce ozone. And it appears that the District does not dispute this point. The District concluded in the 2007 AQMP that major reductions in emissions of oxides of sulfur (SOx), particulate matter less than 2.5 microns (PM2.5) and NOx are necessary to attain the air quality standards for ozone and particulate matter by the dates mandated by federal law. In the Draft 2012 AQMP, the District again determined “that a strategy focusing primarily on NOx reductions has been deemed the best way to achieve long-term ozone attainment objectives,” especially “given that a heavy VOC reduction strategy alone could not achieve the ozone standards....” Draft 2012 AQMP, pg. ES-4. Given this, the 2012 AQMP ozone measures should focus on NOx reductions since VOC control measures will have little or no impact on ozone attainment in the District.

As an aside, focusing on NOx reductions in the SIP will not handicap the District since it clearly has the authority to impose further VOC reductions in the future, through Rule 1113 for example, without locking any VOC commitments into the 2012 AQMP. ACA suggests the District go even further in the 2012 AQMP and provide more background discussions and modeling information on the benefits of NOx reductions as opposed to VOC reductions.

Next, ACA is extremely concerned that if the extreme and unproven reductions are approved, especially in CTS-01 and CTS-02, the coatings industry will be forced to achieve the VOC targets regardless of whether the control measures are necessary and technologically feasible. Setting a hard target and then later justifying that target with subsequent analyses is inappropriate and defeats the critical safeguards provided by the administrative rulemaking process.

ACA is encouraged that the District has at least included some language that allows for future flexibility, or clearly state that any specific numeric goals or targets are subject to the District's future analyses and the rulemaking process and may be adjusted based on technical and economic concerns such as the following statement: "The District is committed to adopt the control measures in Tables 4-2 and 4-4 unless these measures or a portion thereof are found infeasible. . . ." Draft 2012 AQMP, pg. 4-41. The Draft 2012 AQMP describes infeasibility where "the proposed control technology is not reasonably likely to be available by the implementation date in question, or achievement of the emission reductions by that date is not cost-effective." The District, however, should go further and remove the hard VOC targets from the individual source sections in CTS-01 to CTS-04.

Lastly, under California law, a SIP must "include an assessment of the cost effectiveness of available and proposed control measures and shall contain a list which ranks the control measures from the least cost-effective to the most cost-effective." Cal. Health & Safety Code Section 40922(a). The District must also consider other factors as well, including "technological feasibility, total emission reduction potential, the rate of reduction, public acceptability, and enforceability." Cal. Health & Safety Code Section 40922(b). When assessing cost effectiveness, ACA urges the District to not only consider the cost effectiveness of the tons per day of VOC reductions, but the cost effectiveness of the control measure in reducing ozone itself, since this is the ultimate goal of the regulations. Although VOC reductions may appear to be cost effective when viewed alone, VOC reductions are not cost effective if they do little or nothing to reduce ozone levels in the South Coast Air Basin. After conducting such analysis, the District will be able to determine whether the VOC reductions are truly cost effective.

**IV. Concerns Regarding the Specific Implementation Measures for Ozone**

Although ACA objects to the inclusion of any of the VOC control measures in the Draft 2012 AQMP, we provide the following specific comments on the District's proposed implementation measures for ozone that specifically target individual sources for VOC reductions in Appendix IV(A) in sections CTS-01, CTS-02, CTS-03, and CTS-04.

**A. CTS-01: Further VOC Reductions from Architectural Coatings**

ACA appreciates that the District lowered the VOC commitment for architectural coatings to 2-4 tpd, but the District has still not explained why a minimum of 2 tpd is necessary to meet its

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ozone attainment goals. Beyond this general complaint, ACA has the following concerns with CTS-01.

1. Emissions inventory for architectural coatings

ACA requests that the District make the following changes to the architectural coatings emissions inventory.

First, the District’s architectural coatings emissions estimates vary from the Draft 2012 AQMP Chapter 3 Base Year & Future Emissions, which reference Appendix III, to the estimates included in CTS-01 in Appendix IV(A). There is a discrepancy between the estimates for 2019 and 2023, varying as much as 1.33 tpd and 2.59 tpd respectively between the two sections. See the following comparison:

	2008	2014	2019	2023
CTS-01	21.9 tpd	15.8 tpd	17.5 tpd	19.3 tpd
Chap. 3/Appendix III	21.9 tpd	15.46 tpd	16.17 tpd	16.71 tpd

ACA suggests that the District update CTS-01 with the lower Chapter 3 Base Year & Future Emissions estimates.

Second, the District has traditionally assumed that AIM VOC emissions are directly correlated to the volume of coatings sold in the District; as the volume of AIM coatings increases, the VOC emissions from AIM coatings increase as well. The District also assumed that once the economy improved, AIM Coatings sales would increase and AIM VOC emissions would return to 2008 levels. Recent Rule 314 emission data (see below) suggest this is not be the case. While volumes increased by approximately 7%, emissions decreased by approximately 2%. ACA suggests that the VOC content of coatings has drastically decreased as the result of Rule 314 AIM Fee Rule, and the general industry market reformulation towards zero or low-VOC coatings. ACA requests that the District review its assumptions with regards to AIM coatings and revise these assumptions accordingly to match the known historical trends.

	2008	2009	2010	2011
Coatings Volume	39,986,966 gal	34,726,037 gal	35,001,778 gal	37,749,674 gal
VOC Emissions	16.10 tpd	12.05 tpd	12.05 tpd	11.86 tpd

2. VOC Limits for Flat, Nonflat and Primer, Sealer, Undercoaters

The 1.7 tpd reduction from the flat, nonflat, and primer, sealer, undercoater (PSU) categories assumes that the limits for these entire categories will be lowered to 25 g/l regulatory VOC content, even though the CTS-01 description mentions the potential creation of new draft subcategories (e.g., primers for metals). Note that the creation of these categories is not included in the 1.7 tpd reduction estimate. CTS-01 should include a range of emissions reductions based on the likely reductions from amending the flat, nonflat, and PSU categories, not just the best case scenario if the entire categories are reduced to 25 g/l.

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ACA is concerned that limits below 50 g/l for flat and nonflat and 100 g/l for PSUs may be difficult to achieve given the current problems associated with VOC test methods. Depending on a test method that is unreliable at lower VOC levels will create a significant enforcement problem. In addition, ACA suggests the District complete a technology assessment to be sure that it is technologically feasible to lower the VOC limits, especially since certain products require higher VOC content levels to adequately perform.

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**3. Small Container Exemption**

ACA is concerned that eliminating the small container exemption, or even eliminating the exemption for certain categories, is problematic since the small container exemption is a crucial compliance option. This exemption provides a safety valve or a last resort option that allows for traditional, high performing products for challenging application situations where the limits in certain categories are exceptionally low or a category is eliminated, especially since the SCAQMD Rule 1113 limits are the most stringent in the United States. There are also a host of niche coatings that manufacturers can now sell in small containers that would need to be recategorized if the small container exemption is modified or removed.

ACA is very concerned that the current language only mentions the complete phase out of the small container exemption embedded in SCAQMD Rule 1113, and not any of the other available options. Under the most recent version of CTS-01 in the Draft 2012 AQMP's Appendix IV(A), under the Proposed Method of Control section, the small container exemption section excludes any reference to other potential options for emissions reductions. Given the importance of this exemption for the industry, ACA urges the District to revise the language in the current 2012 Draft AQMP by reincorporating the following draft language from June 2012:

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"Staff will evaluate various options for the SCE, including a complete phase out of the exemption, creating certain new categories with higher VOC limits (e.g., primer for recycled rubber floor), creating a maximum allowable VOC limit, or phasing out the SCE for certain coating categories."

This language ensures that the District will evaluate several options beyond just a complete phase out of the exemption when the District amends Rule 1113 in the future.

Along a similar vein, CTS-01 should include a range of target emissions reductions based on the likely reductions from amending the small container exemption, not just the best case scenario of eliminating the entire exemption. The current 1.9 tpd estimate for reductions resulting from amendments to the small container exemption assumes the complete elimination of the entire exemption. The estimate should factor in the other available options, including the creation of certain new categories with higher VOC limits (e.g., primer for recycled rubber floor), a maximum allowable VOC limit, or a phase out of the small container exemption for only certain coatings categories.

**B. CTS-02: Further Emission Reductions from Miscellaneous Coatings, Adhesives, Solvents and Lubricants**

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The District should further elaborate on its proposed control measures in CTS-02. It is impossible to comment on CTS-02 given the lack of any particular details in the control measure

summary. While the District mentioned the possibility of lowering the VOC limits in eight different rules, the District did not list any specific categories that may be impacted or possible VOC limits or reduction measures. ACA requests that the District provide more details on potential VOC limit reductions so that stakeholders can submit substantive comments on CTS-02.

ACA objects to the District's proposal to reduce the VOC limits of some of the coating categories listed in rules 1106 and 1106.1 because, as the following paragraphs explain in greater detail, it is not technologically feasible to make further reductions.

Rule 1106.1 has had a negative effect on South Coast's pleasure craft business since it was introduced in 1992. In the 1970's and 80's, California was considered by many to be the pleasure craft building capital of the world. The following pleasure craft builders operated in California prior to rule 1106.1: Catalina Yachts, Columbia Yachts, Islander Yachts, Capital Marine, Corsair Marine, Ericson Yachts, Laguna Yachts, Westsail, Pacific Seacraft, Bill Lee Yachts, Pacific Boats, Moore Bros, Express, and Wilderness Boats. The introduction of Rule 1106.1 drove these builders out of South Coast and California into other parts of the United States, or to other countries. Even today, the coatings industry has yet developed coatings which meet customer expectations and requirements and which also meet VOC limits in the following categories: Extreme High Gloss; Finish Primer/Surfacer; Other Substrate Antifoulant; and Antifouling Sealer/Tie Coat.

The situation for rule 1106 is similar to that for rule 1106.1. Industry has struggled to meet the VOC limits listed in this rule and does not yet have technologically sound solutions to provide coatings of lower VOC content. Therefore, it is not possible to lower VOC limits in many of the coating categories in this rule. As a result of developments from the International Maritime Organization (IMO) Antifouling Systems Convention (2001), there is a requirement for at least one additional specialty category – Antifouling Sealer/Tie Coat – which industry recommends a level of 420g/L; this also applies to Rule 1106.1

ACA welcome the opportunity to discuss revisions to both rule 1106 and rule 1106.1 with the District in greater detail in due course.

**C. CTS-04: Further VOC Reductions from Consumer Products**

As mentioned earlier, the SCAQMD basin is NOx limited and therefore insensitive to additional VOC reductions, including the proposed measures in CTS-04. In addition, scientific studies and analysis clearly show that LVPs have minimal impacts on VOC emissions and ozone formation. Further, the LVP exemption is an important compliance mechanism that is necessary at this point to comply with the stringent VOC limits in the California consumer product regulations.

**V. California State Implementation Plan Schedule**

SCAQMD should abandon its accelerated schedule for adopting the Draft 2012 AQMP and submitting it to the California Air Resources Board (CARB). SCAQMD should establish a more realistic and reasonable schedule for the adoption of its five-year air quality management plan. The District released the 379-page Draft 2012 AQMP and its six appendices on July 18, 2012 – over 1,000 pages are contained in these documents. The District cannot reasonably expect

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ACA Comments – South Coast Draft 2012 AQMP

August 31, 2012

stakeholders to analyze these documents and provide substantive comment by August 31, 2012. This 44-day time frame is insufficient for stakeholders to adequately respond to the District's proposal.

Furthermore, South Coast staff has indicated the District's intention to raise the final version of the 2012 AQMP to the SCAQMD's Governing Board on November 2, 2012. We appreciate the District moving the date back by one month; however, we are still concerned that this schedule does not provide nearly enough time for the District to fully consider all stakeholder comments and incorporate changes into the Draft 2012 AQMP.

Given the importance of the 2012 AQMP – it effectively locks air quality targets into the California SIP and guides the agency's decision-making for planned future regulatory actions that impact a range of regulated entities – the District's should decelerate its schedule. ACA respectfully requests additional time to comment on the Draft 2012 AQMP and additional time for the District to fully address and respond to stakeholder input concerning this crucial planning document. For more information, please refer to our formal request letter dated August 29, 2012.

**VI. Conclusion**

The District should remove CTS-01, CTS-02, CTS-03, and CTS-04 from the 2012 AQMP, given the fact that additional VOC reductions will have no impact on ozone formation. The District should instead focus its efforts on other source categories for further reductions.

Thank you for the opportunity to comment. If you have any questions or need any further information on the issues discussed here, please feel free to contact me at (202) 462-6272.

Sincerely,

/s/

/s/

David Darling, P.E.  
Director, Environmental Affairs

Tim Serie, Esq.  
Counsel, Government Affairs

*\*\* Sent via email \*\**

**Attachment A (July 5, 2012 Comments)**

July 5, 2012

Dr. Elaine Chang  
Deputy Executive Officer, Planning, Rules & Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

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**RE: SCAQMD 2012 Air Quality Management Plan (AQMP) Advisory Group Meeting #10 – Control Measure Concepts; ACA Comments**

Dear Dr. Chang:

The American Coatings Association<sup>2</sup> (ACA) submits the following comments on CTS-01 *Further Emission Reduction from Architectural Coatings (Rule 1113)*.

**Introduction**

The following is an overview of ACA’s concerns with the Air Quality Management Plan (AQMP) and CTS-01:

1. The District has made several recent reductions to the Architectural Coatings 2008, 2014, 2019 and 2023 inventories. ACA suggests that additional reductions are needed since the current estimates are likely too high and requests additional background on the development of the inventory estimates.
2. Given the fact that the District is actually showing an excess of 4.0 tons per day (tpd) of volatile organic compounds (VOC) reductions in the SIP commitment outlined in the 2007 AQMP, ACA suggests that 4.6 tpd from CTS-01 is not needed.
3. ACA is very concerned that the estimated 4.6 tpd reductions from CTS-01 amounts to nearly a 40% reduction in the architectural and industrial maintenance (AIM) coatings inventory which is excessive on its face and unreasonable.
4. The 4.6 tpd CTS-01 emission reduction estimate is based on a best case scenario and very “optimistic” assumptions that are not consistent with the CTS-01 descriptions and are therefore too large. If the District does not obtain these reductions, they will once again be forced to lower VOC limits for other AIM coatings categories to reach the 4.6 tpd goal.
5. The CTS-01 Control Measures are technically problematic and ACA requests additional background on the development of these measures.
6. SCAQMD is not giving adequate consideration to the science-based fact that ozone formation in the SCAQMD region is ultimately NOx-limited.

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**Architectural and Industrial Maintenance (AIM) Coatings Inventory**

ACA seeks to assure that appropriate inventory credit is given for the significant reductions already achieved in mass and reactivity of VOC emissions from architectural coatings. It is critical that the AIM inventory is accurate since the AQMP and all future regulatory actions are based on these estimates. The District must fully explain its emissions calculations, and all of its underlying assumptions, to provide a well-grounded basis for its decision making and future regulatory actions. Relying on faulty assumptions and inadequate or unrealistic emissions estimations is arbitrary and capricious, and will have an unjustified, negative impact on the paint

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<sup>2</sup> The American Coatings Association (ACA) is a voluntary, nonprofit trade association working to advance the needs of the paint and coatings industry and the professionals who work in it. The organization represents paint and coatings manufacturers, raw materials suppliers, distributors, and technical professionals. ACA serves as an advocate and ally for members on legislative, regulatory and judicial issues, and provides forums for the advancement and promotion of the industry through educational and professional development services.

and coatings industry. The lack of information concerning the District’s calculations also denies affected stakeholders the opportunity to fully analyze and comment on the District’s inventory estimates. To allow ACA to fully comment on CTS-01, ACA requests detailed information on Rule 314 data including sales volume; sales weighted average VOC content; emissions, etc. for each category for years 2008-2011, including the small container exemption.

The District should explain the considerable variability between its different AIM inventory estimates over the last few months, and account for this variability in the AQMP. The AIM inventory estimates have varied drastically over the last several months. For example, at the May AQMP meeting, staff released a preliminary draft AIM inventory of 26.16 tpd for 2008, 22.87 tpd for 2014, and 24.72 tpd for 2023. The revised inventories released at the June 14 meeting were 21.91 tpd for 2008, 15.46 tpd for 2014, 16.17 tpd for 2019 and 16.71 tpd for 2023. The CTS-01 Summary also includes an estimate of 19.1 tpd for 2008, and 17.3 tpd for 2019. As summarized in the table below, the CTS-01 AIM estimate for 2008 is 7 tpd less than the May 17 estimates, far exceeding the estimated 4.6 tpd expected from the control measure. It appears that the control emission reductions are needed since the revisions to inventory are larger than the expected control measure reductions.

**South Coast Air Quality Management District  
Estimated Emissions from Architectural & Industrial Maintenance Coatings**

	2008	2014	2019	2023
May 17 AQMP Meeting	26.16 tpd	22.87 tpd		24.72 tpd
June 14 AQMP Meeting	21.91 tpd	15.46 tpd	16.17 tpd	16.71 tpd
Difference	4.25 tpd	7.41 tpd		8.01 tpd
% Change	16%	33%		33%
CTS-01	19.1 tpd		17.3 tpd	
Difference from May 17	7.06 tpd			
Difference from June 14			1.13 tpd	
% Change	27%		7%	

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Further, it is important to note that based on information from a meeting with District staff on June 14, the CTS-01 2008 estimate of 19.1 tpd actually includes 13.3 tpd for architectural coatings, 3.0 tpd for colorants and 2.8 tpd for solvent usage. The colorant and solvent usage tonnage will be reduced to nearly zero by 2014 based on recent rule amendments. So it is unclear how the District estimated 17.3 tpd in 2019. Assuming the inventory of 12 tpd from 2009, 2010, and 2011 continues into the future, ACA questions the CTS-01 estimate of 17.3 tpd for 2019; this estimate is likely 5.3 tpd, much higher than the estimated CTS-01 4.6 tpd control measure reduction. As such, ACA requests additional information regarding the CTS-01 2014, 2019, and 2023 inventory estimates. The District should account for the additional future reductions resulting from requirements for colorants, VOC limit reductions, thinning/cleaning solvents, reductions from Rule 314 AIM fees as well as reductions from “green marketing” formulation changes that will offset any increases.

The District should also explain its assumptions that recent reductions in the architectural coatings emissions inventory were the result of the economic recession. In the past the District assumed that once the economic growth increased, the emissions from architectural coatings would also increase. However, at the June 14 meeting, Staff confirmed that Rule 314 emissions data indicate that even though architectural coatings volumes have increased by 7% from 2010 to 2011, the emissions have decreased by 2%. ACA suggests any “rebound” assumptions in the inventory be revised. ACA also questions the District’s assumption that increased population in the future will directly increase architectural emissions as well. ACA suggests the District review and release the inventory estimates and lower any assumed emission increases either due to improved economic growth or population increases in the district. The breakdown should include assumptions for population growth, economic impacts, predicted sales volumes, and AIM regulations.

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The District has significantly lowered the 2008 AIM inventory estimates since the May 17 meeting – a total of 7.06 tpd. ACA believes the 2019 estimate is still likely to be at least 5.3 tpd too high. Bottom line, the District’s changes to the AIM inventory since the May 17 AQMP meeting and the potential over estimation of the 2019 AIM inventory will result in nearly 3 times the estimated reductions that would be achieved via CTS-01. Given the significant impact of these emissions inventory calculations, the District should explain each of the individual elements that comprise the emissions estimate and projected future inventory, so that the industry can adequately comment on the AQMP.

District Progress Implementing the 2007 AQMP

On table 1-1 of the CEQA, the District is actually showing an excess of 4.0 tpd of VOC reductions SIP commitment outlined in the 2007 AQMP. ACA suggests that if the District is running 4 tpd excess VOC emissions from the 2007 AQMP, the 4.6 tpd from CTS-01 is not needed.

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ACA Inventory Monitoring Concept

ACA is very concerned that the estimated reductions from CTS-01 of 4.6 tpd would result in a roughly 40% reduction in the 2019 AIM inventory, relying on ACA’s 12 tpd estimate. Requiring a 40% reduction in emissions from a single source category is excessive and unreasonable.

ACA suggests the District develop an AQMP strategy that relates development and implementation of CTS-01 to future AIM emissions. If, for example, the District is able to document (through Rule 314) that the AIM emissions in 2012 are less than 12 tpd (hypothetical number), then the District would not need to develop and implement CTS-01, since the District could take credit for the reductions in Rule 314. If, on the other hand, the AIM emissions in 2012 are more than 12 tpd, then the District could develop and implement CTS-01 to reduce the source category’s emissions to below 12 tpd. Another benefit of this option is that it resolves the District’s concern that recent inventory reductions are solely related to the economic downturn (i.e. the emissions will increase once the economy improves).

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**AIM VOC Reduction Estimates are Overly Optimistic**

The District estimated reductions from CTS-01 to be 4.6 tons per day. Based on discussions with District Staff at the June 14, 2012 meeting, the 4.6 tpd reduction estimate is based on a best case scenario and very optimistic assumptions that are not consistent with the CTS-01 descriptions. As such, ACA believes that this emission reduction estimate of 4.6 tpd is too high. If, for example, the District does include a new subcategory for primers, or does not completely phase out the small container exemption, the District will once again be forced to lower VOC limits for other AIM coatings categories to reach the 4.6 tpd goal since the maximum tonnage reductions are included in the AQMP.

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**Arbitrary Control Measures Will Result in Need for Additional AIM Reductions**

Once again, similar to our comments on the 2007 AQMP (letter dated December 7, 2006), ACA is concerned that if these extreme and unproven reductions are approved, the industry will be forced to achieve the VOC targets regardless of whether the CTS-01 control measures are technologically feasible. Once these reduction estimates are approved in the AQMP and cemented into the State Implementation Plan (SIP), the District may sidestep technical or economic concerns with the regulations by claiming that it has no choice since the reductions are already "locked" into the AQMP and SIP. Setting a hard target and then later justifying that target with subsequent analyses is inappropriate and defeats the critical safeguards provided by the administrative rulemaking process. Given these significant concerns, the Plan should clearly state that any specific numeric goals or targets are subject to the District's future analyses and the rulemaking process and may be adjusted based on technical and economic concerns. Providing a range for the emissions reductions targets would give the District needed flexibility.

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**CTS-01 Control Measures are Technologically Problematic**

ACA offers the following comments regarding concerns with the specific proposed measures outlined in CTS-01:

**1. Reduce VOC Emissions from Flat, Nonflat and Primer, Sealer, Undercoaters**

The 1.7 tpd reduction from the flats/nonflats/PSU categories assumes that the limits for these entire categories will be lowered to 25 g/l regulatory VOC content, even though the CTS-01 description mentions the potential creation of new draft subcategories (e.g., primers for metals). Note the creation of these categories is not included in the 1.7 tpd reduction estimate. CTS-01 should include a range of emissions reductions based on the likely reductions from amending the flat, nonflats, and PSU categories, not just the best case scenario if these categories are completely reduced to 25 g/l.

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ACA is concerned that limits below 50 g/l (flat and nonflat) and 100 g/l (PSU's) may be difficult given the current problems associated with VOC test methods. Depending on a test method that is unreliable at lower VOC levels will create a significant enforcement problem. In addition, ACA suggests the District complete a technology assessment to be sure that it is technologically

feasible to lower the VOC limits, especially since certain products need to be kept at the current limits.

**2. Small Container Exemption**

The 1.9 tpd reduction from the Small Container Exemption (SCE) assumes complete elimination of the entire small container exemption, even though the CTS-01 description mentions creating certain new categories with higher VOC limits (e.g., primer for recycled rubber floor), creating a maximum allowable VOC limit, or phasing out the SCE for only certain coating categories. Note these options are not included in the 1.9 tpd reduction estimate. CTS-01 should include a range of target emissions reductions based on the likely reductions from amending the small container exemption, not just the best case scenario of eliminating the entire exemption.

ACA is concerned that eliminating the small container exemption, or even eliminating the exemption for certain categories, is problematic since the small container exemption is critical given the fact that the SCAQMD Rule 1113 limits are the most stringent in the US. This exemption provides a "safety valve" or a last resort option that allows for traditional products in problem situations when the limits in categories become increasingly more stringent or a category is eliminated. There are also a host of niche coatings that manufacturers can now sell in small containers that would need to be categorized if the small container exemption is modified or removed.

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**3. Application Techniques with Greater Transfer Efficiency**

The 1.0 tpd reduction from the Spray gun efficiency requirements assumes a first phase would incorporate the laser targeted technology, commercially proven to reduce coating usage by 30%. The second phase of incorporating transfer efficiency requirement of 65% may potentially reduce coating usage by up to an additional 30%. ACA requests additional information on the assumptions used to develop the 1.0 tpd estimate, since ACA seriously questions whether the use of laser technology or more efficient spray guns will result in 1.0 tpd of reductions. The District should ensure its emission reductions estimates are realistic before incorporating an arbitrary figure into the AQMP.

ACA is concerned the District's reduction estimates are overly optimistic and we do not believe either the laser technology nor a more efficient spray guns will result in a 30% reduction in coating usage. Spray application of coatings on large flat buildings is drastically different than spraying small odd shaped parts – there is very little over spray associated with spraying buildings. The District should not rely on estimated reductions based on spray booth applications when calculating the potential reductions for architectural coatings applications. Further, since architectural coating contractors already have a financial incentive to reduce coating usage, it is very unlikely that increased gun efficiency will reduce coatings usage by 30%. ACA requests background information the District used to estimate the 30% reduction so that we can adequately comment on this issue.

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**Reducing VOC Emissions in South Coast will Not Reduce Ozone**



ACA Comments – South Coast Draft 2012 AQMP

August 31, 2012

ACA is concerned that SCAQMD is neglecting to adequately consider the science-based fact that ozone formation in the SCAQMD region is ultimately limited by nitrogen oxides (NOx), or is NOx-limited. The District concluded in the 2007 AQMP that major reductions in emissions of oxides of sulfur (SOx), particulate matter less than 2.5 microns (PM2.5) and NOx are necessary to attain the air quality standards for ozone and particulate matter by the dates mandated by federal law. Less emphasis is placed on emission reductions of VOCs because of the greater emphasis on NOx emission reductions, which is a precursor to both ozone and PM. ACA suggests the District go even further in the 2012 AQMP and provide more background discussions and modeling information on the benefits of NOx reductions as opposed to VOC reductions. Given this, the District should focus its efforts on adopting NOx reduction control measures, since VOC control measures will not have any impact on ozone attainment in the District.

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Thank you for the opportunity to comment. If you have any questions or need any further information on the issues discussed here, please feel free to contact me at (202) 462-6272.

Sincerely,

/s/

/s/

David Darling, P.E.  
Director, Environmental Affairs

Tim Serie, Esq.  
Counsel, Government Affairs

**\*\* Sent via email \*\***

**The following is a copy of comment letter D:**

Attachment B (June 13, 2012 ACA Comments)

June 13, 2012

Dr. Philip Fine and Joe Cassmassi  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

RE: SCAQMD 2012 Air Quality Management Plan (AQMP) Advisory Group  
Meeting #9 – Control Measure Concepts; ACA Comments

Dear Dr. Fine and Mr. Cassmassi:

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ACA Comments – South Coast Draft 2012 AQMP

August 31, 2012

The American Coatings Association (ACA) submits the following initial comments on CTS-01 *Further Emission Reduction from Architectural Coatings (Rule 1113)* that were presented at the May 17, 2012 Air Quality Management Plan (AQMP) Advisory Group Meeting.

#### Architectural and Industrial Maintenance (AIM) Coatings Inventory

ACA wants to assure that appropriate inventory credit is given for the significant reductions already achieved in mass and reactivity of VOC emissions from architectural coatings, and additional reductions to come from requirements for colorants, VOC limit reductions and thinning/cleaning solvents.

SCAQMD should fully explain any discrepancies or changes to the architectural and industrial maintenance (AIM) coatings inventory. At the May AQMP meeting, staff released a preliminary draft AIM inventory of 26.16 tpd for 2008, 22.87 tpd for 2014, and 24.72 tpd for 2023. Recent revised information suggests the inventory for 2008 is now 21.9 tpd (16.1 tpd for AIM coatings; 2.8 tpd for thinning/ cleaning/additives; and 3.1 tpd for colorants). ACA requests additional information on what the 2.8 tpd for thinning, cleaning and additives includes. ACA has also requested additional information on the 2014 inventory. ACA suggests the estimated 2014 inventory is too high, considering the 2011 Rule 1113 Staff Report where the District estimated the 2009 inventory to be as low as 11.6 tpd. Assuming the 2009 and 2014 inventories are similar (11.6 tpd), the original 2014 estimate of 22.87 tpd may be as much as two times too large. Instead of accounting for 22% of the AIM inventory, the proposed CTS-01 would instead account for nearly 43% of the AIM inventory.

ACA suggests the District develop an AQMP strategy that relates development/implementation of CTS-01 to future AIM emissions. If for example the District is able to document (via Rule 314) that the AIM emissions in 2012 are less than say 12 tpd (hypothetical number), then the District would not need to develop/implement CTS-01, since the District could take credit for the reductions in Rule 314. If on the other hand, the AIM emissions in 2012 are more than 12 tpd, then the District would develop and implement CTS-01 to reduce the industry emissions to below 12 tpd. Another benefit of this option is that it resolves District concern that the recent inventory reductions are economy related (i.e. the emissions will increase once the economy improves).

#### AIM VOC Reduction Estimate

ACA assumes that the 4-5 tons per day in CTS-01 will come from reductions from the recent Rule 1143 (9.75 tpd) and Rule 1113 amendments (4.4 tpd) since the estimated a 4-5 tpd reduction from CTS-01 is too large based on the associated CTS-01 synopsis. In comparison, the 2011 Rule 1113 amendments resulted in estimated reductions of 4.4 tpd, which included VOC limit reductions for 11 categories (0.4 tpd), changes/phase-out of the averaging provision (1.2 tpd) and limits on colorants (2.8 tpd). ACA requests further details on the estimated CTS-01 reductions, since ACA is concerned that the reductions detailed in the synopsis will not result in 4-5 tpd of reductions, therefore the District will be forced to lower VOC limits for other coatings categories.

Further, similar to our comments on the 2007 AQMP (letter dated December 7, 2006), ACA is concerned that if these extreme and unproven reductions are approved, the industry will be

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forced to achieve the VOC targets regardless of whether the CTS-01 control measures are technologically feasible. As ACA commented in the past, we are concerned that once these reduction estimates are approved in the AQMP and the State Implementation Plan, the District may sidestep the technical concerns claiming that it has no choice since the reductions are “locked” into the Plan/SIP. Given this significant concern, the Plan should clearly state that any specific numeric goals or targets are subject to the District’s statutory authority to regulate non-mobile sources and may be adjusted in the future based on technological feasibility analyses.

**CTS-01 Control Measure Technological Concerns**

ACA is currently reviewing the potential control measure concepts in CTS-01, however ACA offers the following initial comments:

**1. Reduce VOC Emissions from Flat, Nonflat and Primer, Sealer, Undercoaters (PSU)**

ACA is concerned that limits lower than 50 g/l (flat and nonflat) and 100 g/l (PSU’s) may be difficult given the current problems associated with VOC test methods. In addition, ACA suggests the District complete a technology assessment to be sure that it is technologically feasible to lower the VOC limits, especially since certain products need to be kept at the current limits. See attached ACA comments dated 2/4/2011.

**2. Small Container Exemption**

ACA is concerned that eliminating the small container exemption, or eliminating the exemption for certain categories is problematic since the small container exemption is critical given the fact that the SCAQMD Rule 1113 limits are the most stringent in the US. This exemption provides a “safety valve” or a last resort option that allows for traditional products in problem situations when the limits in categories become more stringent or a category is eliminated. There are also a host of niche coatings that manufacturers can now sell in small containers that would need to be categorized if the small container exemption is modified or removed. See attached ACA comments dated 2/4/2011.

**3. Application Techniques with Greater Transfer Efficiency**

ACA is concerned the District is imposing transfer efficiency requirements on equipment used to apply AIM coatings. With regards to the laser paint targeting system, ACA is concerned that the system is sold exclusively by Iowa University and has not been widely distributed throughout the US. While this technology may be useful for training contractors to properly apply coatings in an automotive refinish shop under controlled conditions, this technology may not be applicable to field applied coatings. As such, ACA is concerned that it may be difficult for the District to document and receive SIP credit for increased efficiency from the use of this technology. Further, this equipment is expensive – approximately \$100 per unit (not including replacement of the lithium battery that has a tested average life of only 20 hours). Also, ACA is concerned that this technology was designed for auto refinish coatings shops, and it may not work on AIM spray equipment that is used in the field (large areas, use of wands, rough texture substrates, sunny locations). Finally, it’s unclear whether these units can be properly cleaned.

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ACA is also concerned that if the laser paint targeting system control measure is abandoned for some reason the District will be forced to impose the 65% efficiency requirements for all AIM spray equipment, which is problematic.

**Lack of Technological or Economic Assessment**

ACA is also generally concerned with the absence of the following in the AQMP:

- (1) No assessment of technological or economic feasibility of the proposals, which may amount to pointless bans on useful products.
- (2) No assessment of potentially significant unintended adverse environmental impacts from either (a) substitution of inadequate alternatives, or (b) lack of adequate protective maintenance painting.
- (3) No demonstration that further reductions in VOC emissions from architectural coatings would be necessary or helpful in achieving ozone attainment under the increasingly NO<sub>x</sub>-limited conditions of the South Coast Air Basin.

Thank you for the opportunity to comment. If you have any questions or need any further information on the issues discussed here, please feel free to contact me at (202) 462-6272.

Sincerely,

/s/

David Darling, P.E.  
Director, Environmental Affairs

**The following is a copy of comment letter received for the 2007 AQMP, responses can be found at: [http://www.aqmd.gov/aqmp/07aqmp/07AQMP\\_modified.html](http://www.aqmd.gov/aqmp/07aqmp/07AQMP_modified.html).**

**Attachment C (December 7, 2006 Comments)**

December 7, 2006

Mr. Joseph Cassmassi  
Manager Planning, Rule Development and Area Sources SCAQMD  
21865 Copley Drive  
Diamond Bar, CA 91765-4182

RE: 2007 Air Quality Management Plan (AQMP); NPCA Comments

Dear Mr. Cassmassi,

NPCA<sup>3</sup> is pleased to submit the following initial comments on the SCAQMD Preliminary Draft 2007 AQMP.

The Draft AQMP appears to recognize that additional mass-based VOC reductions, beyond those already required by the limits SCAQMD has previously imposed on architectural and industrial maintenance coatings are not feasible based on currently available technology. NPCA agrees that the 56 ton reduction in emissions that SCAQMD expects to achieve from AIM coatings and other solvents must remain in the "black box" reactivity-based controls as proposed (as CM #2007LTM-01) for Architectural Coatings, Miscellaneous Coatings and Solvents, and Consumer Products, and as to other potential "advanced technologies" discussed in the Draft AQMP. NPCA is greatly concerned that if this extreme and unproven reduction target is adopted by the SCAQMD Board as a short- or mid-term control measure of the AQMP, and approved as part of the California SIP by ARB and EPA, the industry will be arbitrarily "locked" into achieving the target whether or not it is technologically possible -- in which case the regulation becomes a wholesale ban on architectural coatings. NPCA and the paint industry have been subject to other SIP-approved AQMP control measures in the past, and SCAQMD sidestepped technical concerns claiming it was "locked" into these measures through the SIP approval and enforcement process. On Page 4-63, the proposed SCAQMD plan itself notes that "reformulation based on lower reactive compounds need to be evaluated and considered" and does not know what additional reductions are actually achievable. NPCA does not want to see this happen again with the 2007 AQMP. Given this concern, NPCA recommends that a specific numerical goal not be set until technical feasibility issues are carefully examined.

NPCA recognizes that the technological and economic feasibility of the proposed "black box" measure cannot be fully assessed at this time. However, NPCA believes it is critical that it be documented that any specific numerical "goal or target" can be adjusted in the future based on technological and economic feasibility findings. If this long-term "black box" measure is adopted, NPCA is prepared to work with the District in ensuring that any future emissions rulemakings implementing the control measure be technologically and commercially feasible.

We note that the control measure proposes to require that paints be reformulated with "50 percent minimum by volume acetone reactivity-equivalent materials by 2015." The main problem with this is that while industry has long advocated consideration of reactivity-based limits for architectural coatings, no reactivity-based regulation exists today, nor is it yet understood how much, if any, *additional* reduction in ozone-formation potential may be possible by means of a reactivity-based rule. We believe that, to set an extreme goal of 50 percent reduction without any technical basis to assure feasibility is unwarranted.

At the November 16th SCAQMD Public Workshop, NPCA requested information on how the control measure reduction target was selected. SCAQMD staff responded by saying that the

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<sup>3</sup> NPCA is a voluntary, nonprofit trade association representing some 350 manufacturers of paints, coatings, adhesives, sealants, and caulks, raw materials suppliers to the industry, and product distributors. As the preeminent organization representing the coatings industry in the United States, NPCA's primary role is to serve as ally and advocate on legislative, regulatory and judicial issues at the federal, state, and local levels. In addition, NPCA provides members with such services as research and technical information, statistical management information, legal guidance, and community service project support.

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target had no technical basis other than the district's own computer modeling estimates as to what degree of VOC reduction would be needed to project attainment of the ozone standard. We note that § 182(e)(5) of the Clean Air Act requires the District to identify enforceable contingency measures if a "black box" control measure is ultimately incapable of achieving the proposed reductions. LTM-01 states that the proposed 56 ton emission reductions would be achieved through mass-based limits if reactivity is not feasible. It is not clear whether SCAQMD intends that mass-based reductions are to be the contingency measure, should reactivity-based controls be insufficient to achieve the reductions. Since the current mass-based limits for architectural coatings in the SCAQMD are already so low, NPCA believes that further reductions to such an extreme degree will not be possible via reactivity nor mass-based limits, and the entire control measure, whether the reductions are based on limits on VOC reactivity, or VOC mass, must remain in the "black box," and specific contingency measures be proposed if such reductions are not achievable.

In addition, NPCA is concerned that SCAQMD is not giving adequate consideration to the science-based fact that ozone formation is ultimately NOx-limited. As such, with sufficient NOx reductions, VOC control will not further contribute to attainment of the ozone standard.

Finally, NPCA supports SCAQMD suggestion (page 4-50) that additional reactivity research is necessary especially for the magnitude of reductions suggested by SCAQMD. NPCA also suggests that SCAQMD incorporate atmospheric availability in its inventory assessment - since the current assumption that 100% of solvents in coatings are available for ozone formation is not accurate.

Thank you for your consideration of our comments.

Sincerely,

/s/

David F. Darling, P.E.,  
Director, Environmental Affairs

/s/

Jim Sell  
Senior Counsel, Government Affairs

Cc: Catherine Witherspoon, ARB  
Debbie Jordan, EPA Region 9  
Bill Wehrum, EPA

\*\* Sent via email and in hard-copy \*\*

**Responses to Comment Letter P**  
**ACA**

**Response to Comment P-1:**

Staff acknowledges that the architectural coatings industry has made great strides in lowering the VOC emissions from architectural coatings. Even with these reduced emissions, this category is one of the largest sources of VOC emissions under the AQMD's regulatory purview. Staff continues to look at all sources of emission for further reductions and is not seeking to focus solely on the architectural coatings manufacturers.

The reporting pursuant to Rule 314 – Fees for Architectural Coatings indicates that many coatings manufacturers are formulating coatings well below the current VOC limits. While the AQMD is unable to seek SIP credit for the lower emissions as a result of Rule 314 expected in the future due to the fact that the rule does not include enforceable caps that limit emission on a permanent basis, the 2008 baseline in the AQMP is based on the Rule 314 data so it does reflect the lower emissions in the inventory.

The Clean Coatings Certification Program (CTS-02 from the 2007 AQMP), was not implemented and did not include any SIP reductions. The control measure did discuss the concept for seeking SIP credit for reductions due to promoting the use of certified ultra-low VOC coatings. Manufacturers have reported ultra-low VOC coatings under Rule 314, but any emission reductions from those ultra-low VOC coatings are not enforceable and permanent because manufacturers have the ability to increase the VOC content of coatings up to the applicable VOC limits in Rule 1113, depending on a shift in market demand. Therefore, these emissions reductions cannot be considered permanent or enforceable, two of the four key parameters necessary for SIP emission reductions to be credited on a forward looking basis.

The long term strategy achieves attainment of the ozone standards at all the air quality monitoring stations throughout the Basin by 2023. Modeling analysis shows that significant NOx emissions reductions are the only viable path to attain the 8-hour ozone standards in the Basin. Therefore, the ozone strategy focuses primarily on NOx reductions. However, VOC emissions reductions can also be cost-effective in progressing towards attainment of the ozone standards, especially in the western portions of the Basin. Furthermore, there is a significant health benefit to meeting the ozone standards as soon as possible in as many areas of the Basin as possible. While the current 8-hour ozone design value site is at Crestline in the San Bernardino Mountains, projections in 2023 show that the design value site will be at Glendora in the San Gabriel Valley to the west. As shown in the 2023 baseline 8-hour ozone NOx/VOC isopleths for Glendora and other western sites presented in the attachment to

Appendix V, VOC reductions will help to lower ozone concentrations in the San Gabriel Valley and Western portions of the Basin. This is true near the level of the 8-hour ozone standards, but is even more significant along the path to attainment. This is due to the higher VOC/NO<sub>x</sub> ratios projected to occur in future years, especially in the western Basin.

To this end, short-term VOC controls (through 2020) will help offset the impact of the increased VOC/NO<sub>x</sub> ratio in the impacted areas of the Basin, such as the San Gabriel Valley, that are immediately downwind of the primary emissions source areas. As such, a nominal amount of VOC reductions are proposed in the Draft 2012 AQMP. The proposed VOC control measures in the Plan are based on implementing all feasible control measures through the application of available technologies and best management practices, while seeking a fair share reduction from both mobile and stationary sources. As zero and near-zero technologies are implemented for mobile sources to reduce NO<sub>x</sub> emissions, concurrent VOC reductions from mobile sources are expected. Thus, stationary sources must continue to achieve their fair share of VOC reductions in the future. This plan proposes a modest 6 tpd of VOC emissions reductions out of a total 21 tpd of VOC reductions needed for basin-wide attainment in 2023.

**Response to Comment P-2:**

Again, staff concurs that the coatings industry has made great strides in lowering the VOC emissions from architectural coatings. Staff agrees that this may in part be attributed to market demands, as well as the financial incentives in Rule 314. However, staff notes that majority of the emissions reductions achieved are the result of three main phases of amendments to Rule 1113 – Architectural Coatings (previously included in the AQMP) that took place over a 12 year period, often with litigation from the architectural coatings industry.

While staff is not taking forward looking SIP credit for the coatings that are sold below the current VOC limits, the baseline VOC emission inventory will reflect those lower VOC coatings. With the adoption of Rule 314, the inventory is more accurate as the estimates are based on the coating sold into and within the AQMD as reported by the manufacturers on an annual basis. Prior to 2008, the AQMP relied on data collected by CARB for coatings sold throughout California which were reported every 4 – 5 years. The inclusion of Rule 314 data ensures that the emission inventory included for planning purposes is current.

Many factors contribute to the significant emissions reductions that have been achieved in architectural coatings, including implementation of Rule 314. However, staff is unable to attribute quantifiable emission reductions or the 10 tons of reductions mentioned in the comment to Rule 314. In addition to the strides the manufacturers have shown in lowering the VOCs, and the change to incorporate Rule 314 data to



calculate the emissions inventory, the industry experienced a large compression due to the economic recession. However, the VOC reductions achieved from the recessionary sales of architectural coatings are not permanent. Moreover, manufacturers have the ability to increase the VOC content of coatings up to the applicable VOC limits in Rule 1113, depending on a shift in market demand. Therefore, these emissions reductions cannot be considered permanent or enforceable, two of the four key parameters necessary for SIP emission reductions to be calculated on a forward looking basis.

Staff concurs with the costs associated with Rule 1113 amendments and Proposed Amended Rule 1107. However, staff is unable to determine how the ACA estimated the cost of \$41.4 million for the implementation of Rule 1143. The March 6, 2009 staff report estimated the annualized cost at approximately \$12 million. Staff is also unclear how the ACA estimated the cost of \$13.65 million for implementing Rule 314. Since Rule 314 implementation starting in CY-2009, the AQMD has received a total of less than \$8 million over four years, well below the projected revenue of \$14.5 million.

While the district agrees that passenger cars, off-road equipment, light duty trucks, etc. need to be considered in the overall control strategy for meeting the federal and state requirements, architectural coatings and low vapor pressure solvents found in consumer products also need consideration for additional control. Even with the lower emission baseline for 2008, architectural coatings remain the highest source of VOC emissions under the AQMD's current regulatory authority.

Staff agrees that the fee program may provide some incentive for formulation of lower VOC coatings, which was one of the goals of implementing Rule 314 and including the fee exemption for coatings that are less than 5 g/L of material. The benefits of those lower-VOC coatings cannot be quantified and credited on a forward looking basis because they cannot be considered permanent or enforceable. To the extent, however, the emission reductions currently experienced as a result of Rule 314 and other factors, reflect a permanent trend in future emission inventories, such reductions can play a role in shaping the scope of future amendments to the architectural coatings program.

**Response to Comment P-3:**

For comments regarding the need for further VOC reductions, please see response to comment P-1.

As staff works to implement CTS-01, they will work with stakeholders to ensure future limits are technically feasible and cost effective. Instead of including a hard target for the projected VOC emission reductions, staff included a range of reductions in CTS-01 (2 -4 tpd) and has yet to quantify the potential reductions in CTS-04.

**Response to Comment P-4:**

Staff has investigated the source of the discrepancy in the emission numbers between the table in CTS-01 and chapter 3 Appendix III and the necessary corrections have been made in the Final 2012 AQMP.

Staff is encouraged to see that while the volume of architectural coatings has increased, the emissions have remained relatively flat. Staff would like to see this trend continue. It is not likely that emissions will increase to the levels they were in 2008 in the near future, largely because the VOC limits in Rule 1113 have decreased since 2008. But as the housing market recovers and coating sales continue to rise, the VOC emissions from the application of architectural coatings will inevitably increase, albeit not potentially at same rate as previously seen. Due to the adoption of Rule 314, staff will be able to monitor the emissions on an annual basis.

**Response to Comment P-5:**

CTS-01 lists the potential emission reductions for lowering the VOC limit for flat, non-flat and primer, sealer, undercoater categories as “up to” 1.7 tpd, it is not a hard target of 1.7 tpd. Further, the table lists the total VOC reductions for architectural coatings as a range between 2 – 4 tpd. Staff notes that the lower end of the range will be submitted into the SIP and individual strategy targets will not be placed in the SIP.

Staff agrees that improvements in VOC test method, and/or a change in the metric to VOC of material will likely be necessary to implement a 25 g/L VOC limit, as proposed. Staff will work with industry, the U.S. EPA, CARB and academia in an effort to incorporate an improved test method.

**Response to Comment P-6:**

Staff does not agree that this exemption is a necessary safety valve for the VOC limits in Rule 1113. Aside from a few niche categories or new categories that may be necessary, there are ample products available in the marketplace that meets the VOC limits in Rule 1113. Staff is mindful, however, of the usefulness of the small container exemption to manufacturers and end users, especially for niche products, as well as repair, touch-up and maintenance. As part of the rule development process, staff will consider all options in regard to the small container exemption, including creating small volume categories with higher VOC limits if necessary.

The control measure states that the elimination of the small container exemption may potentially reduce VOC emissions by “up to” 1.9 tpd; it is not a hard target of 1.9 tpd. The estimates for individual strategies relative to the architectural coatings will not be included in the SIP.

**Response to Comment P-7:**

Please note that even though multiple rules are listed in the control measure, its scope and emission reduction commitment is fairly modest. The objective of the control measure is to be achieved by focusing on a few select coating/product categories of a few rules and not through a wholesale or across the board lowering of VOC limits. Staff has revised the language of CTS-02 to specifically to identify the four main rules that have been targeted for emission reduction potential. Rules 1124, 1144, 1168, 1171 include certain product categories, as indicated in the control measure source category description, that are being considered, including coatings used in aerospace applications, adhesives used in a variety of sealing applications, solvents usage, cleaning or graffiti abatement activities, and lubricants used as metalworking fluids to reduce heat and friction to prolong life of the tool, improve product quality and carry away debris. Staff agrees that the marine and pleasure craft coatings activities in the District do not currently represent a significant portion of emissions or emission reduction potential. As such, specific reference to Rule 1106, 1106.1, as well as to the other two rules identified in the draft control measure have been removed to indicate that the estimated emission reductions do not rely upon rule amendments in those areas.

The District remains committed to considering all miscellaneous coatings, adhesives, solvents and lubricant categories for incorporation as feasible measures as required by the Clean Air Act Section 172(c)(1); however, the extent such measures are available and technologically and economically feasible to implement in the aforementioned non-specified rules is expected to be limited as reflected in the revised language.

**Response to Comment P-8:**

Please see response to comment P-1.

CTS-04 represents potentially one of the largest VOC emission source categories. VOC emissions from consumer products are projected in 2020 to be the largest source of emissions in the district exceeding light duty passenger vehicles and dwarfing emissions from stationary sources such as coatings and petroleum marketing. As such, it is incumbent on the AQMD to investigate all areas for potential emission reductions, including evaluation of any existing regulatory exemptions or exclusions.

Current USEPA, CARB and AQMD emissions inventory and photochemical air quality models include speciation profiles that account for total organic gases (TOGs), including reactive compounds, unreactive and exempt compounds, as well as LVP-VOC compounds. Model results for ozone non-attainment areas have demonstrated that even compounds with low photochemical reactivity or LVP-VOCs contribute to photochemical ozone formation and not including these would compromise the ozone attainment demonstrations. Staff recognizes that some multi-media models that incorporate partitioning concepts such as “Atmospheric Availability” or

“Environmental Fate” may have been recently developed; however, current peer-reviewed ambient ozone models used by CARB and AQMD do not include such partitioning concepts. District staff will continue to work with USEPA and CARB staff on ozone model improvements, especially if additional peer-reviewed environmental fate and atmospheric availability studies justify incorporation into these predictive models.

Because substitution of traditional VOC containing materials indicates an increased use of LVP-VOCs, a review of the specific and extent of LVP-VOCs utilized and the associated applications is required to ensure that VOC emission reductions and ozone reduction benefits are maintained as originally intended. Following a study, “Non-Volatile, Semi-Volatile, or Volatile: Redefining Volatile for Volatile Organic Compounds”, U. Vø and M. Morris, August 2012

(<http://www.aqmd.gov/prdas/Coatings/VOCs/RedefiningVOCs.pdf>), that indicates that some LVP-VOCs can evaporate nearly as rapidly as other VOC materials, AQMD staff believes that additional review of specific materials and applications and the associated LVP-VOC qualification criteria may help identify air quality improvement opportunities.

The proposed control measure is intended to further study the air quality improvement potential for replacing LVP-VOC containing compositions with alternative low VOC formulations. The AQMD, through the implementation of the Clean Air Cleaners Program and Rule 1143 – Consumer Paint Thinners and Multi-Purpose Solvents, has identified alternative low-VOC, cost-effective technologies that are currently commercially available and used that do not rely upon the LVP-VOC exemption. The proposed control measure may involve eliminating or amending the CARB LVP-VOC criteria based on scientific data, which may include MIR and similar photochemical reactivity parameters. Consultation with external stakeholders including technical experts as well as manufacturers, end users and other concerned interests is expected during the rule development process to ensure overall efforts are feasible, productive and cost-effective. Further, the control measure includes requirements for CARB to collect speciated LVP-VOC data by category as a part of future surveys. This information will assist CARB and AQMD, as well as industry, in identifying additional categories that have the types and greatest LVP-VOC penetration, and result in more focused changes to the LVP-VOC exemption.

**Response to Comment P-9:**

AQMD staff agrees that the 2012 AQMP development schedule was initially compressed. The attainment demonstration modeling could not begin until input data from SCAG’s 2012 RTP and CARB’s emissions inventories were available. AQMD staff has made every effort to provide all data and information to the public as soon as it became available in an open and transparent process. The review period for many of

the documents has also been extended, additional workshops and regional public hearings have been added scheduled for November 13 - 15, and the Governing Board adoption hearing date has been delayed to December. The AQMD staff is committed to providing sufficient time for public comment, and continues the enhanced outreach efforts to all stakeholders, while keeping the U.S. EPA submittal deadline in December of 2012 in mind.

**Response to Comment P-10:**

The recent VOC reductions achieved in Rules 1113 and 1143 have been accounted for in the VOC inventories included in the 2012 AQMP. The following table summarizes the reductions and full implementation dates:

	<b>2008 Emissions (tpd)</b>	<b>2014 Reduction (tpd)</b>	<b>2015 Reduction (tpd)</b>
Architectural Coatings	16.1	1.3	0.3
Solvents (Thinning/Cleaning/Additives)	2.8	2.66	
Colorants	3.0	2.8	
<b>Total</b>	<b>21.9</b>	<b>6.76</b>	<b>0.3</b>

Draft control measure CTS-01 also summarizes VOC inventories for 2019 and 2023, which includes the earlier VOC reductions but include a growth factor to account for increased coatings usage due to population growth.

As staff works to implement CTS-01, staff will work with stakeholders to ensure future limits are technically feasible and cost effective. Instead of including a hard target for the projected VOC emission reductions, staff included a range of reductions in CTS-01 (2 -4 tpd) and has yet to quantify the potential reductions in CTS-04.

Staff acknowledges that the VOC reductions achieved surpass the commitments in the 2007 AQMP. However, modeling shows the need for modest VOC reductions, and the ozone levels are affected by an atmospheric ratio of VOC to NOx. The long term strategy achieves attainment of the ozone standards at all the air quality monitoring stations throughout the Basin by 2023. Modeling analysis shows that significant NOx emissions reductions are the only viable path to attain the 8-hour ozone standards in the Basin. Therefore, the ozone strategy focuses primarily on NOx reductions. However, aggressive NOx reductions can increase ozone levels in the western portions of the Basin. VOC emissions reductions can also be cost-effective in progressing towards attainment of the ozone standards, especially in the western portions of the Basin. Furthermore, there is a significant health benefit to meeting the ozone standards as soon as possible in as many areas of the Basin as possible. While the current 8-hour ozone

design value site is at Crestline in the San Bernardino Mountains, projections in 2023 show that the design value site will be at Glendora in the San Gabriel Valley to the west. As shown in the 2023 baseline 8-hour ozone NO<sub>x</sub>/VOC isopleths for Glendora and other western sites presented in the attachment to Appendix V, VOC reductions will help to lower ozone concentrations in the San Gabriel Valley and Western portions of the Basin. This is true near the level of the 8-hour ozone standards, but is even more significant along the path to attainment. This is due to the higher VOC/NO<sub>x</sub> ratios projected to occur in future years, especially in the western Basin.

To this end, short-term VOC controls (through 2020) will help offset the impact of the increased VOC/NO<sub>x</sub> ratio in the impacted areas of the Basin, such as the San Gabriel Valley, that are immediately downwind of the primary emissions source areas. As such, a nominal amount of VOC reductions are proposed in the Draft 2012 AQMP. The proposed VOC control measures in the Plan are based on implementing all feasible control measures through the application of available technologies and best management practices, while seeking a fair share reduction from both mobile and stationary sources. As zero and near-zero technologies are implemented for mobile sources to reduce NO<sub>x</sub> emissions, concurrent VOC reductions from mobile sources are expected. Thus, stationary sources must continue to achieve their fair share of VOC reductions in the future. This plan proposes a modest 6 tpd of VOC emissions reductions from stationary sources out of a total 18 tpd of VOC reductions needed for basin-wide attainment in 2023.

Since the submittal of this comment letter, the inventory and anticipated emission reductions have been modified. In 2023, the VOC inventory is estimated to be 19.3 tpd and the projected reductions from CTS-01 are 4.4 tpd. Thus, the VOC reductions will be much less than 40% of the inventory. The initial draft control measure CTS-01 has been revised, listing the VOC reductions as a range between 2 – 4 tpd. Staff further notes that the lower end of the range will be submitted into the SIP. Staff believes that the proposed control measure is technically feasible, and staff will conduct a thorough technology assessment a part of a public rule amendment process.

**Response to Comment P-11:**

Staff acknowledges that using the most accurate and currently available VOC inventory is vital when considering VOC reductions. With the adoption of Rule 314 in 2008, the 2008 and subsequent inventory is more accurate as the estimates are based on the coating sold into and within the AQMD as reported by the manufacturers on an annual basis. Prior to 2008, the AQMP relied on data collected by CARB for coatings sold throughout California which were reported every 4 – 5 years. The inclusion of Rule 314 data ensures that the emission inventory included for planning purposes is current. The differences in the inventory data that was released in the preliminary draft and prior meeting on the AQMP included references to the earlier estimates based on the older

CARB survey data. Those discrepancies have been addressed and the current inventory estimates and projections are based on the Rule 314 data and include the recent VOC reductions achieved through Rules 1113 and 1143. The following table summarizes the projected emission trends:

	2008	Rule reductions by 2014	2014	Rule reductions by 2015	2019	2023
Inventory	21.9		15.8		17.5	19.3
Reductions					2.0 – 4.0	2.2 – 4.4
Remaining					13.5 – 15.5	14.9 – 17.1
Rule Reductions		6.76		0.3		

Staff is encouraged to see that while the volume of architectural coatings has increased, the emissions have remained relatively flat. Staff would like to see this trend continue. It is not likely that emissions will increase to the levels they were in 2008 in the near future, largely because the VOC limits in Rule 1113 have decreased since 2008. But as the housing market recovers and coating sales continue to rise, the VOC emissions from the application of architectural coatings will inevitably increase, albeit not potentially at same rate as previously seen. Due to the adoption of Rule 314, staff will be able to monitor the emissions on an annual basis.

**Response to Comment P-12:**

Please see response to comment P-10.

**Response to Comment P-13:**

Staff originally estimated that draft CTS-01 may potentially achieve VOC reductions of 4.4 tpd. Based on the concern and subsequent discussions with the industry, CTS-01 has been revised to reflect potential emission reductions ranging from 2-4 tpd, with 2 tpd to be included in the SIP, which is technically feasible based on currently available technology. Developing a VOC cap for architectural coatings is an interesting suggestion, but even with the suggested 12 tpd target, architectural coatings remain the highest source of VOC emissions under the AQMD’s current regulatory authority, and the AQMD is obligated to evaluate each and every feasible approach toward attaining the ozone standards.

**Response to Comment P-14:**

Based on the concern and subsequent discussions with the industry, CTS-01 has been revised to reflect potential emission reductions ranging from 2-4 tpd, with 2 tpd to be included in the SIP.

**Response to Comment P-15:**

CTS-01 has been revised to include a range of potential emission reductions from 2-4 tpd. As clearly demonstrated in previous rule amendments to Rule 1113, District staff will evaluate technical feasibility during the rule development process, working closely with the manufacturers on any specific rule proposals.

**Response to Comment P-16:**

Based on the concern and subsequent discussions with the industry, CTS-01 has been revised to reflect potential emission reductions ranging from 2-4 tpd, with 2 tpd to be included in the SIP. The range of potential emission reductions reflects the alternative options for each of the three strategies, including potentially creating subcategories from the large volume coating categories for certain niche uses, as necessary.

Staff agrees that an improved VOC test method is needed in order to achieve further VOC reductions. Draft CTS-01 includes a proposal to lower VOC limits in conjunction with the adoption of a gas chromatographic test method for more accurately measuring of VOC content, and a change of the metric from VOC of coating to VOC of material. In addition, staff plans to perform a technology assessment, in conjunction with the industry, as part of the rule amendment process.

**Response to Comment P-17:**

Based on the concern and subsequent discussions with the industry, CTS-01 has been revised to reflect potential emission reductions ranging from 2-4 tpd, with 2 tpd to be included in the SIP. The range of potential emission reductions reflects the possibility of carving out new, higher-VOC categories for niche uses.

Staff does not agree that the small container exemption is a necessary safety valve for the VOC limits in Rule 1113. As part of any rule development activities, staff will evaluate the need for any niche categories with higher VOC limits that may be necessary for certain small volume uses. However, based on a review of data submitted by manufacturers, there are ample products available in the market place that meet the VOC limits in Rule 1113.

The District has not yet attained compliance with national air quality standards, and has a continued need to evaluate all technically-feasible and cost-effective reductions for criteria pollutants, including VOCs. With consideration for potential more stringent ozone standards in the near future, it is vital to fully evaluate the need for any and all exemptions from VOC rules, including Rule 1113.



**Response to Comment P-18:**

Draft CTS-01 inclusion of transfer efficiency requirements focuses on application equipment, including the laser paint targeting tool, with data supporting an increase in transfer efficiency by 30%, and HVLP or equivalent technology, with data supporting 65% transfer efficiency. Staff took a conservative estimate ranging from 2% to 10% reduced coatings usage, which can potentially result in significant reductions in volume of coating used, estimated to be between 150,000 to 685,000 gallons annually.

Staff plans to conduct a thorough technical analysis, including evaluating cleaning and maintenance, during the rule development period.

**Response to Comment P-19:**

Please see response to comment P-10.

Q. SC Johnson, Nancy Levenson, August 31, 2012



Global Government Relations  
1667 K Street, NW  
Suite 650  
Washington, DC 20006

August 31, 2012

South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765-4182  
(Via e-mail: <http://www.aqmd.gov/aqmp/2012aqmp/Comments.htm>)

**Subject: Draft 2012 Air Quality Management Plan (AQMP)**

Dear Sir or Madam,

S. C. Johnson & Son, Inc. (SC Johnson) appreciates this opportunity to provide comments on the Draft 2012 Air Quality Management Plan (AQMP) released by the South Coast Air Quality Management District on July 19, 2012.

By way of background, SC Johnson is a family-owned and managed business dedicated to innovative, high-quality products, excellence in the workplace, and a long-term commitment to the environment and communities around the world in which it operates. Based in Racine, Wisconsin, our company is one of the world's leading manufacturers of household cleaning products and products for home storage, air care, shoe care, and insect control. Among the well-known leading brands we market in the U.S. are GLADE®, PLEDGE®, OFF!®, RAID®, SCRUBBING BUBBLES®, SHOUT®, WINDEX®, KIWI®, and ZIPLOC®. Founded 126 years ago, SC Johnson has more than \$9 billion in annual sales, employs approximately 13,000 people globally, and markets products in virtually every country in the world.

Our company takes very seriously our responsibility to act as the environmental steward of our products, thus we continuously seek to improve them, particularly relative to human health and environmental impact. This effort is driven in part by Greenlist™, our patented internal environmental classification program that institutionalizes a greener, more informed selection process that surpasses regulatory requirements and motivates our scientists and formulators to use raw materials and ingredients that are safer for consumers and better for the environment. Through Greenlist™, we strive to ensure that our products have the least impact on the environment, while also delivering the performance, efficacy, and other benefits that consumers have come to expect from our products – including essential public health benefits associated with our pest control products.

Working directly and through our trade association, the Consumer Specialty Products Association (CSPA), we have engaged the California Air Resources Board (CARB) over the years to develop and implement a number of regulatory proposals for consumer products that have resulted in significant reductions in emissions of volatile organic compounds (VOC). To date, these regulations have obtained more than 50% reductions in VOC emissions from consumer products – a significant accomplishment for state regulators and our industry, which remains committed to ensuring that consumer products provide maximum benefits and minimal environmental impacts in California and elsewhere. In fact, our

Q-1

Greenlist™ program helped us meet more stringent air quality regulatory requirements by removing 1.8 million pounds of VOCs from WINDEX® glass cleaner.

Along with continuously seeking to improve our product ingredient selections, SC Johnson also continues to work on advances for our packaging. In 2010, SC Johnson launched its first aerosol product in the U.S. utilizing compressed air as the propellant rather than liquefied petroleum gas (LPG), providing a quieter spray and softer feel without the VOCs typically associated with aerosols. Early products have included PLEDGE® Multi Surface Spray, GLADE® Premium Aerosols, and WINDEX® Electronics Cleaner, and we continue to explore ways to expand the use of compressed gas technology across our product categories.

While we will continue to innovate and develop products with lesser impact on human health and the environment, the transition to developing and marketing greener, more sustainable chemistries takes time, as manufacturers must engage in a variety of complex and often costly reformulation and related research and development activities to arrive at the desired end-use product. As this transition occurs, it will be vitally important for formulators like SC Johnson to have the flexibility to utilize existing limited exemptions and alternative compliance methods previously approved by CARB. Of particular importance is the continued availability to SC Johnson and other formulators of the current exemption for Low Vapor Pressure (LVP) compounds.

We are very concerned that South Coast has included CTS-04, Further VOC Reductions from Consumer Products [VOC], which calls for working with CARB to identify categories of consumer products where it may be appropriate to “revise or eliminate the LVP-VOC exemption,” in its Draft AQMP. In addition to supporting the arguments in defense of the LVP exemption that are articulated in comments submitted to South Coast in July and August of this year by CSPA, of which we are a member, we wish to highlight a few concerns specific to SC Johnson:

- SC Johnson has invested many years and significant resources reformulating our products utilizing LVP-VOCs, water and compressed air to replace VOCs to meet the increasingly lower VOC standards;
- Almost all of SC Johnson’s products contain LVP-VOCs. SC Johnson has several hundred products currently used in North American that have been optimally formulated to meet both consumer needs and VOC standards;
- Product efficacy would be severely affected causing consumers to use more of the product resulting in more emissions; and
- Unintended consequences are very likely to occur, including but not limited to having to reformulate with less ‘green’, more toxic, less tested, and corrosive substitutes to maintain product efficacy.

We also wish to highlight our concerns with a June 21, 2012, presentation entitled “Non-Volatile, Semi-Volatile, or Volatile: Redefining Volatile for Volatile Organic Compounds,” prepared by Mike Morris and Uyen-Uyen T. Vo of the SCAQMD staff that summarizes findings from a study on evaporation of LVP compounds, specifically:

- The study does not remotely approximate LVP usage in consumer products, and should not be used as a policy basis;

Q-1

Q-2

- The authors do not specify what they mean by non-volatile, semi-volatile, and volatile. Thus, they fail to establish the million-dollar correlation: vapor pressure at 20°C (the current regulatory parameter) and evaporation. They do not seem to be even asking the right questions in this study;
- Many LVPs (such as in household cleaners) are exposed to the atmosphere for seconds, before they are wiped up and properly disposed of;
- LVPs do not usually exist as pure chemicals in consumer products. The mixing of chemicals (whether forming solutions, emulsions, or other blends) will affect the vapor pressure of the mixture as a whole, and thus, the ability of the mixture itself to evaporate. Additionally, what is in the mixture will affect the ability of individual molecules in the solution to evaporate. This has to do with relative strength or weakness of the intermolecular attraction;
- Use of hydrotreated distillates light, a complex mixture of higher and lower volatility chemicals, should not be used as representative of a process that has properly classified most LVP chemicals; and
- The presentation at best indicates that a check of potential marginal LVP materials may be prudent, but does not demonstrate that the majority of classified materials are already appropriately classified.

Q-2

For the reasons stated in CSPA's comments and the concerns we have outlined above, SC Johnson respectfully requests that SCAQMD reconsider the inclusion of Control Measure CTS-04, which is aimed at requiring CARB to remove the LVP exemption from the Consumer Products Regulation, in the final South Coast Air Quality Management Plan.

SC Johnson greatly appreciates the opportunity to comment on the Draft 2012 AQMP. We look forward to working cooperatively and collaboratively with South Coast, CARB, and other relevant stakeholders to improve air quality for all California citizens. If you have any questions regarding our comments, please feel free to contact me directly at 202-331-1186 or by email at [nrlevens@scj.com](mailto:nrlevens@scj.com).

Sincerely,



Nancy R. Levenson  
Director – Global Government Relations

cc: Elizabeth Jameson, Global Regulatory Affairs, SC Johnson  
D. Douglas Fratz, Consumer Specialty Products Association  
Joseph T. Yost, Consumer Specialty Products Association

**Responses to Comment Letter Q**  
**SC Johnson**

**Response to Comment Q-1:**

Staff appreciates the efforts made by S.C. Johnson to reduce VOC emissions and advance packaging technology for consumer products. The AQMD is very supportive of the use of compressed air as a propellant in lieu of a VOC (e.g., LPG) and commends S.C. Johnson's role in successfully developing and commercializing such aerosol products. AQMD staff expects that CARB will leverage your technology into future regulatory requirements to further lower VOC emissions from Consumer Products offered in aerosol form.

The inclusion of LVP-VOCs as an exemption may be accomplishing the substitution of one solvent considered to be a VOC with another that is not considered a VOC by CARB. However, the AQMD has concerns regarding the associated equivalent ozone benefits of such an approach, since many of the LVP-VOCs readily evaporate, have Maximum Incremental Reactivity (MIRs) values greater than ethane's, and therefore readily contribute to ozone formation. ("Non-Volatile, Semi-Volatile, or Volatile: Redefining Volatile for Volatile Organic Compounds", U. Vö and M. Morris, August 2012.) While there will be potential need for reformulation of products that contain LVP-VOCs, the AQMD, through the implementation of the Certified Clean Air Cleaners Program and Rule 1143 – Consumer Paint Thinners and Multi-Purpose Solvents, has identified alternative low-VOC, cost-effective technologies that are currently commercially available and used, and do not rely upon the LVP-VOC exemption.

The Certified Clean Air Choices Cleaner program has nearly 50 institutional and industrial (I&I) cleaners that do not rely upon the LVP-VOC exemption. These products consist of full I&I product lines to cover nearly all cleaning and maintenance needs. Other certification programs have several hundred I&I cleaners, most of which do not rely upon the LVP-VOC exemption. If, in fact, there are specialty cleaning operations for which no product is available, then the regulations would likely be drafted to reflect the special situation by carving out those narrow uses. It is not reasonable to minimize ozone benefits by allowing blanket exemptions, such as the LVP-VOC exemption, when the vast majority of uses do not need such an exemption.

Except for very few niche applications where efficacy of certain products may be impacted from a complete exclusion of a LVP-VOC, for the great majority of operations, environmentally preferable cleaners have equal or superior performance at equal or lower costs. Many cities and school districts have completely switched to environmentally preferable janitorial products and have found no degradation in performance at no extra cost. In some cases, lower overall costs have been seen and included in the cost-effectiveness section of the control measure. The City of Santa Monica reported spending 5% less on its cleaning products costs when it switched from conventional

cleaners to less-toxic brands a decade ago. An article entitled, “The Benefits of Green Cleaning” by Dr. Robert W. Powitz on the ISSA website (November 2008), states, “We’ve heard the excuses, most of which can be grouped into one sentence: Eco-friendly products do not work and are more expensive. But this is simply not so.” The Green Seal and EcoLogo certification programs include efficacy performance standards to address claims in deterioration of performance. Again, Green Seal and EcoLogo have certified hundreds of I&I products most of which do not rely upon the LVP-VOC exemption.

Further, under AQMD Contract #11519, the AQMD conducted a study “Evaluate Protocols for Measuring Emissions from Cleaning of Application Equipment and Surfaces using Solvents” with an objective to develop an approach to measure mass emissions from cleaning paint brushes and surface cleaning using five different low vapor pressure (LVP) solvents, as well as acetone and a commercially-available lacquer thinner formulated with 95% acetone and 5% methyl soyate. The other objective was to determine the relative amount of solvent used, and then calculate the total ozone formation potential of each solvent based on its established Maximum Incremental Reactivity (MIR) value. The study indicated that ozone formation potential of acetone and acetone-containing products was much lower than comparative LVP-VOC solvents, especially for panel cleaning. The summary of this report can be accessed from:

[http://www.aqmd.gov/tao/Demonstration/Reports/2011AnnualReport\\_2012PlanUpdate.pdf](http://www.aqmd.gov/tao/Demonstration/Reports/2011AnnualReport_2012PlanUpdate.pdf), pages C-25 to C-26. Contrary to the assertion that these products may degrade the environmental profile, many of the products that do not rely on the LVP-VOC exemption are specifically designed to meet stringent environmental profiles. Many are certified as environmentally preferred products through programs like Clean Air Choices Cleaners and U.S. EPA’s Design for the Environment or third party certification organizations like Green Seal and EcoLogo. When already environmentally preferable certified products were tested, less than ten percent relied on the LVP-VOC exemption to meet the VOC limits. See table below.

**Environmentally Preferable Products VOC Content (No LVP-VOC Exemption)**

Product Type	Dilution Rate	VOC (g/l)
Air Freshener	RTU	24
Bathroom Cleaner	RTU	19
Bathroom Cleaner	1:18	5
Bathroom Cleaner	1:20	2
Carpet Cleaner	1:20	1
Carpet Cleaner	1:64	1
Dishwashing Soap	1:1536	1
Disinfectant	1:64	1
Floor Polish	1:24	2
General Purpose Cleaner	1:10	1
General Purpose Cleaner	1:08	1
General Purpose Cleaner	1:64	1
General Purpose Cleaner	1:12	1
General Purpose Cleaner	1:15	1
General Purpose Cleaner	1:512	1
Glass and General Purpose Cleaner	RTU	1
Glass and General Purpose Cleaner	1:128	1
Glass and General Purpose Cleaner	1:128	1
Glass Cleaner	1:20	1
Glass Cleaner	1:64	1
Glass Cleaner	1:15	5

RTU = Ready to Use

Please note that CTS-04 does not include an emission reduction commitment nor does it necessarily require a complete elimination of the LVP-VOC exemption. Rather, it seeks the re-evaluation of the necessity, scope of the existing exemption LVP-VOCs are currently enjoying and the efficacy of such an exemption, starting first with consumer product categories where LVP-VOCs are widely used in formulations and proceeding in later phases with other categories.

Lastly, as a part of phased implementation, CARB staff is expected to assess the efficacy of different categories that may be impacted by modification of the LVP-VOC exemption proposed under Control Measure CTS-02.

**Response to Comment Q-2:**

A study, “Non-Volatile, Semi-Volatile, or Volatile: Redefining Volatile for Volatile Organic Compounds”, U. Vø and M. Morris, August 2012, tested commonly used LVP-VOC compounds and a few product blends, mainly lubricants of varying viscosity. There may be some difference in evaporation rates in fully formulated products, which needs additional review and may be part of future studies. However, many fully formulated products use significant quantities of LVP-VOC in their products, some as high as 100% as is the case with certain multi-purpose solvents. Currently, these LVP-VOCs are not included in emission calculations despite, in some cases, having similar evaporation rates as the VOC solvents they were meant to replace. As a part of implementation activities, CARB is expected to conduct detailed surveys of LVP-VOC content currently found in different categories of Consumer Products in an effort to develop a revised inventory and to understand potential additional impacts from the use of LVP-VOCs.

The presentation referred to by the commenter does include charts of solvents that fall under non-volatile, semi-volatile, and volatile. The full details are included in the technical paper available on the AQMD website which can be accessed from: <http://www.aqmd.gov/prdas/Coatings/VOCs/RedefiningVOCs.pdf>. The paper specifies the criteria used for determining volatility:

- Volatile – 5% or less non-volatile after 180 days at ambient temperature
- Semi-Volatile – Between 5% and 95% non-volatile after 180 days at ambient temperature
- Non-Volatile – 95% or greater non-volatile after 180 days at ambient temperature

The current LVP-VOC exemption does not distinguish between solvents that remain exposed to the atmosphere and those that are not (i.e. wiped and disposed or “down the drain”). In fact only a few (i.e. toilet/urinal cleaners, laundry products, hand soap, motor vehicle wash, shaving products) of the numerous product categories contained in the consumer product regulation are intended to be wiped and disposed or immediately washed down the drain. The majority (i.e. adhesives, air fresheners, automotive products, most cleaners, disinfectants, insect repellants and insecticides, lubricants, multi-purpose solvents and paint thinners) are intended to remain for long periods of time exposed to the atmosphere. Even if the products are wiped and disposed quickly or flushed down the drain, atmospheric availability or environmental fate criteria are not included in the LVP-VOC exemption nor current peer-reviewed ozone models. The LVP-VOCs may readily evaporate from the wiping cloth/paper, depending on storage of the solvent-laden materials, or may be released during the wastewater treatment process.



Hydrotreated light distillates qualify as an LVP-VOC as currently defined. Hydrotreated light distillates are used as an example, since these have been used as a 100% substitute in certain multi-purpose solvents, replacing petroleum distillates used in previous formulations. It was one of more than 20 samples tested to review evaporation profiles at ambient temperatures. (“Non-Volatile, Semi-Volatile, or Volatile: Redefining Volatile for Volatile Organic Compounds”, Uyên-Uyên T. Võ, August 2012). Many of the LVP-VOCs commonly used in consumer products were found to be completely volatile at ambient temperature in less than 180 days. However, the study also found that there were organic compounds that were non-volatile and likely do not contribute to ozone formation. Many of the environmentally preferable cleaning products use non-volatile organic compounds and are representative of a process that would properly classify them as LVP-VOCs.

Staff concurs that the study indicates that a check of potential marginal LVP materials may be prudent. The study recommends a reevaluation of the criteria which currently defines LVP-VOC status to exclude materials that clearly contribute to ozone formation. The study also recognizes that there are non-volatile organic compounds which do not evaporate under ambient conditions and are already appropriately classified. Taking the overall study into consideration, Control Measure CTS-04 calls for a phased in approach and would start with the most volatile and reactive compounds that may have the greatest emission impacts.

R. Orange County Transportation Authority (OCTA), Kurt Brotke, August 31, 2012



AFFILIATED AGENCIES

- Orange County Transit District
- Local Transportation Authority
- Service Authority for Freeway Emergencies
- Consolidated Transportation Service Agency
- Congestion Management Agency
- Service Authority for Abandoned Vehicles

August 31, 2012

Dr. Barry R. Wallerstein  
 Executive Officer  
 South Coast Air Quality Management District  
 21865 Copley Drive  
 Diamond Bar, CA 91765

Dear Dr. Wallerstein:

The Orange County Transportation Authority (OCTA) appreciates the opportunity to review and comment on the Draft 2012 Air Quality Management Plan (AQMP) for the South Coast Air Quality Management District (District). The related socio-economic report has not yet been made publically available; therefore, OCTA would appreciate an extension of the comment period in order take this additional analysis into consideration. Please note that the comments provided below may require additions or modifications once OCTA reviews the results of the socio-economic report.

There are three issues that currently raise concerns with OCTA:

1. Inclusion of the ozone attainment strategy;
2. The suggested "Enhanced Environmental Analysis" that is discussed in Chapter 9; and,
3. The "Infrastructure Planning Actions" that are discussed in Appendix IV-B under control measure ADV-01.

According to federal law, the current AQMP is required to demonstrate attainment for inhalable coarse particles (PM<sub>10</sub>) and fine particles (PM<sub>2.5</sub>); however, it is not required that ozone attainment be addressed until the 2015 AQMP. The ozone target needs to be looked at in a comprehensive manner, rather than piecemeal, to ensure that we are actually reducing emissions in the most cost efficient and effective manner. This would be best achieved by reserving discussion of the ozone attainment to the 2015 AQMP. OCTA looks forward to participating in these discussions, and working with the District to develop an achievable 2015 AQMP that meets all of the federal Clean Air Act standards.

The Enhanced Environmental Analysis recommends performing additional analysis that goes beyond the requirements of the California Environmental Quality Act (CEQA). As noted in the Draft AQMP, the *Ballona Wetlands Land*

R-1

R-2

Dr. Barry R. Wallerstein  
August 31, 2012  
Page 2

*Trust v. City of Los Angeles* (2011) and the *South Orange County Wastewater Authority v. City of Dana Point* (2011) ruled that this type of analysis is not required under CEQA. Therefore, OCTA suggests omitting this policy recommendation from the 2012 AQMP.

R-2

Regarding the Infrastructure Planning Actions identified in ADV-01, the District is suggesting that in order to support zero and near-zero emission technologies for freight trucking, new infrastructure such as wayside electric or magnetic power built into roadways, refueling and battery recharging stations, and dedicated truck lanes may be required. Furthermore, the District states under the ADV-01 actions and schedules, it is important that project approvals for near-term goods movement projects ensure implementation of these types of infrastructure. However, the District also states that at this time it is unknown if the zero and near-zero emission technologies will requires these types of infrastructure.

R-3

OCTA believes that there are too many unknowns regarding the zero and near-zero technologies to justify including infrastructure commitments in project approvals at this time. The types of infrastructure suggested could have significant financial implications. Furthermore, they may not be feasible for any number of reasons, such as costs, right-of-way limitations, resulting environmental impacts, or limited availability of the specific technology(ies). For these reasons, OCTA requests removal of the language suggesting that project approvals ensure implementation of infrastructure to support zero and near-zero emission technology.

Thank you again for the opportunity to comment on the Draft AQMP. OCTA requests that the District address these concerns and recommendations in the Final Draft 2012 AQMP. Please contact Greg Nord, Senior Transportation Analyst, at (714) 560-5885 to further discuss these comments.

Sincerely,



Kurt Brotcke  
Director, Strategic Planning

KB:gn

**Responses to Comment Letter R**  
**OCTA**

**Response to Comment R-1:**

Consistent with the previous AQMP, the current analysis shows that approximately 65% of additional NOX emissions reductions, beyond already adopted rules and measures, will be needed to meet the existing 1997 8-hour ozone standard of 80 ppb in 2023. The Basin can only demonstrate attainment of the 8-hour standard by using the CAA Section 182(e)(5) provision allowing for long-term measures that anticipate the development of new technologies or improving of existing control technologies. This CAA provision requires that these long-term measures be specifically adopted in regulatory form at least three years prior to the attainment year (2020).

With less than 8 years remaining to identify these so-called “black box” emissions reductions, it is imperative to move forward with the identification and development of all feasible specific measures to achieve these reductions as soon as possible. If progress is delayed, there will be even less time to develop and implement strategies before the looming deadlines, and thus the resulting necessary measures could be more burdensome and disruptive. Delaying progress will also provide less certainty and lead time to the regulated community for planning compliance with potential new regulatory requirements. The considerable time it takes for new technologies to be developed, assessed and implemented widely, especially in the mobile source sector, also underscores the need to begin immediately. Note that while this Plan commits to the adoption of several ozone measures in the near-term, the implementation date and emissions reduction commitments are at least 2015 and beyond. While the District will need to adopt another ozone plan in 2015 to attain the 75 ppb standard by 2032, we cannot afford to delay implementation of the large “black box” in the existing approved 2007 AQMP (241 fpd NOx & 40 tpd VOC).

Recent litigation regarding U.S. EPA approvals of previous SIPs has focused on the reliance on a relatively large “commitments” to demonstrate attainment and the short time frame available to develop and deploy potential new technologies. The District believes it is important to demonstrate progress towards ozone attainment by making commitments for additional emissions reductions that reduce the size of the “black box” commitments. In U.S. EPA’s comment letter on the Draft 2012 AQMP (August 30, 2012), they state that they “fully support the District’s inclusion in the 2012 AQMP of updates on the implementation of control measures and emission reduction commitments relied upon in the South Coast 2007 AQMP to demonstrate expeditious attainment of the 1997 8-hour ozone NAAQS. We urge the District to continue working closely with EPA staff to identify the specific near-term and long-term control measures that will fulfill the NOx and VOC emission reduction commitments contained

in the SIP-approved South Coast 2007 8-hour ozone plan, and to develop appropriate methodologies for calculating the emission reductions attributed to each such measure.”

Furthermore, U.S. EPA recently proposed to require a new 1-hour ozone SIP for the South Coast Air Basin. In order to demonstrate attainment with this revoked standard by 2022, all feasible measures must be included in the SIP. Making enforceable emissions reductions commitments based on specific measures as they are identified is the best way to demonstrate that the District is dedicated to realizing the emission reductions necessary to achieve the 8-hour and 1-hour ozone standards. Future AQMPs should further identify specific measures and associated emissions reductions that will allow the “black box” commitments to shrink to zero by 2019 for the 1-hour ozone or 2020 for the 8-hour ozone.

**Response to Comment R-2:**

The commenter correctly states that recent court rulings have found that CEQA does not require this type of "enhanced environmental analysis" (with the exception of new school sites). However, lead agencies retain the authority to conduct an analysis of potential health effects on project occupants either within a CEQA document, or outside of it prior to making a decision on the project. Text has been added to Chapter 9 to clarify that AQMD staff recommendations for enhanced environmental analysis will continue to be consistent with existing guidance from both the CARB Air Quality and Land Use Handbook and the AQMD Clean Communities Plan.

**Response to Comment R-3:**

Staff believes that transportation projects should be designed with recognition of the environmental impacts of freight transport, and that such projects should be part of the solution to our air quality problems. The AQMP language referred to in this comment merely states the district’s view that it is “important” that near-term decisions on major freight transportation infrastructure (such as the I-710 project and new railyards) not miss what may be the only opportunity to incorporate environmental conditions needed for our region to attain air quality standards. Staff notes that the control measure does not state that “it is important that project approvals for near-term goods movement projects ensure implementation of” “wayside electric or magnetic power built into roadways, refueling and battery recharging stations, and dedicated truck lanes.” as indicated by the Commenter, rather, the measure description is far more general: It is therefore important that such project approvals be fashioned to assure that the projects participate in the technology development and demonstration activities for trucks described below, and that the project approvals ensure implementation of resulting technologies when determined to be feasible. This language (which the Commenter requests be removed) is in a paragraph describing that certain “major regional infrastructure projects” will be considered for approval in “the near term, while the technology development and demonstration actions described below are being

undertaken.” The paragraph specifically refers to three projects: the proposed new Southern California International Gateway Railyard, the proposed expansion of the Union Pacific Intermodal Transfer Facility, and the I-710 project. The paragraph notes that other major projects may also be considered for approval in the same timeframe. The main point of the paragraph is that these projects will “comprise key portions of regional freight infrastructure for many decades to come” and “the action to approve such projects will be a key opportunity to establish appropriate operating and environmental requirements for the infrastructure.” In some cases, the paragraph notes, “the project approval action may be the only opportunity to establish requirements.” Staff continues to believe the statements in the above paragraph are accurate, and the comment does not dispute them. We also continue to believe it to be “important” that major freight movement projects such as the two railyards and I-710 “participate” in technology development and demonstration activities, and that project approvals (which, again, may be the only opportunity to include environmental conditions) require implementation of clean technologies “when determined to be feasible.” All of this language is, in our view, reasonable for projects of the magnitude described in the paragraph.

Regarding the commenter’s concern about the need for and feasibility of the infrastructure it mentions (e.g. wayside electric or magnetic power built into roadways), the measure sets out a schedule over the coming decade to determine whether such infrastructure will be needed. Specifically, the measure’s Major Agency Implementation Actions sets out a schedule for AQMD, SCAG and CARB actions. These include a determination in the 2015-2016 timeframe regarding “the need for wayside power infrastructure for trucks on major freight movement corridors.” It is staff’s intent that these determinations would be made based upon the ability of zero and near zero emission on-road technologies to serve the needs of the region without wayside power. Key questions would include the range and cost (and other factors bearing on feasibility) of technologies not relying on wayside power. By 2015-16, these agencies, and the other “implementing agencies” listed at the end of the measure (e.g. LA Metro, Caltrans, ports, etc) would have the benefit of additional years of technology development and evaluation. We believe this sets an appropriate schedule to collaboratively make determinations regarding needed and feasible technologies. We also note that these provisions are consistent with the proposed action schedules to develop zero and near zero emission transport that are included in the RTP update adopted earlier this year.

S. LA Department of Water & Power, August 31, 2012



ANTONIO R. VILLARAIGOSA  
Mayor

Commission  
THOMAS S. SAYLES, *President*  
ERIC HOLOMAN, *Vice President*  
RICHARD F. MOSS  
CHRISTINA E. NOONAN  
JONATHAN PARFREY  
BARBARA E. MOSCHOS, *Secretary*

RONALD O. NICHOLS  
General Manager

August 31, 2012

Mr. Philip Fine  
Planning and Rules Manager  
South Coast Air Quality Management District  
Planning, Rule Development & Area Sources  
21865 Copley Drive  
Diamond Bar, CA 91765-4182

Dear Mr. Fine:

Subject: Comments on the Draft 2012 South Coast Air Quality Management District (AQMD) Draft Air Quality Management Plan (AQMP) and Related Documents

Dear Mr. Fine:

The Los Angeles Department of Water and Power (LADWP) has reviewed the Draft 2012 Air Quality Management Plan (AQMP) and appreciates the opportunity to provide preliminary comments on the proposed control measures that have the potential to impact LADWP operations, as well as on the associated documents, including the California Environmental Quality Act (CEQA) and Socio-economic analysis and the Joint Vision document. General comments are discussed in the following summary; technical comments have been also been provided on specific control measures. It is noted that at this time neither the full CEQA document, nor the socio-economic analysis has been made available for public review. As such, after review of these documents, LADWP may submit additional comments when the next draft AQMP and CEQA analysis are released.

**GENERAL COMMENTS**

1. The primary purpose of the 2012 AQMP is to identify control measures needed to attain the federal standard for particulate matter less than 2.5 microns in diameter (PM2.5) by 2014. Although there is no federal requirement to submit an ozone plan at this time, LADWP is aware of the enormous challenge with regards to ozone and the urgency AQMD sees for developing an ozone strategy. LADWP would be supportive of keeping the ozone strategy in the plan, but not submit as part of the State Implementation Plan (SIP) which would result in legally binding emission reductions upon approval by the Environmental Protection Agency (EPA).

S-1

**Water and Power Conservation ... a way of life**

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Telephone: (213) 367-4211 Cable address: DEWAPOLA



Mr Philip Fine  
Page 2  
August 31, 2012

2. Although the CEQA scoping document identifies the analysis of the PM2.5 measures as a feasible alternative, the Draft Environmental Impact Report (EIR) has not been completed and released for public review. Specifically, this alternative will be reviewed as it relates to environmental impacts on the environment if this alternative is deemed the "project". LADWP will be reviewing the analysis and providing comments on the full EIR upon its availability.
3. AQMD predicts attainment of the PM2.5 standard within several years (2014). As such, LADWP supports the deferral of a Regional Clean Air Incentive Program (RECLAIM) shave to the 2015 AQMP. Since the average rulemaking schedule for a "shave" can take up to two years, dividing the "shave" into two phases as proposed under the 2012 AQMP may not be feasible. With the conversion factor of Nitrogen Oxides (NOx) to PM2.5, minor emission reductions will be achieved through RECLAIM for PM2.5. LADWP recommends substituting a PM2.5 measure for the proposed RECLAIM shave.
4. The Joint "Vision" document has been discussed and vetted in a Public Hearing; however, it is also embedded in the 2012 AQMP as a reference document. LADWP supports unlinking the Vision document from the 2012 AQMP as it is not regulatory in nature.
5. A substantial amount of emission reductions are projected from the implementation of "incentive" programs. It is possible that given the current economic state, a majority of those funds will no longer be available. LADWP is concerned that if emission reductions cannot be achieved through mobile sources, the stationary sources could be held responsible for additional emission reductions.
6. LADWP is concerned that with the proposed electrification in the Basin, impacts on utilities have not been thoroughly evaluated in the CEQA document. This is especially true for many of the incentive programs that aim to reduce emissions from federal sources (ships/trains/aircraft) by requiring sources to substitute electricity for fuel when possible. The CEQA document should carefully evaluate this category for impacts, and identify potential mitigation measures.

S-2

S-3

S-4

S-5

**COMMENTS ON PROPOSED CONTROL MEASURES**

**CMB-01 Further Emission Reductions from NOx RECLAIM [NOx]**

LADWP is concerned that this control measure, if fully implemented, could have the potential to impact the operation of in-basin power plants and inadvertently limit the ability of electric utilities to fully advance electrification technology in the transportation sector.

S-6



Mr. Philip Fine  
Page 3  
August 31, 2012

In May, 2011, AQMD's Governing Board adopted the "AQMD Energy Policy" which supports many of the existing policies and programs that are going forward on a statewide and local level. LADWP participated and supported the policy, which adopts policies and principles relative to energy use. LADWP has been aggressively pursuing the same goals of achieving emission reductions through the use of clean and efficient energy technologies to meet air quality, renewable energy and climate change objectives. A key strategy to achieving emission reductions is the transition of existing energy sources to the established statewide renewable energy mandate of 33% by 2020. As LADWP implements projects to meet this mandate, the repowering of our in-basin facilities to reduce air pollutant emissions under provisions of the RECLAIM program have been a major undertaking.

LADWP agrees that the increased use of electricity is an essential part of a comprehensive plan to reduce the existing levels of air pollution and bring the basin into compliance with federal air quality standards. LADWP supports these policies that promote the electrification of the transportation sector while recognizing that electrification could result in a shift in emissions to utilities. With the anticipation of an emissions shift to utilities from the transportation sector, preservation of the electric sector's NOx allocation becomes a critical issue; and any "shave" will need to be closely examined to determine the extent of impact it will have on electricity generation.

The determination of Best Available Retrofit Control Technology (BARCT) versus Best Available Control Technology (BACT) levels that are currently in place is also of interest to LADWP during AQMD's proposed second phase of the NOx shave. Any changes in the BARCT levels may have a significant impact on LADWP and the operation of its in-basin power plants. Although it has been portrayed that this measure will not have a significant impact on RECLAIM facilities, LADWP has concerns with the approach to divide the NOx shave into two phases. From a compliance perspective, as well as from an administrative view, the proposed NOx shave ought to be evaluated as a complete measure. LADWP requests that AQMD carefully review the impacts this proposed shave may have on the RECLAIM market, in particular how it will affect the availability of future NOx credits and its pricing. LADWP also requests that during the rulemaking process, AQMD hold a series of public workshop regarding amendments to BARCT standards with an adequate review and comment period.

In summary, LADWP is supportive of an alternative to AQMD's proposed NOx shave. LADWP would support deferring a NOx shave to the 2015 AQMP, thoroughly assessing impacts related to a shift in emissions from transportation to utilities, and protecting existing NOx allocations for electrical generating facilities to achieve AQMD's goal of promoting electrification in the South Coast Air Basin.

S - 6

Mr. Philip Fine  
Page 4  
August 31, 2012

**MCS-01 All Feasible Measures Assessment [All Pollutants]**

This control measure is to address the state law requirement for all feasible measures for ozone. Existing rules and regulations for pollutants such as Volatile Organic Compounds (VOC), NOx, Sulfur Oxides (SOx) and Particular Matter (PM) reflect current BARCT. However, BARCT continually evolves as new technology becomes available that is feasible and cost-effective. This control measure has the potential to impact every piece of LADWP equipment permitted with the AQMD, from internal combustion engines to power plant boilers, as this is a "catch all" measure. The issue of BARCT implementation at power plants is a critical discussion for LADWP. LADWP supports that during the rulemaking process, AQMD identify a working group and hold a series of public meetings regarding amendments to BARCT standards with adequate review and comment period.

S-7

I appreciate your consideration of these comments and look forward to AQMD's final AQMP. Should you have any questions, please contact me at (213) 367-0403.

Sincerely,



Mark J. Sedlacek  
Director of Environmental Affairs

LB:ms

c: Aram Benyamin  
Randy Howard  
Leila Barker  
Dat Quach  
Jodean Giese

**Responses to Comment Letter S**  
**LA Department of Water and Power**

**Response to Comment S-1:**

Consistent with the previous AQMP, the current analysis shows that approximately 65% of additional NOX emissions reductions, beyond already adopted rules and measures, will be needed to meet the existing 1997 8-hour ozone standard of 80 ppb in 2023. The Basin can only demonstrate attainment of the 8-hour standard by using the CAA Section 182(e)(5) provision allowing for long-term measures that anticipate the development of new technologies or improving of existing control technologies. This CAA provision requires that these long-term measures be specifically identified at least three years prior to the attainment year (2020).

With less than 8 years remaining to identify these so-called “black box” emissions reductions, it is imperative to move forward with the identification and development of all feasible specific measures to achieve these reductions as soon as possible. If progress is delayed, there will be even less time to develop and implement strategies before the looming deadlines, and thus the resulting necessary measures could be more burdensome and disruptive. Delaying progress will also provide less certainty and lead time to the regulated community for planning compliance with potential new regulatory requirements. The considerable time it takes for new technologies to be developed, assessed and implemented widely, especially in the mobile source sector, also underscores the need to begin immediately. Note that while this Plan commits to the adoption of several ozone measures in the near-term, the implementation date and emissions reduction commitments are at least 2015 and beyond. While the District will need to adopt another ozone plan in 2015 to attain the 75 ppb standard by 2032, we cannot afford to delay implementation of the large “black box” in the existing approved 2007 AQMP (241 fpd NOx & 40 tpd VOC).

Recent litigation regarding U.S. EPA approvals of previous SIPs has focused on the reliance on a relatively large “commitments” to demonstrate attainment and the short time frame available to develop and deploy potential new technologies. The District believes it is important to demonstrate progress towards ozone attainment by making commitments for additional emissions reductions that reduce the size of the “black box” commitments. In U.S. EPA’s comment letter on the Draft 2012 AQMP (August 30, 2012), they state that they “fully support the District’s inclusion in the 2012 AQMP of updates on the implementation of control measures and emission reduction commitments relied upon in the South Coast 2007 AQMP to demonstrate expeditious attainment of the 1997 8-hour ozone NAAQS. We urge the District to continue working closely with EPA staff to identify the specific near-term and long-term control measures that will fulfill the NOx and VOC emission reduction commitments contained

in the SIP-approved South Coast 2007 8-hour ozone plan, and to develop appropriate methodologies for calculating the emission reductions attributed to each such measure.”

Furthermore, U.S. EPA recently proposed to require a new 1-hour ozone SIP for the South Coast Air Basin. In order to demonstrate attainment with this revoked standard by 2022, all feasible measures must be included in the SIP. Making enforceable emissions reductions commitments based on specific measures as they are identified is the best way to demonstrate that the District is dedicated to realizing the emission reductions necessary to achieve the 8-hour and 1-hour ozone standards. Future AQMPs should further identify specific measures and associated emissions reductions that will allow the “black box” commitments to shrink to zero by 2019 for the 1-hour ozone or 2020 for the 8-hour ozone.

**Response to Comment S-2:**

The two tons per days reduction proposed for the 1<sup>st</sup> phase of the RECLAIM shave will be incorporated as a contingency emissions reduction measure to satisfy CAA requirement to be triggered if the NAAQS is not attained by 2015. The BARCT assessment phase of the NO<sub>x</sub> RECLAIM shave is to be completed fully by 2015 to be fully achieved by 2020. As such, staff plans to commence the rule amendment process beginning in late 2012 targeting a midyear 2013 adoption date. Staff recognizes that this is an aggressive timetable; regardless every effort will be made to expedite the rule amendment process. The CAA requires that contingency measures be fully adopted and in place prior to the SIP submittal. While the contingency measure is targeted for implementation for 2015 if triggered, U.S. EPA will take into consideration the progress (or completion) of the rule amendment when evaluating the Draft 2012 AQMP for completeness prior to making its recommendation on the plan’s approval. Staff believes that as long as the rule making process is well under way with a reasonable date established for the Public Hearing, that U.S. EPA will not consider this as a barrier to the evaluation and approval process.

Moving the proposed RECLAIM shave control measure to the 2015 ozone AQMP could postpone full implementation of the Phase II reduction to a later date. Staff believes that there are currently sufficient unused RTCs available in the RECLAIM market to provide a cushion for the transition. As part of the Phase II BARCT assessment technology availability, cost, and market impacts will be thoroughly addressed. The rule making process will undergo a fully transparent public evaluation of the potential for emissions reductions coupled with the key element of the BARCT assessment listed above. It should also be noted that the state law requires the RECLAIM program not only undergo periodic BARCT review, but also achieve equivalent reductions as the command and control program.

**Response to Comment S-3:**

The Vision document serves as a resource document for the development of AQMPs. The actions in the Vision document are possible pathways that show how the region can attain air quality standards by their applicable dates. The Vision document is not a control measure in the 2012 AQMP.

**Response to Comment S-4:**

Staff appreciates the comment regarding funding. The emission reductions associated with a majority of the funding programs are not proposed to be committed as emission reductions in the SIP.

**Response to Comment S-5:**

The Program EIR for the 2012 AQMP contains a comprehensive and robust analysis of potential energy impacts, including impacts from increased demand for electricity. Energy impacts associated with PM2.5 control measures were evaluated and determined to be less than significant for electricity, natural gas, petroleum fuels, and alternative fuels impacts. Energy impacts associated with the ozone control measures (see Table 4.3-1 of the Program EIR) were evaluated and determined to be significant for electricity, and less than significant for natural gas, petroleum fuels, and alternative fuels impacts. Please see Subchapter 4.3 of the Draft Program EIR for the complete analysis of potential energy impacts from the 2012 AQMP.

**Response to Comment S-6:**

Approximately 30 percent of the RTC's in the NOx RECLAIM market are currently not being utilized. The two tons per days reduction proposed for the 1<sup>st</sup> phase of the RECLAIM shave will be incorporated as a contingency emissions reduction measure to satisfy CAA requirements to be triggered if the NAAQS is not attained by 2015. The BARCT assessment phase of the NOx RECLAIM shave is to be completed in 2015 and fully achieved by 2020. The two to three tons per day shave proposed in the 2012 AQMP is expected to have only a minor impact on the stakeholders. (The form of the Phase I proposed shave, to be initiated as a contingency measure, is anticipated to be implemented across the board with reductions to be shared equally by the RECLAIM universe. The form of the subsequent BARCT shave will be determined as a component of the rule development process.)

Moving the proposed RECLAIM shave control measure to the 2015 ozone AQMP could postpone full implementation of the Phase II reduction to a later date. Staff believes that there are currently sufficient unused RTCs available in the RECLAIM market to provide a cushion for the transition of the existing energy sources to a 33 percent renewable energy base by 2020. As part of the Phase II BARCT assessment technology availability, cost, and market impacts will be thoroughly addressed. The

rule making process will undergo a fully transparent public evaluation of the potential for emissions reductions coupled with the key element of the BARCT assessment listed above. It should also be noted that the state law requires the RECLAIM program not only undergo periodic BARCT review, but also achieve equivalent reductions as the command and control program.

**Response to Comment S-7:**

The District agrees with the commenter's suggestion. BARCT implementation at any facilities needs to be carefully discussed and analyzed, thus the District will identify a working group, hold necessary public meetings, and provide adequate review and comment periods during the rule making period.

**T. Southern California Business Coalition (SCBC), August 31, 2012**



August 31, 2012

Dr. William A. Burke, Chairman  
Members of the SCAQMD Governing Board  
South Coast Air Quality Management District  
21865 Copley Dr.  
Diamond Bar, CA 91765

**RE: 2012 Air Quality Management Plan**

Dear Chairman Burke and Governing Board Members:

The Southern California Business Coalition (Coalition) appreciates the opportunity to provide comments on the Draft 2012 Air Quality Management Plan (AQMP). The Coalition is comprised of leaders from some of Southern California's largest regional business entities and associations. The final 2012 Air Quality Management Plan, and the rule making that will eventually stem from it, will directly affect many of these businesses' interests. The Coalition's highest priority is to work with SCAQMD to develop a well-balanced strategy that addresses federal requirements through an economically feasible compliance program. To that end, we offer the following comments:

**1. Delays and Changes Have Hampered our Ability to Respond Effectively**

The District released the initial version of the draft proposed AQMP control measures on June 12. However, the descriptions of those control measures in the CEQA Initial Study, released on June 28, conflicted with the actual measures themselves. To further confuse the process, the Draft AQMP released on or about July 17 had revisions to some of the proposed control measures that had been included in the Initial Study. Most recently, the Notice of Preparation and Initial Study were released again for "recirculation" on August 1 with a comment deadline of August 31. Finally, although the District held five public meetings in July to discuss the Draft AQMP, the Draft AQMP was not released until after the fourth meeting, which regrettably prevented meaningful public comment.

The District has strongly recommended that comments on the Draft AQMP be submitted by August 31. Unfortunately, the regulated community has had limited time to review the AQMP, and we still have not seen the entire document. Appendix V, the Modeling and Attainment Demonstrations, was only released on August 10. At the time this letter was developed, the separate Socio-Economic Analysis and Draft Program EIR were still pending. These documents are integral to our full and comprehensive understanding of the impacts of the Plan and the various proposed control measures. *We cannot adequately analyze or comment on the AMQP without them.*

T - 1



In contrast to the previous AQMP adopted in 2007, documents were initially released for review October 6, 2006. The document was not formally adopted until September 7, 2007 – a full eleven months. *This year's process has been rushed into a much tighter time frame.*

Nevertheless, based on the amount of information available to us at this time, we are providing these initial comments. Moving forward, we respectfully ask that the AQMD release all future documents in a timely manner and then allow sufficient time for a comprehensive review by the regulated community.

## 2. Proposed Alternatives to the Project as Currently Defined

The legal requirement for the current AQMP is to demonstrate attainment of the federal 24-hour standard for PM-2.5 by 2014, whereas an ozone attainment Plan is not required until 2015, three years from now.

If the current Plan were focused solely on PM-2.5 attainment, attainment of both the 24-hour and the annual PM-2.5 standards could be achieved by 2014, at a level of cost and effort that is not likely to be objectionable. However, by contrast, the proposed "early action" 183(e)(5) ozone strategy is reasonably expected to require significantly greater effort. For example, the District has estimated that the annual cost will exceed \$115 million per year. This is the sum of the annual costs for only the six mobile source control measures, which are the only sources for which annual costs have been estimated. The annual cost of the fifteen stationary source measures has not been determined and is not included.

We respectfully request that the Board consider adopting an alternative project as the Air Quality Management Plan. The alternative project would be comprised of only the proposed short term PM-2.5 attainment measures since that is all that is required. That is, the 182(e)(5) stationary source and mobile source measures are not required now.

This alternative project will allow the Governing Board to consider all the options provided to it for a 2015 Ozone Plan, and will ensure much needed flexibility and additional time in developing those options. While it is appropriate to be discussing the next wave of ozone controls at this time, we recommend that the District Board fully utilize the three years provided by federal regulations to craft a well-integrated, economically defensible ozone attainment plan. This alternative project strategy avoids putting the fragile regional economic recovery at risk.

Further, the Coalition has specific comments on control measure CMB-01, NOx RECLAIM, now included in the Draft AQMP as Phases I and II. Although Phase I is included as a short term PM-2.5 control measure, we understand that the proposed NOx reduction of between two and three tons per day has virtually no beneficial impact on the PM-2.5 attainment demonstration. We further understand that the District has not yet taken credit for NOx reductions associated with the Residential Wood Burning and Open Burning control measures, BCM-01 and -02, which we understand to be several times greater than the proposed Phase I RECLAIM NOx reductions. Residential Wood Burning and Open Burning NOx reductions should be substituted for the proposed NOx RECLAIM Phase 1 measure in the PM 2.5 control strategy.

T-1

T-2

T-3

In summary:

- We strongly believe that the District would be better served by a PM 2.5-only AQMP at this time.
- We recommend that the Draft EIR present and analyze a project alternative that represents a PM 2.5-only control strategy.
- We recommend that the District take credit for the significant NOx reductions associated with BCM-01 and -02, and that these credits substitute for CMB-01 Phase I, which should be deleted from the Plan.
- Finally, we recommend that the ozone attainment strategy be developed as one entire integrated package for the 2015 AQMP.

As the process moves forward, we look forward to our continued partnership with SCAQMD. Please know that the business community remains committed to helping develop a balanced, workable 2012 AQMP that provides for both environmental and economic success.

We welcome further discussion of these comments; please contact Tracy Rafter, CEO of BizFed (Tracy.rafter@bizfed.org) or Matt Petteruto, Vice President of Economic Development for the Orange County Business Council (mpetteruto@ocbc.org).

Sincerely,

Southern California Business Coalition - AQMP Stakeholders Working Group

Comprised of members of the following associations:



Tracy Rafter  
BizFed, Los Angeles County Business Federation



Matt Petteruto  
Orange County Business Council



Gary Toebben  
Los Angeles Area Chamber of Commerce



Jay McKeeman  
CA Service Station & Auto Repair Association  
CA Independent Oil Marketers Association



Steven Schuyler  
BIA of Southern California, Inc.



Sandy Cajas  
Regional Hispanic Chamber of Commerce



Eric Sauer  
California Trucking Association



John Kelsall  
Greater Lakewood Chamber of Commerce



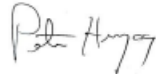
Paul C. Granillo  
Inland Empire Economic Partnership



Clayton Miller  
Construction Industry Air Quality Coalition



Gary W. Hambly  
CalCIMA



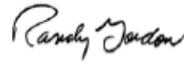
Peter Herzog  
NAIOP SoCal Chapter



Terri K. Crain  
Santa Clarita Valley Chamber of Commerce



Carol Schatz  
Central City Association



Randy Gordon  
Long Beach Area Chamber of Commerce



Stuart Waldman  
Valley Industry & Commerce Association



Bill LaMarr  
California Small Business Alliance



T.L. Garrett  
Pacific Merchant Shipping Association



Rob Evans  
NAIOP Inland Empire Chapter



Don Sachs  
Industry Manufacturers Council



Ron Wood  
Valley Economic Alliance

**Responses to Comment Letter T**  
**SCBC**

**Response to Comment T-1:**

AQMD staff agrees that the 2012 AQMP development schedule was initially compressed. The attainment demonstration modeling could not begin until input data from SCAG's 2012 RTP and CARB's emissions inventories were available. AQMD staff has made every effort to provide all data and information to the public as soon as it became available in an open and transparent process. The review period for many of the documents has also been extended, additional workshops and regional public hearings have been added, scheduled for November 13-15, and the Governing Board adoption hearing date has been delayed to December. The AQMD staff is committed to providing sufficient time for public comment, and continues the enhanced outreach efforts to all stakeholders, while keeping the U.S. EPA submittal deadline in December of 2012 in mind.

**Response to Comment T-2:**

Consistent with the previous AQMP, the current analysis shows that approximately 65% of additional NOX emissions reductions, beyond already adopted rules and measures, will be needed to meet the existing 1997 8-hour ozone standard of 80 ppb in 2023. The Basin can only demonstrate attainment of the 8-hour standard by using the CAA Section 182(e)(5) provision allowing for long-term measures that anticipate the development of new technologies or improving of existing control technologies. This CAA provision requires that these long-term measures be specifically identified at least three years prior to the attainment year (2020).

With less than 8 years remaining to identify these so-called "black box" emissions reductions, it is imperative to move forward with the identification and development of all feasible specific measures to achieve these reductions as soon as possible. If progress is delayed, there will be even less time to develop and implement strategies before the looming deadlines, and thus the resulting necessary measures could be more burdensome and disruptive. Delaying progress will also provide less certainty and lead time to the regulated community for planning compliance with potential new regulatory requirements. The considerable time it takes for new technologies to be developed, assessed and implemented widely, especially in the mobile source sector, also underscores the need to begin immediately. Note that while this Plan commits to the adoption of several ozone measures in the near-term, the implementation date and emissions reduction commitments are at least 2015 and beyond. While the District will need to adopt another ozone plan in 2015 to attain the 75 ppb standard by 2032, we cannot afford to delay implementation of the large "black box" in the existing approved 2007 AQMP (241 fpd NOx & 40 tpd VOC).

Recent litigation regarding U.S. EPA approvals of previous SIPs has focused on the reliance on a relatively large “commitments” to demonstrate attainment and the short time frame available to develop and deploy potential new technologies. The District believes it is important to demonstrate progress towards ozone attainment by making commitments for additional emissions reductions that reduce the size of the “black box” commitments. In U.S. EPA’s comment letter on the Draft 2012 AQMP (August 30, 2012), they state that they “fully support the District’s inclusion in the 2012 AQMP of updates on the implementation of control measures and emission reduction commitments relied upon in the South Coast 2007 AQMP to demonstrate expeditious attainment of the 1997 8-hour ozone NAAQS. We urge the District to continue working closely with EPA staff to identify the specific near-term and long-term control measures that will fulfill the NO<sub>x</sub> and VOC emission reduction commitments contained in the SIP-approved South Coast 2007 8-hour ozone plan, and to develop appropriate methodologies for calculating the emission reductions attributed to each such measure.”

Furthermore, U.S. EPA’s recently proposed to require a new 1-hour ozone SIP for the South Coast Air Basin. In order to demonstrate attainment with this revoked standard by 2022, all feasible measures must be included in the SIP. Making enforceable emissions reductions commitments based on specific measures as they are identified is the best way to demonstrate that the District is dedicated to realizing the emission reductions necessary to achieve the 8-hour and 1-hour ozone standards. Future AQMPs will need to further identify specific measures and associated emissions reductions that will allow the “black box” commitments to shrink to zero by 2019 for the 1-hour ozone or 2020 for the 8-hour ozone.

**Response to Comment T-3:**

The Draft Final 2012 AQMP has removed the RECLAIM Phase I NO<sub>x</sub> reductions from the list of control measures directed towards achieving attainment of the 24-hour PM<sub>2.5</sub> standard. The Phase I NO<sub>x</sub> RECLAIM measure has been moved to the contingency measure category, to be implemented if the Standard is not achieved in 2014. Staff is committed under the contingency measure provisions of the CAA to have the measure in rule form ready to be implemented based on a trigger of non-attainment. To this end, staff will commence the process to amend Rule 2002 to meet the contingency requirement of having the provisions in place by June of 2013. If not implemented as a contingency measure, the Phase I NO<sub>x</sub> RECLAIM commitment of 2 tons per day will be incorporated with the following Phase II NO<sub>x</sub> RECLAIM BARCT assessment targeting full implementation by 2020. Proposed control measures BCM-01 and BCM-02 will constitute the proposed control strategy to achieve attainment of the 24-hour PM<sub>2.5</sub> standard by 2014. Regional air quality modeling simulations presented in the Draft Final 2012 AQMP have demonstrated that with implementation of control measures BCM-01 and BCM-02, the Basin is expected to attain the 24-hour PM<sub>2.5</sub> standard by 2014. Like the Phase I NO<sub>x</sub> RECLAIM rule, adoption of these control

measures is targeted towards the 2<sup>nd</sup> quarter of 2013 to meet U.S. EPA's completeness requirements for evaluation of the SIP submittal.

**U. Enstrom, James E, UCLA School of Public Health, August 30, 2012**

**Criticism of Draft 2012 South Coast Air Quality Management District  
Air Quality Management Plan Appendix I Health Effects  
and  
Request for California Health and Safety Code Section 40471 (b) Hearing on  
Health Impacts of Particulate Matter Air Pollution in South Coast Air Basin**

James E. Enstrom, Ph.D., M.P.H.  
UCLA School of Public Health  
Los Angeles, CA 90095-1772  
[jenstrom@ucla.edu](mailto:jenstrom@ucla.edu)  
(310) 825-2048

August 30, 2012

Summary of Attached Pages:

- 1) Enstrom Criticism of Draft 2012 AQMD AQMP Appendix I Health Effects makes the primary points that a) overwhelming epidemiologic evidence indicates particulate matter is not killing Californians; b) since 2001 AQMD has not prepared reports on "the health impacts of particulate matter in the South Coast Air Basin" in accord with California Health and Safety Code (CHSC) Section 40471 (b); c) the AQMD Advisory Council failed to properly peer review AQMP Appendix I Health Effects; and d) AQMD must hold a Governing Board Hearing on AQMP Appendix I Health Effects before the 2012 AQMP is finalized.
- 2) Enstrom Op-Ed for The Desert Sun on particulate matter in the Coachella Valley, which was scheduled to be published on April 4, 2012 but which has never been published, makes a strong case that a) particulate matter is not currently harming Coachella Valley residents and b) there will be no health risk from particulate matter after the Sentinal Power Plant is operational.
- 3) Figure 21 from 2000 Health Effects Institute Reanalysis Report by Krewski, Jerrett, et al., shows clear and large variation in PM2.5 mortality risk across the US, with low risk in California
- 4) Enstrom Table 1 summary of the epidemiologic evidence shows NO relationship between PM2.5 and total mortality in California.
- 5) Enstrom Table 2 summary of the epidemiologic evidence shows NO relationship between PM10 and total mortality in California; also, US EPA summary of PM NAAQS indicates revocation of the annual PM10 standard in 2006 due to lack of long-term health effects.
- 6) NCHS US map shows 2009 age-adjusted total death rate by state, with California third lowest; also, California county data shows that the death rate in the South Coast Air Basin is lower than the death rate in every state except Hawaii.

Criticism of Draft 2012 South Coast Air Quality Management District  
Air Quality Management Plan Appendix I Health Effects

The Southern California Air Quality Management District (AQMD) has released its Draft 2012 Air Quality Management Plan (AQMP) (<http://www.aqmd.gov/aqmp/2012aqmp/index.htm>). This plan proposes aggressive and costly emission control measures, such as, increased use of zero emission vehicles and severe restrictions on wood-burning fireplaces, in order to reduce air pollution in the South Coast Air Basin (SCAB). This air basin includes about 17 million residents in Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The primary goal of the AQMP is to bring the SCAB into compliance with the US Environmental Protection Agency (EPA) National Ambient Air Quality Standards (NAAQS) for criteria pollutants, such as, particulate matter (PM2.5 and PM10) and ozone. These standards are based on the nationwide health effects of these pollutants (<http://www.epa.gov/air/criteria.html>).

However, the AQMP needs to address the health effects of air pollution in the SCAB. In particular, California Health and Safety Code (CHSC) Section 40471 (b) specifically states "On or before December 31, 2001, and every three years thereafter, as part of the preparation of the air quality management plan revisions, the south coast district board, in conjunction with a public health organization or agency, shall prepare a report on the health impacts of particulate matter air pollution in the South Coast Air Basin. The south coast district board shall submit its report to the advisory council appointed pursuant to Section 40428 for review and comment. The advisory council shall undertake peer review concerning the report prior to its finalization and public release. The south coast district board shall hold public hearings concerning the report and the peer review, and shall append to the report any additional material or information that results from the peer review and public hearings." (<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=40001-41000&file=40460-40471>).

As best I can determine, AQMD never prepared a "report on the health impacts of particulate matter air pollution in the South Coast Air Basin" at the end of 2001, 2004, 2007, or 2010. The only "health impacts" reports that I can find are Appendix I "Health Effects" of the 2003 AQMP, 2007 AQMP, and Draft 2012 AQMP. However these reports do not specifically address "the health impacts of particulate matter air pollution in the South Coast Air Basin." Indeed, the 2003 AQMP Appendix I states "The purpose of this appendix is to provide an overview of air pollution health effects, rather than to provide estimates of health risk from current ambient levels of pollutants in specific areas of the SCAB." ([http://www.aqmd.gov/aqmp/docs/2003AQMP\\_AppI.pdf](http://www.aqmd.gov/aqmp/docs/2003AQMP_AppI.pdf)).

Failure to comply with CHSC Section 40471 (b) is a serious matter because the local health effects of PM provide the primary public health justification for the entire AQMP. Overwhelming epidemiologic evidence now indicates that there is NO relationship in California between PM and total mortality (also known as "premature deaths"), as I explained in the June 4, 2012 Orange County Register (<http://www.ocregister.com/articles/air-357230-california-pollution.html>).

U-1



This null relationship in California has been known since 2000, but the specific null evidence is only partially presented in the Draft 2012 AQMP and was entirely omitted from the earlier AQMPs. For instance, each AQMP Appendix I cites the 2000 Health Effects Institute Special Report "Reanalysis of the Harvard Six Cities Study and the American Cancer Society Study of Particulate Air Pollution and Mortality," a major report relied upon by EPA and AQMD. However, only the nationwide PM2.5 mortality risk results in this report are cited in the AQMP, whereas Figures 5 and 21 show substantial geographic variation in PM2.5 mortality risk across the US, with Los Angeles ranking fifth lowest among 49 cities (<http://www.scientificintegrityinstitute.org/HEIFigure5093010.pdf>).

U-2

In total, ten separate analyses of five major California cohorts have found no relationship between PM2.5 and total mortality. Indeed, detailed analyses of two of these cohorts, funded by AQMD and completed in 2011, have found no relationship between any criteria pollutant and total mortality in California ([www.scientificintegrityinstitute.org/Enstrom081512.pdf](http://www.scientificintegrityinstitute.org/Enstrom081512.pdf)). Keep in mind, total mortality is the primary health impact that justifies the NAAQS. However, these national standards are not based on health effects or mortality in California or the SCAB. In 2009 the SCAB had an age-adjusted total death rate lower than the death rate in every state in the continental US (<http://www.scientificintegrityinstitute.org/NCHSRR070811.pdf>).

The 16 members of the 2012 AQMD Advisory Council were asked on June 7, 2012 to review and comment on Appendix I, particularly regarding the "health impacts of particulate matter air pollution in the South Coast Air Basin," and to attend a July 11, 2012 meeting at AQMD regarding Appendix I. Only 7 members submitted any written comments. The three members with the most relevant scientific expertise on PM did not address the "health impacts of particulate matter air pollution in the South Coast Air Basin". UCLA Professor John R. Froines did not submit any written comments; USC Professor Rob S. McConnell did not submit any comments on PM health effects; and LLU Professor Samuel Soret failed to reveal the null PM findings from AHSMOG in the December 2011 LLU Dr. P.H. dissertation of Lie Hong Chen ([http://books.google.com/books/about/Coronary\\_Heart\\_Disease\\_Mortality\\_and\\_Long.html?id=PA8ltwAACAAJ](http://books.google.com/books/about/Coronary_Heart_Disease_Mortality_and_Long.html?id=PA8ltwAACAAJ)).

U-3

Dr. Soret served on the committee for Dr. Chen's highly relevant dissertation, CORONARY HEART DISEASE MORTALITY AND LONG-TERM EXPOSURE TO AMBIENT PARTICULATE AIR POLLUTANTS IN ELDERLY NONSMOKING CALIFORNIA RESIDENTS. The Abstract states "The purpose of this study is to assess the effect of long-term concentrations of ambient PM on risks of all causes . . . . The health effects of long-term ambient air pollution have been studied with up to 30 years of follow-up in the AHSMOG cohort, a cohort of 6,338 nonsmoking white California adults."

Before the Draft 2012 AQMP is finalized and approved, AQMD must hold a public hearing on the health impacts of air pollution in the SCAB, in accordance with CHSC Section 40471 (b). If the hearing confirms the overwhelmingly null evidence cited above, then the AQMP should not propose emission control measures necessary to comply with NAAQS that are not appropriate for California or the SCAB. Instead, AQMD should request a waiver from compliance with the NAAQS using the special waiver status granted to California in Section 209 of the Clean Air Act (<http://www.epa.gov/otaq/cafr.htm>).

U-4

From: "Folmer, James" <jfolmer@palmspri.gannett.com>  
To: "James E. Enstrom" <jenstrom@ucla.edu>  
Date: Tue, 3 Apr 2012 09:44:35 -0700  
Subject: RE: Proposed Op-Ed on Particulate Matter Health Effects in CV

Dr. Engstrom, here's the edited version. I did minimal editing, just a few tweaks to match AP style. I replaced  $\mu\text{g}/\text{m}^3$  with "micrograms per cubic meter." Please let me know if that's acceptable.

Also, I took your website references out of the body of the column and put them in a breakout (below) to make it more readable.

It will be in Wednesday's edition. Thanks for the contribution.

The Desert Sun has recently published a special report and an editorial on the Sentinel power plant that is under construction by Competitive Power Ventures. Substantial concern has been expressed about the impact of the particulate matter (PM) pollution that will be generated by the plant. I would like to provide my perspective on the PM levels associated with the plant and the health effects associated with PM. PM consists of "inhalable coarse particles" (PM10) and "fine particles" (PM2.5).

Based on the April 15, 2010, California Energy Commission air quality assessment for the Sentinel plant, Table 13 indicates that the maximum annual background PM10 level in the Coachella Valley will be increased from 54.9 microgram per cubic meter to 55.33 during plant operation. This represents a "worse case (maximum)" increase of only 0.8 percent. Based on the South Coast Air Quality Management District (AQMD) Final 2007 Air Quality Management Plan, the maximum annual average PM10 level in the Coachella Valley (Salton Sea Air Basin) is only 45.7 micrograms per cubic meter.

All these levels are quite similar to the U.S. EPA's 1987-2006 annual standard for PM10 of 50 micrograms per cubic meter. However, this standard was revoked in 2006 due to "inadequate" evidence of long-term health effects of PM10, as summarized in the 2004 and 2009 EPA Integrated Science Assessment for Particulate Matter.

The Desert Sun claim that "the Sentinel plant would increase the (PM10) level to 277 percent above the state standard" is highly misleading because it is based on the California Energy Commission's Table 13 comparison of 55.33 micrograms per cubic meter with the California annual standard for PM10 of 20. But this state standard was established by the California Air Resources Board in 2002 and does not reflect the extensive null evidence on PM10 health effects that has been published since 2002.

In January 2007, the Air Resources Board and AQMD approved \$1,034,358 in funding, half from each agency, for two major epidemiologic studies on the relationship between PM (PM10 and PM2.5) and death in California. The study based on the American Cancer Society cohort was conducted by UC Berkeley professor Michael Jerrett and 13 other investigators.

The study based on the California Teachers Study cohort was conducted by Michael Lipsett of the California Department of Public Health and nine other investigators. A primary purpose of these studies was to produce new California evidence "to assist with the review of ambient air quality standards."

The results of these two studies were published in 2011 and they both found no relationship between PM and total mortality in California. The Jerrett Study found that total mortality during 1982-2000

among about 75,000 California adults was not related to either PM10 or PM2.5 in eight of nine models tested. The Lipsett Study found that total mortality during 2000-2005 among about 75,000 female

California teachers was not related to either PM10 or PM2.5.

The studies found some unexplained evidence of increased cardiovascular disease risk and decreased cancer risk, but there was no overall increased risk of death. These null results agree with the overwhelmingly null results for California that have been published since 2000, which include my 2005 results.

Thus, based on all the evidence described above, there is no health risk associated with PM in the Coachella Valley or in California as a whole and there will be no health risk from PM after the Sentinel power plant is operational. However, since AQMD and others have a different perspective and since The Desert Sun stated that "Robust debate on this issue is needed," I propose that an open forum be organized so that AQMD Executive Officer Barry Wallerstein and I can debate our different views on the health effects of PM in the Coachella Valley. Hopefully, our debate will help resolve the PM health effects issue.

James E. Enstrom is on the research faculty at the UCLA School of Public Health and has been conducting epidemiologic research there since 1973. Email him at [jenstrom@ucla.edu](mailto:jenstrom@ucla.edu)

LEARN MORE ABOUT PARTICULATE MATTER

Read the California Energy Commission air quality assessment for the Sentinel plant at [mydesert.com/opinion](http://mydesert.com/opinion)

Websites cited by James E. Engstrom:

[www.epa.gov/pm/](http://www.epa.gov/pm/)  
[www.aqmd.gov/aqmp/07aqmp/aqmp/Chapter\\_2.pdf](http://www.aqmd.gov/aqmp/07aqmp/aqmp/Chapter_2.pdf)  
[www.epa.gov/ttn/naaqs/standards/pm/s\\_pm\\_history.html](http://www.epa.gov/ttn/naaqs/standards/pm/s_pm_history.html)  
[cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=216546](http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=216546)  
[www.arb.ca.gov/board/books/2007/012507/07-1-4pres.pdf](http://www.arb.ca.gov/board/books/2007/012507/07-1-4pres.pdf)  
[wmbriiggs.com/blog/?p=4587](http://wmbriiggs.com/blog/?p=4587)  
[ajrccm.atsjournals.org/content/184/7/828.short](http://ajrccm.atsjournals.org/content/184/7/828.short)  
[www.scientificintegrityinstitute.org/Enstrom081111.pdf](http://www.scientificintegrityinstitute.org/Enstrom081111.pdf)

From: "Folmer, James" <[jfolmer@palmspri.gannett.com](mailto:jfolmer@palmspri.gannett.com)>  
To: "James E. Enstrom" <[jenstrom@ucla.edu](mailto:jenstrom@ucla.edu)>  
Date: Wed, 28 Mar 2012 13:11:05 -0700  
Subject: RE: April 5 DSun Op-Ed on PM Health Effects & Enstrom Photo

Photo is fine. I'll try to remember to send you the edited version. Feel free to pester me on Tuesday, but we can never promise exactly when a column will run depending on what's happening in the news.

Thanks.

**Responses to Comment Letter U**  
**Enstrom, James**

**Response to Comment U-1:**

The AQMD has prepared an Appendix I to the past Air Quality Management Plan updates which include a discussion on the health impacts of particulate matter, which are applicable to the South Coast Air Basin. Staff believes that these reports fulfill the California Health & Safety Code requirements contained in section 40471(b). Staff also notes that the Clean Air Act requires the attainment of the National Ambient Air Quality Standards. The AQMP updates provide the plan to attain the particulate matter standards.

The commentator appears to believe that the purpose behind Appendix I is to promote criticism of the PM 2.5 NAAQS, with the ultimate goal of having the Governing Board reject the applicable NAAQS and seek a waiver from it. The legislative analysis of SB 1195, which led to section 40471(b), refutes this belief. Thus, the Senate Floor analysis of SB 1195, just prior to the bill's adoption, states that one of the purposes of the bill is "intended to require the district to update its most recent plan adopted for the attainment of [fine particulate matter] standards." And to make it perfectly clear that the legislators were concerned about the health impacts of fine particulate matter, the analysis noted the following fact: "Recent scientific studies have linked fine particulate air pollution with serious public health problems, including premature death, aggravated asthma and acute respiratory distress."

**Response to Comment U-2:**

The commenter refers to a "null relationship" in California regarding particulate matter and mortality and that this was only "partially presented" in the draft 2012 AQMP, and that there were variations in the PM2.5 mortality risk across the U.S. noted in a study from the Health Effects Institute. Staff has included additional discussion on the range of findings in the studies referenced in the Appendix. However, that there were regional difference in the association of PM2.5 and mortality in the report (Krewski, 2000) was, in fact, noted in the draft Appendix. Commenter also refers to two reports co-funded by AQMD (Lipsett, 2011 and Jerrett, 2011). Staff has presented a summary of several studies on particulate matter health effects, including those referred to by the commenter. Also included are the findings of two studies that looked specifically at the effects of PM2.5 among the American Cancer Society cohort residents of the Los Angeles metropolitan area. (Jerrett, 2005 and Krewski, 2009), both of which reported associations of mortality with PM2.5, and found that the associations were higher than those reported in the national cohort. Additionally, since the initial draft of the 2012 AQMP Appendix I was compiled, the U.S. EPA issued a Regulatory Impact Report (Regulatory Impact Analysis related to the Proposed Revisions to the National Ambient Air Quality Standards for Particulate Matter EPA-452/R-12-003, June 2012

([http://www.epa.gov/ttn/ecas/regdata/RIAs/PMRIACombinedFile\\_Bookmarked.pdf](http://www.epa.gov/ttn/ecas/regdata/RIAs/PMRIACombinedFile_Bookmarked.pdf)), in conjunction with a proposal to revise the PM2.5 NAAQS (<http://www.gpo.gov/fdsys/pkg/FR-2012-06-29/pdf/2012-15017.pdf>), that looked at California specific studies regarding PM2.5 and mortality published in the scientific literature. The EPA analyses concluded "most of the cohort studies conducted in California report central effect estimates similar to the (nation-wide) all-cause mortality risk estimate we applied from Krewski et al. (2009) and Laden et al. (2006) albeit with wider confidence intervals. A couple cohort studies conducted in California indicate higher risks than the risk estimates we applied." Thus in EPA's judgment, the California related studies provided estimates of mortality consistent with or higher than those from the national studies.

### **Response to Comment U-3:**

As required by the California Health and Safety Code section 40471(b), Appendix I was submitted to the Advisory Council appointed pursuant to section 40428 to review and comment on Appendix I. Section 40428 provides that the Governing Board appoint the Advisory Council, which was done according to procedures adopted by the Governing Board. Briefly, each Governing Board member has authority to nominate a member to the Council, and each of the Governing Board standing Advisory Groups also nominated one member. Comments from the Advisory Council were given at the July 11, 2012, and October 11, 2012 meetings, as well as in written comments received. All comments received were included in the Appendix I. The Draft Appendix I will be revised in the process of developing the final report, as informed by comments received from the Advisory Council and from the public hearings, as well as other comments from the public, other reviewers and other information that comes to staff's attention. As requested by the Advisory Council, there will be additional opportunities to review and comment on the updated drafts. Also as called for by the Health and Safety Code, any additional material or information resulting from the review and public hearings will be appended to Appendix I.

### **Response to Comment U-4:**

The commenter refers to the requirement that public hearings be held concerning Appendix I and its peer review. The AQMD has held public regional hearings on the entire Draft AQMD, including Appendix I. Also, the Appendix I will be discussed at the Board Adoption Hearing scheduled for December 7, 2012. In staff's opinion, this fulfills the requirements of the California Health and Safety Code. Commenter further implies that the AQMD may request a waiver from compliance with the NAAQS under provision of Section 209 of the Clean Air Act. There is no provision in the Clean Air Act that allows exemption by Districts for meeting National Ambient Air Quality Standards. Section 209 refers to mobile source emission controls, and provides procedures in which California may seek waiver from federal motor vehicle standards if they are replaced with at least equally protective standards.

The Draft Appendix I relies on the conclusion of EPA reviews on the health effects of air pollutants. Tables summarizing the EPA conclusions are included in the discussion. The purpose of Appendix I is not to provide a re-evaluation of the National Ambient Air Quality Standards. See also response to Comment U-1. The establishment of the NAAQS are under the sole discretion of the EPA Administrator, as provided in the Clean Air Act. The District has no authority to establish or alter ambient air quality standards. The Draft 2012 AQMP is designed to provide a pathway to attain the NAAQS for PM<sub>2.5</sub> by the statutory deadlines. Failure to adopt or implement a plan to attain the NAAQS by the deadlines can trigger severe adverse consequences to the region, restrictions on transportation and highway funds to the region, increases in required emissions offset ratios, and implementation of a Federal Implementation Plan to attain the standard.

## V. Air Conditioning Heating, and Refrigeration Institute (AHRI), August 31, 2012

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August 31, 2012

South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, California 91765-4178

Re: AHRI Comments on the Draft 2012 Air Quality Management Plan

Dear Sir/Ma'am:

These comments are submitted by the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) in response to the South Coast Air Quality Management District's (AQMD) issuance of the draft 2012 Air Quality Management Plan (AQMP).

AHRI is the trade association representing manufacturers of heating, cooling, water heating, and commercial refrigeration equipment. More than 300 members strong, AHRI is an internationally recognized advocate for the industry, and develops standards for and certifies the performance of many of the products manufactured by our members. In North America, the annual output of the HVACR industry is worth more than \$20 billion. In the United States alone, our members employ approximately 130,000 people, and support some 800,000 dealers, contractors and technicians. The membership of the AHRI Furnace Section includes all the major manufacturers of commercial space heating equipment being sold in the district today.

In general, we recognize the AQMD staff's dedication to do what it can within its authority to improve the air quality in the district. We ask that staff consider the following comments regarding one of the control measures proposed in the draft 2012 AQMP:

### CMB-03: Reductions from Commercial Space Heating [NOx]

The estimated NOx reduction of 0.18 tons per day (TPD) is not sufficiently validated. We recommend that at this stage of AQMP development the potential NOx reduction for this measure be noted as "To be determined."

Page IV-A-64 of Draft 2012 Appendix IV-A states "staff estimates that 45 to 60% of all commercial, light manufacturing, warehouse, office, school and government building floorspace is heated by commercial forced air units." This estimate was based on national estimates that were developed by the U.S. Department of Energy (DOE). The estimates of the current daily NOx emissions from commercial space heating equipment and the potential reductions in this control measure should have been based on information that reflects the commercial space heating inventory and the percentage of commercial buildings heated by commercial gas furnaces within the district. The

V-1

characteristics of the district respective to population and the high saturation of gas-fired equipment are so above average that national average values should not be used.

V-1

Another concern with the draft AQMP analysis for this measure is that it fails to account for the energy savings that will be achieved by the implementation of the California Energy Commission's (CEC) 2013 *Building Energy Efficiency Standards* (California Code of Regulations, Title 24). In particular, the improved building envelope requirements of the 2013 Title 24 regulations will reduce building heating loads, thereby lowering the amount of gas consumed to heat the building. This reduction in gas consumption directly reduces the NOx emissions and must be factored in any estimates of NOx reductions from this control measure. Furthermore, this factor of the analysis would be conservative since California's building efficiency standards are updated on a three-year cycle, so it is highly likely that there will be at least one more revision to the Title 24 standard before the AQMP's proposed 2018 implementation period.

V-2

The projected implementation date for this measure is 2018. In view of the complexities in developing gas-fired equipment with reduced NOx emissions and the current ongoing project to reduce NOx emissions from residential gas furnaces, we recommend that this 2018 implementation date not be changed to any earlier date as the associated rule is developed. The manufacturers of commercial gas central furnaces are the same companies who manufacture residential gas furnaces. Those manufacturers are already working towards redesigns that would allow equipment to satisfy the requirements of Rule 1111. Technical feasibility studies are ongoing but it has not yet been confirmed that the 14 ng/J NOx emission limit for gas-fired furnaces less than 175,000 Btu/h is practical in the field. Recognizing that manufacturers are being required to provide furnaces that are compliant with Rule 1111 by 2014, 2015 or 2016, depending on the particular furnace category, the proposed adoption date associated with CMB-03 within the 2012 draft AQMP is nominally only 2 to 3 years later. Past experience with rules on redesigning gas fired equipment to reduce NOx emissions suggests that even a 2 to 3 year lead time may not be enough. However, that experience clearly shows that it cannot be anything shorter.

V-3

The adoption schedule in the draft 2012 AQMP does not allow adequate time for manufacturers to shift their focus from furnaces less than 175,000 Btu/h to furnaces greater than or equal to 175,000 and less than 2,000,000 Btu/h. In our opinion, manufacturers should not be required to work on developing new designs for residential and commercial furnaces simultaneously. It cannot be assumed that the emission reduction technologies are easily transferrable from residential to commercial products. Manufacturers would have to undergo extensive research to ensure that no adverse impact is placed on product safety while meeting the AQMD's reduction requirements. Hence, we recommend that the adoption dates be postponed so that manufacturers have sufficient lead times to comply with the requirements of the 2012 AQMP; Phase I (technical assessment) should be moved to 2015 and Phase II should be moved to 2017. The implementation period may need to be adjusted as well to accommodate the postponement of the adoption dates.

V-4

Chapter 3 and Appendix IV-A of the draft 2012 AQMP do not provide any reference to the NOx inventory of 2.2 TPD for commercial space heating equipment. How was this baseline estimate deduced for the district? We believe that the reduction levels specified

V-5



in CMB-03 need to be investigated further. The draft 2012 AQMP does not explain how the proposed reduction of 0.18 TPD by 2023 was achieved. Furthermore, the total reduction of 0.6 TPD was calculated based on national estimates and not the inventory available in the district. We feel that the AQMD will have a better understanding of the reduction levels upon the completion of the technical assessment. Hence, we recommend that at this stage of the AQMP development, the potential NOx reduction for both these reduction levels be replaced with the phrase "To be Determined."

} V-5

AHRI appreciates the opportunity to provide these comments. If you have any questions regarding this submission, please do not hesitate to contact me.

Sincerely,



Aniruddh Roy  
Regulatory Engineer  
Air-Conditioning, Heating, and Refrigeration Institute  
2111 Wilson Boulevard, Suite 500  
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703-600-0383 Phone  
703-562-1942 Fax  
[aroy@ahrinet.org](mailto:aroy@ahrinet.org)

**Responses to Comment Letter V**  
**AHRI**

**Response to Comment V-1:**

The methodology for developing the commercial space heating emissions inventory is well established, has been used in previous AQMPs and incorporates EPA emission factors, local data on gas use by different sectors from local gas utilities and information from the California Energy Commission, CARB and local agencies. The inventory incorporates local growth projections and gas utility provided energy conservation projections. The factor in inventory development that may need further enhancements is the proportion of heating provided by forced air furnaces versus boilers. Both kinds of heating are used with a split of approximately 50% each. While it is true that Southern California uses more gas-fired heating appliances than other parts of the country, our boilers are also gas-fired. The percentage of floor space heated by forced air versus boilers depends more upon the numbers and size of various types of commercial buildings (their construction) than on other factors. The percentage of floor space heated by forced air units may be more than the 45% used by staff to estimate a minimum total reduction of 0.6 tons/day after 20 years of implementation. If this is the case, AQMD staff will use local floor space data when available and adjust the inventory and the emission reduction higher during rule development.

**Response to Comment V-2:**

The baseline and future inventories for space heating incorporate federal, state and local energy conservation measures. The emission reductions from this proposed measure are in addition to reductions achieved by potential energy conservation beyond current standards of funded programs.

**Response to Comment V-3:**

AQMD staff does not expect the compliance date for a rule based on control measure CMB-03 to be earlier than 2018.

**Response to Comment V-4:**

The current project to develop prototypes of Rule 1111 compliant residential furnaces is progressing well and is expected to be completed by the summer of 2013. Based on progress to date, AQMD staff does not expect a delay in Rule 1111 implementation. Staff believes that the current schedule in measure CMB-03 provides sufficient time for development of larger products based on residential furnace technology (multiple small burners) or single burner technologies used in other applications.

**Response to Comment V-5:**

Please refer to response to comment V-1. The inventory methodology for commercial space heating is well established and has been accepted for previous AQMPs. Current and future emission inventories are based on gas consumption by categories of use provided by local gas utilities. The baseline inventory uses emission factors developed by EPA. The methodology for estimating NO<sub>x</sub> reductions from control measure CMB-03 is explained in the control measure. The reduction of 0.18 ton/day in 2023 is based on a compliance date of 2018 for new sales and an average equipment life of 20 years. Thus each year 1/20 of the total number of commercial space heaters will be replaced by compliant units resulting in a reduction of 0.18 ton/day in 2023 ( 0.06 ton/day X 1/20 X 6 years = 0.18 ton/day reduction in NO<sub>x</sub>).

W. Western States Petroleum Association (WSPA), August 31, 2012



Western States Petroleum Association  
Credible Solutions • Responsive Service • Since 1907

Patty Senecal  
Manager, Southern California Region and Infrastructure Issues

VIA ELECTRONIC MAIL

August 31, 2012

Barry Wallerstein, D. Env.  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

Re: **Comments on the Draft 2012 Air Quality Management Plan (AQMP)**

Dear Dr. Wallerstein:

The Western States Petroleum Association (WSPA) is a non-profit trade association that represents twenty-seven companies that explore, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California and five other western states. WSPA has been an active participant in air quality planning issues for over 30 years. WSPA member companies operate petroleum refineries and other facilities in the South Coast Air Basin and thus have a major stake in the Air Quality Management Plan (AQMP) being prepared by the South Coast Air Quality Management District (SCAQMD or District), and any rule developments that might stem from the final AQMP as adopted by the District's Governing Board.

WSPA appreciates the opportunity to submit these comments on the Draft 2012 AQMP and continues to support the South Coast regional air quality planning process and the successes achieved to date. The attainment of the National Ambient Air Quality Standard (NAAQS) for PM<sub>2.5</sub>, which is now imminent, represents a significant public health milestone for Southern California residents and industry. We also wish to acknowledge that the technical inputs and tools used by the District staff for this AQMP represent a significant improvement over prior plans. These important advances provide the opportunity for stakeholders and decision makers to be better informed about the state of air quality in Southern California and the regional economy. Over the last two decades, Southern California's industrial facilities (i.e., stationary sources including the region's petroleum refineries) have reduced their emissions by over 70 percent for most criteria pollutants including nitrogen oxides (NO<sub>x</sub>) and sulfur oxides (SO<sub>x</sub>).

Page 1

970 W. 190th Street, Suite 770, Torrance, California 90502  
PHONE: (310) 678-7782 • FAX: (310) 324-9063 • [PSenecal@wspa.org](mailto:PSenecal@wspa.org) • [www.wspa.org](http://www.wspa.org)

This letter presents WSPA's general comments, with detailed comments on specific AQMP measures to follow under a separate letter. WSPA may submit additional comments during this process as the District releases additional 2012 AQMP documents including, but not limited to a reported second Draft AQMP. We understand all submissions will be given due consideration by the District staff and the Governing Board.

Our general comments on the Draft 2012 AQMP (dated July 2012) are as follows:

1. **Although the District has prepared an integrated AQMP that addresses both PM<sub>2.5</sub> and ozone, the focus of the 2012 AQMP control strategy and the associated State Implementation Plan (SIP) submittal, should be limited exclusively to the PM<sub>2.5</sub> plan consistent with EPA requirements.**

The District's current obligation under the Clean Air Act is to prepare an AQMP to attain the PM<sub>2.5</sub> standard and continuing to implement 2007 AQMP measures. Showing attainment of the 8-hour ozone standard is the obligation of the 2015 AQMP. This strategy makes sense because there are scientific and technical improvements that need to be made before the District can provide a meaningful update to the basin's ozone strategy at this time. The magnitude of the ozone challenge for future milestone years (i.e., 2023 and 2032) is a function of forecasts and assumptions which will only become better understood with time, but under any scenario the District's "Black Box" commitment under Clean Air Act Section 182(e)(5) still requires significant emission reductions for which this plan quantifies very little. That is because the overwhelming majority of these emission reductions must come from transportation and can only be provided by new technologies which are as yet unidentified. While the District has "sketched out" a path for identification, development and commercialization of such technologies, this part of the AQMP remains speculative. Meanwhile, potential co-benefits from other regulatory initiatives like the California Air Resources Board's (CARB) AB32 Program (e.g., Cap-and-Trade, Low Carbon Fuel Standard, etc.) remain largely unconsidered in this plan.

Given these facts, there is no benefit to pushing new ozone measures into the SIP at this time. Rather, such action would only serve to unnecessarily constrain the future options available to the District and Southern California businesses. The District should wait and develop the revised ozone attainment strategy when it is required as part of the 2015 AQMP. At that time, we will all have a better understanding of the needed emission reductions and better information on the economic factors and technologies required to meet the region's air quality challenge. New control measures in the 2012 AQMP and the associated SIP submittal should be limited exclusively to the PM<sub>2.5</sub> attainment demonstration consistent with EPA requirements.

W-1

2. WSPA agrees that the region can attain the PM<sub>2.5</sub> NAAQS by 2014 through the use of focused, time & place control measures. This is the most efficient and cost effective path to attainment of the PM<sub>2.5</sub> standard.

Most of the basin is already in attainment of the PM<sub>2.5</sub> NAAQS, and the District's modeling forecast suggests that the area around the Mira Loma monitoring station will be very close to achieving the standard by 2014. Based on the information provided in the Draft AQMP, measures BCM-01 and BCM-02 are by themselves sufficient to demonstrate PM<sub>2.5</sub> attainment in 2014. These measures would enhance restrictions on residential wood burning (BCM-01) and open burning (BCM-02) whenever key areas of the air basin are forecast to approach the federal 24-hour PM<sub>2.5</sub> standard. Similar measures been successfully implemented in other jurisdictions and are technologically feasible and cost effective.

The Draft AQMP currently proposes eight short term PM<sub>2.5</sub> control measures, but as summarized in Table 1, only three of these measures have any quantified emissions benefits for 2014.

TABLE 1: 2012 AQMP Proposed PM<sub>2.5</sub> Control Measures (Tons per Day)<sup>1</sup>

2014 Emissions	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub> Equiv	Reference
Baseline Emissions	499.9	18.4	70.4	451.4	1821.6	App III, Table A-2
CMB-01	-2.0	0	0	0	-2.0	App IV-A
BCM-01	-14.84	-0.37	-5.36	-6.46	-95.4	App IV-A & App III Table A-2
BCM-02	-1.52	-0.47	-4.60	-3.23	-70.4	App IV-A & App III Table A-2
BCM-03	0	0	0	0	0	App IV-A
BCM-04	0	0	0	0	0	App IV-A
IND-01	0	0	0	0	0	App IV-A
EDU-01	0	0	0	0	0	App IV-A
MCS-01	0	0	0	0	0	App IV-A
Total Measures	-18.36	-0.84	-9.96	-9.69	-167.7	
Controlled Emissions	481.5	17.6	60.4	441.7	1653.9	

W-2

The Draft AQMP reports that BCM-01 and BCM-02 will reduce direct PM<sub>2.5</sub> emissions,<sup>2</sup> but these two measures also yield significant reductions in NO<sub>x</sub> and VOC emissions during control episodes which were not presented in the AQMP report. Those emission reductions, which are presented in Table 1, are based on the emission inventory presented in Appendix III of the Draft AQMP, will significantly contribute to attainment of the 24-hour PM<sub>2.5</sub> NAAQS.

Using the District's "NO<sub>x</sub> equivalent" weighting system, BCM-01 and BCM-02 would provide about 166 tons per day (tpd) of NO<sub>x</sub> equivalent emission reductions which includes 16 tpd of

<sup>1</sup> "NO<sub>x</sub> Equivalent" emissions are computed based on the relative contributions of precursor emissions reductions to simulated controlled future-year 24-hour PM<sub>2.5</sub> concentrations discussed in Section 5 of the Draft AQMP. As presented in Table 5-2, PM<sub>2.5</sub> has a standardized contribution to ambient PM<sub>2.5</sub> mass of 14 times that of NO<sub>x</sub>. The factors for SO<sub>x</sub> and VOC are 6 and 0.5, respectively. (See Draft AQMP, p. 5-15).

<sup>2</sup> SCAQMD, Draft 2012 AQMP, Table 4-2.

NO<sub>x</sub> reductions. Based on these figures, 99% of the emission reductions quantified for the PM<sub>2.5</sub> attainment demonstration are attributable to BCM-01 and BCM-02. These two measures, by themselves, will deliver the needed emissions reductions and represent the most efficient and most cost effective path to attainment of the PM<sub>2.5</sub> standard by 2014.

**3. Proposed Control Measure CMB-01 (Further NO<sub>x</sub> Reductions from RECLAIM - Phase I) is not needed for the PM<sub>2.5</sub> attainment demonstration. CMB-01 should be removed from the Short-Term PM<sub>2.5</sub> Control Measures.**

In part, the 2012 AQMP is designed to evaluate potential control measures and their effectiveness in meeting the federal 24-hour PM<sub>2.5</sub> NAAQS. The predicted 24-hour PM<sub>2.5</sub> Design Value for 2014 at the Mira Loma monitoring station was 37.3 µg/m<sup>3</sup>, which exceeds the 24-hour PM<sub>2.5</sub> standard of 35 µg/m<sup>3</sup>.<sup>3</sup> The controlled scenario includes measures BCM-01 and BCM-02 which would restrict residential wood burning and open burning on a basin-wide basis on days predicted to have an ambient concentration of 30 µg/m<sup>3</sup> or greater (approximately 60 no-burn days used in the modeling). With those controls, the Design Value for 2014 was predicted to be 34.2 µg/m<sup>3</sup> which is below the 24-hour NAAQS.<sup>4</sup>

The Draft AQMP does not include a sensitivity analysis for the short-term PM<sub>2.5</sub> control measures, but using the District's "NO<sub>x</sub> equivalent" weighting system it is reasonably deduced that CMB-01 (Phase I) does not meaningfully contribute to the PM<sub>2.5</sub> attainment demonstration. As shown above in Table 1, BCM-01 and BCM-02 would provide about 166 tpd of "NO<sub>x</sub> equivalent" emission reductions, including 16 tpd of NO<sub>x</sub>. By comparison, proposed measure CMB-01 (Phase I) would only reduce 2 tpd NO<sub>x</sub> which represents a mere 1% of the NO<sub>x</sub> equivalent emission reductions proposed for 2014. This equates to less than 0.1 µg/m<sup>3</sup> of quantified ambient improvement which is statistically irrelevant to the PM<sub>2.5</sub> attainment demonstration for 2014.

The Draft AQMP succeeds in showing that Control Measures BCM-01 and BCM-02 can provide all of the air quality improvement needed for the District to demonstrate attainment of the 24-hour PM<sub>2.5</sub> NAAQS by 2014. As such, CMB-01 should be removed from the Short-Term PM<sub>2.5</sub> Control Measures in this plan.

W-3

<sup>3</sup> 2012 AQMP Chapter 5 and Appendix V.

<sup>4</sup> It is not clear from the Draft AQMP and supporting Appendix V whether the pollutant co-benefits (e.g., 16 tpd NO<sub>x</sub>) attributable to measures BCM-01 and BCM-02 were accounted in the CMAQ model. If not, that inclusion would drive the predicted design value for the controlled scenario lower than the reported value of 34.2 µg/m<sup>3</sup>.

4. **Proposed Control Measure CMB-01 (Further NO<sub>x</sub> Reductions from RECLAIM) needs to be wholly reconsidered. The Draft AQMP fails to properly consider RECLAIM market demand, or the cost implications of supply reductions. CMB-01 should be removed from the 2012 AQMP.**

As recognized by all stakeholders, the region still has a long way to go to meet the federal ozone NAAQS. The Draft AQMP notes:

“The Basin faces several ozone and PM attainment challenges, as strategies for significant emission reductions become harder to identify and the federal standards continue to become more stringent.

... In finding the most cost-effective and efficient path to meet multiple deadlines for multiple air quality and climate objectives, it is essential that an integrated planning approach is developed.”<sup>5</sup>

We agree with this concept and would suggest that the Draft AQMP does not achieve this objective. Proposed Control Measure CMB-01 (Phase I) suggests:

“The proposed Phase I reductions are designed to enhance timely attainment of the 24-hr PM<sub>2.5</sub> standard by 2014 by taking advantage of currently approximately 8 tpd of excess RTC in the market. A shave of 2 tpd of NO<sub>x</sub> RTCs should not cause a significant impact to the market.”<sup>6</sup>

This statement is inaccurate for several reasons: (1) the Draft AQMP provides no evidence to support the assertion concerning the future RECLAIM RTC supplies; (2) there is no evidence presented or implied to support a position that a 2 tpd NO<sub>x</sub> reduction in the market is reasonable nor feasible in the short- or long-term; and (3) there is no suggestion of a control strategy that would be the basis for such emission reductions. Finally, we reiterate that Control Measure CMB-01 is unneeded for the PM<sub>2.5</sub> attainment demonstration.

- **The market data used to support CMB-01 (Phase I) reflected a major recession (i.e., 2008-2010); those data do not reflect a “normal” economy and are not indicative of the RECLAIM RTC supply needed to support the Southern California economy.**

The Draft AQMP suggests that the NO<sub>x</sub> RECLAIM market has a surplus which can be “shaved” with no significant impact to the market. This supposition is based on the District’s review of NO<sub>x</sub> RTC data from 2008-2010. Elsewhere in the Draft AQMP it is acknowledged that the 2008-2010 period was impacted by a major recession. That recession significantly suppressed economic activity in most sectors of the economy including transportation, goods movement, and electricity demand. Those recessionary impacts are indeed reflected in the referenced 2008-2010

<sup>5</sup> SCAQMD, Draft 2012 AQMP, p. ES-12.

<sup>6</sup> SCAQMD, Draft 2012 AQMP, Appendix IV-A, p. IV-A-14.

W-4



RTC market data. But more importantly, that time period is an inappropriate basis for forecasting future RTC demand.

- The District's ozone attainment strategy is dependent on the advancement of zero/near-zero technologies for transportation. That strategy will require that the NO<sub>x</sub> RECLAIM market have sufficient RTC supply for significant new electricity generation.

W-4

As explained in the Regional Transportation Plan (RTP) and the Draft AQMP, attainment of the ozone NAAQS will not be possible without significant NO<sub>x</sub> emission reductions from the transportation sector. The Draft AQMP notes this repeatedly:

"...a transition to zero- and near-zero emission technologies is necessary to meet 2023 and 2032 air quality standards and 2050 climate goals. Many of the same technologies will address air quality, climate and energy goals."<sup>7</sup>

"Since most significant emission sources are already controlled by over 90%, attainment of the ozone standards will require broad deployment of zero- and near zero emission technologies in the 2023 to 2032 timeframe. On-land transportation sources such as trucks, locomotives, and cargo handling equipment have technological potential to achieve zero- and near-zero emission levels. Current and potential technologies include hybrid-electric, battery-electric, and hydrogen fuel cell on-road vehicle technologies. Other technologies and fuels may also serve regional needs, e.g. natural gas-electric hybrid technologies."<sup>8</sup>

W-5

In short, this strategy involves transitioning the transportation sector from petroleum-based energy sources to electricity. California has some of world's most aggressive policies to reduce emissions from the electricity sector including demand management (e.g., energy efficiency) programs and emission standards. Part of that strategy includes the Renewable Portfolio Standard (RPS) which would eventually have utilities supplying 33% of electricity generation from zero emission technologies like solar and wind. But that leaves 60+% of our electricity coming from fossil-fueled sources for the foreseeable future.<sup>9</sup>

Terminology aside, electricity is not zero-emissions and going forward much of the increased electricity demand in Southern California would need to be delivered from fossil-fueled power plants in the South Coast Air Basin. That electricity generation will need to be accommodated under the NO<sub>x</sub> RECLAIM market, and it is not in the 2008-2010 baseline.

<sup>7</sup> SCAQMD, Draft 2012 AQMP, p. ES-13.

<sup>8</sup> SCAQMD, Draft 2012 AQMP, p. 4-20.

<sup>9</sup> Hydroelectric and nuclear power plants are expected to supply less electricity to Southern California going forward due to declining snow packs and the threatened retirement of SONGS (in part or whole).

- The District needs to consider electricity sector impacts associated with a broad-scale electrification initiative for transportation before proposing any new NO<sub>x</sub> RECLAIM shave. Failure to plan for such a structural change would challenge the feasibility of the District's zero/near-zero technologies strategy, negatively impact the Southern California economy, and may be contrary to State requirements under Assembly Bill 1318.

Broad-scale transportation electrification will mean significant new demand for electricity. The District has worked to preserve emission offsets availability for electricity generation, in particular with certain exemptions for non-RECLAIM pollutants under Regulation XIII. But that could prove irrelevant if the NO<sub>x</sub> RECLAIM market lacks sufficient RTC supply to cover the NO<sub>x</sub> emissions associated with natural gas-fueled power plants needed to serve future load demand. And failure to plan for this under the RECLAIM market would complicate this AQMP's ambitions for zero/near-zero emission technologies. Yet the Draft AQMP fails in this regard:

"Energy projections made in this chapter reflect past energy usage in the South Coast Basin and energy projections made from utility and other agencies' planning documents. These projections reflect existing policies and regulations. This review does not include an analysis of energy implications from the control measures within this AQMP; this analysis is conducted within the EIR review."<sup>10</sup> (emphasis added)

W-5

In fact, CARB is working on a similar study as required under California Assembly Bill (AB) 1318. That law requires CARB, in consultation with the California Energy Commission (CEC), California Public Utilities Commission (CPUC), California Independent System Operator (CAISO), and the State Water Resources Control Board (SWRCB) to prepare a report for the Governor and Legislature that evaluates the electrical system reliability needs of the South Coast Air Basin. The report is to include recommendations for meeting those reliability needs while ensuring compliance with state and federal law requirements for emission offsets (i.e., ERCs and RTCs).

The AB 1318 study was demanded by the legislature specifically because of concerns about current air permitting issues facing power plants under SCAQMD jurisdiction. The CARB report is to include recommendations for long-term, sustainable permitting of additional needed capacity. Under the statute, this report was due on or before July 1, 2010 but was not delivered. At this time, the draft AB 1318 report is scheduled for release in "Fall 2012."<sup>11</sup> The results of this study, which is the first of its kind for Southern California, are critical to understanding the baseline forecast against which the District would consider the additional electricity sector impacts associated with a broad-scale electrification initiative for transportation. It would be

<sup>10</sup> SCAQMD, Draft 2012 AQMP, p. 10-1.

<sup>11</sup> CARB, AB 1318 Project Overview and Status Report: South Coast Air Basin Electric Reliability and Offset Needs Assessment, June 22, 2012.

premature to consider any new NO<sub>x</sub> RECLAIM shave which could constrain future power plant operations prior to the review of this report and additional needs analysis.

Based upon the above and given that the proposed NO<sub>x</sub> RECLAIM shave under CMB-01 (Phase I) is not needed for the PM<sub>2.5</sub> attainment demonstration, we recommend that CMB-01 (Phase I and Phase II) should be removed from the 2012 AQMP.

- Any future RECLAIM shave should be limited to those required under BARCT authority.

According to the Draft AQMP, the California Health and Safety Code (H&SC) requires the District to monitor the advancement in Best Available Control Retrofit Technology (BARCT), and if BARCT advances the District is required to periodically reassess the RECLAIM market, overall facility caps, and reduce the RTC holdings, as if the equipment located at the facilities would be subject to applicable equivalent command-and-control BARCT levels. The BARCT evaluation must include an evaluation of the maximum degree of reduction achievable with advanced control technologies taking into account the environmental, energy, and economic impacts for each class or category of source.

Any proposed NO<sub>x</sub> RECLAIM shave should be limited to those required under this BARCT authority. The size of any such shave cannot be specified until the required BARCT evaluation has been completed.

- Any NO<sub>x</sub> RECLAIM shave would impose significant costs on the Southern California economy. The AQMP must include a proper cost effectiveness analysis for CMB-01.

The Draft AQMP makes several representations concerning the cost effectiveness of Control Measure CMB-01.

CMB-01 (Phase I): "It is expected that the cost effectiveness for this control measure would be in the neighborhood of \$7,950 per ton for Phase I based on the most recent RTC trading prices."<sup>12</sup>

CMB-01 (Phase II): "It is expected that the cost effectiveness for this control measure would be in the neighborhood of \$16,000 per ton NO<sub>x</sub> reduced."<sup>13</sup>

Subsequent to the release of the Draft, District staff suggested in several public meetings that the cost of the Phase I NO<sub>x</sub> shave could actually be "zero." The cost to Southern California businesses of the proposed CMB-01 would most certainly not be zero, and we would respectfully submit that the cost figures presented in the Draft AQMP are also improperly deduced.

<sup>12</sup> SCAQMD, Draft 2012 AQMP, Table 6-4 and Appendix IV-A-15.

<sup>13</sup> SCAQMD, Draft 2012 AQMP, Table 6-5 and Appendix IV-A-59.

W-5

W-6

W-7

RECLAIM is the oldest locally designed and implemented air emissions “cap and trade” program. As with any cap and trade program, the cost of allowances (i.e., RTCs) is dictated by both the market’s view of the current supply-demand balance and the market’s view of the future supply-demand balance. Any reduction in market supply (e.g., a shave), will cause the market to reassess the supply-demand relationship and the RTC market price will adjust accordingly. Past market prices cannot be used to forecast future prices when a major structural change is being proposed, such as a nearly 20% supply reduction. And if RECLAIM is unable to support key industrial sectors, the economic consequences could be enormous.

W-7

Stakeholders and decision makers need to be presented a cost effectiveness analysis that is based on appropriate economic principles and information. The Draft 2012 AQMP fails to do that for proposed Control Measure CMB-01 (Phase I or Phase II).

- **There is insufficient time to implement the proposed CMB-01 (Phase I) control measure.**

The Draft AQMP proposal for Control Measure CMB-01 (Phase I) suggests that the rulemaking for amending Regulation XX would be completed in 2013 and be in effect in 2014. This timetable is inadequate. First, a rulemaking of this type would be difficult to complete in 12 months especially because the proposed measure includes a number of controversial issues. Key among those issues would be the shaving methodology. The Draft AQMP states “staff will work with stakeholders to evaluate various shaving methodology (e.g., sector-specific or across-the-board).”<sup>14</sup> That analysis alone will take time. Depending on the outcome of that evaluation, certain stationary sources may need to evaluate installation of new emission controls. Stationary sources would need no less than 2-4 years to design, construct, and operationalize new emissions controls necessitated by a reduction of NO<sub>x</sub> RTC allocations (assuming control technology options are available). Given these realities, the implementation schedule for proposed measure CMB-01 (Phase I) is simply not achievable.

W-8

- **In summary, proposed measure CMB-01 (Phase I or Phase II) is not well considered. Since CMB-01 (Phase I) is not needed for the PM<sub>2.5</sub> attainment demonstration, proposed measure CMB-01 (Phase I and Phase II) should be removed from the 2012 AQMP.**

5. **If EPA issues a SIP call for an updated attainment plan for the (now revoked) 1-hr ozone NAAQS, that should be covered in a standalone plan (i.e., not in the 2012 AQMP).**

W-9

There has been much discussion over the last several months concerning recent litigation and court decisions suggesting that the District might need to prepare a new 1-hour ozone SIP. Should the District actually receive a SIP call to prepare a 1-hour ozone plan (which has not yet

<sup>14</sup> SCAQMD, Draft 2012 AQMP, Appendix IV, p. IV-A-14.

occurred), that requirement should be satisfied in a separate plan in accordance with the schedule applicable to that SIP call. The District should not attempt to deal with that requirement in the 2012 AQMP because the requirements applicable to the 1-hr ozone standard, including inventory, model performance, modelled output, and emission reduction strategies are wholly different from those required under the current AQMP.

We expect that a revised 1-hour ozone plan will be eclipsed by the District's 8-hour ozone strategy as presented in the 2007 AQMP and revised in the 2015 AQMP. The compliance milestones for the 1-hour and first 8-hour (80 ppb) ozone plans would both be 2023. Based on prior District estimates, the overall emission reduction requirements for meeting the 1-hour ozone standard are within the range needed for the 8-hour ozone standard (particularly the 75 ppb NAAQS). To date, no full-scale assessment has been made to confirm this assertion.

The District has not prepared a recent attainment demonstration for the 1-hour ozone NAAQS, so the existing analyses are based on outdated inputs, models and EPA guidance. The 1-hour and 8-hour ozone NAAQS also have different forms (beyond the averaging periods) which make quantitative comparisons problematic. The Draft 2012 AQMP notes these issues:

"If a 1-hour ozone SIP is requested by U.S. EPA, the SIP would be due within 12 months of such a SIP call. The attainment demonstration in the SIP would have to show attainment within 5 years with a potential 5-year extension, which would be a similar timeframe as is required for the 1997 8-hr ozone standard (deadline of 2023). However, many new technical issues such as modeling for the attainment demonstration and other CAA requirements would require U.S. EPA's guidance, since the previous preambles/guidelines are no longer directly applicable. Based on previous modeling estimates, the control strategies that are needed to attain the 8-hour ozone standard are nearly identical to those that would be needed to attain the 1-hour ozone standard."<sup>15</sup> (emphasis added)

Should EPA issue a 1-hour ozone SIP call, the District should take the full 12 months allotted to develop a standalone 1-hour ozone AQMP using current inputs, models and updated EPA guidance. The 2012 AQMP should make no assertions concerning the attainment strategy for the 1-hour ozone NAAQS; the required technical analyses have not been completed.

6. **Proposed Control Measure MCS-03 (Improved Startup-up, Shutdown and Turnaround Procedures)** was covered in the 2007 AQMP and is already in rule development based on that authority. The measure should be removed from the 2012 AQMP.

As noted in the Draft AQMP, this proposed measure would be a carryover from the 2007 AQMP and SIP submittal. The District has already commenced rule development activities for this measure on the basis of the 2007 AQMP authority. For that very reason, the inclusion of proposed measure MCS-03 in the 2012 AQMP is duplicative and unnecessary.

W-9

W-10

<sup>15</sup> SCAQMD, Draft 2012 AQMP, p. 8-3.

Proposed Control Measure MCS-03 should be removed from the 2012 AQMP. Notwithstanding this fact, WSPA will submit detailed comments on proposed Control Measure MCS-03 under separate cover.

W-10

7. The schedule for this AQMP has not provided stakeholders with the opportunity to effectively review and comment on key documents. The District should lengthen the AQMP schedule to ensure stakeholder input and comments can be given due consideration.

Despite the best intentions of District staff, the process and schedule for this AQMP has been altered and compressed, which has impaired stakeholders ability to effectively review and comment on key documents. Despite months of AQMP Advisory group and Scientific, Technical & Modeling Peer Review (STMPR) group meetings, the strategy outlined in the Draft AQMP released on 12 July was radically different from that which had been presented by District staff to public stakeholders only two weeks earlier. We cannot understand how such abrupt change of direction occurred given that EPA and CARB stakeholders were active participants in those Advisory and STMPR group meetings.

Then the Notice of Preparation/Initial Study required for compliance with the California Environmental Quality Act (CEQA) was released on 28 June. That document contained outdated information and other material errors which led to a revised NOP/IS having to be issued on 2 August. Despite that, stakeholders are being "strongly urged" to deliver their comments on the Draft AQMP by 31 August when it has already been announced that a brand new Draft AQMP is set to be released in mid-September with as-yet-unspecified changes. It seems unlikely that public comments submitted by 31 August could reasonably be considered prior to issuance of the second draft plan. Furthermore, the as-yet-unseen socioeconomic analysis and the Draft Environmental Impact Report (DEIR) won't be released until mid-September, yet the District continues to suggest this public process can be completed by December 2012.

W-11

This continued schedule compression has left stakeholders without sufficient time for review of AQMP products (those actually released, as well as yet to be released). Furthermore, District staff are not going to have sufficient schedule or resources to fairly consider and respond to stakeholders' comments. This is an unacceptable situation for a plan of such importance to the health and welfare of Southern Californians. The only available remedy for this condition is to relax the 2012 AQMP schedule to allow for full and proper consideration of stakeholder inputs and comments.

As for the 2015 AQMP, we would strongly encourage the District staff to defer debate on the region's ozone strategy for that plan and begin that public process much earlier. The District should confer with key stakeholders early to ensure the current AQMP process situation is not repeated.

8. Economic impacts need to be considered in the AQMP. The Draft AQMP has not provided sufficient information to stakeholders and decision makers. Information on the economic impacts of the AQMP should be released with sufficient schedule to allow proper review, comment, and decision making.

The regional air quality plan should strive to achieve our environmental objectives as cost efficiently as possible. And plan actually states that as an objective:

“...this Draft 2012 AQMP strives to identify the most cost-effective and efficient path to achieve federal clean air standards.”<sup>16</sup>

Stakeholders and the Governing Board need to have a full and (reasonably) complete understanding of the costs and benefits of the policy options before them. While the Draft AQMP provides some of this information, to date it has fallen short of providing an acceptable level of detail on the economic costs and impacts associated with the proposed plan. The cost analyses provided in this Draft AQMP have often been incomplete, deferred or summarily dismissed. The plan suggests certain control measures are cost effective without providing evidence to support those claims. And certain economic analyses, most notably the socio-economic analysis, are still yet-to-be-released. This is interesting given that one of the actions under the “AQMD Air Quality-Related Energy Policy” directed the following:

“Conduct appropriate socioeconomic studies to identify the societal costs and benefits for the implementation of zero and near-zero emissions strategies, including but not limited to, further electrification and impacts on businesses and jobs.”<sup>17</sup>

These studies have not been released to the public, leaving stakeholders and the Governing Board without sufficient information to consider important policy choices. We would suggest that the AQMP schedule needs to be revised (i.e., extended) to allow these important economic information to be released and sufficient time for stakeholders to review, understand, and comment on the economic information related to this plan. In the meantime, we reiterate our position that the SIP submittal for this 2012 AQMP should be limited exclusively to the PM<sub>2.5</sub> attainment demonstration consistent with EPA requirements to allow proper consideration of the region’s next ozone strategy.

W-12

<sup>16</sup> SCAQMD, Draft 2012 AQMP, p. ES-12.

<sup>17</sup> SCAQMD, Draft 2012 AQMP, p. 10-3.

WSPA appreciates the opportunity to submit these general comments. As noted in our preamble, WSPA intends to submit detailed comments on specific measures contained in the Draft 2012 AQMP under separate cover. WSPA may submit additional comments during this process as the District staff release additional 2012 AQMP documents.

Please contact me with any questions at (310) 678-7782 or [psenecal@wspa.org](mailto:psenecal@wspa.org).

Sincerely,



Patty Senecal  
Manager, Southern California Region and Infrastructure Issues  
Western States Petroleum Association



**Responses to Comment Letter W**  
**WSPA**

**Response to Comment W-1:**

Consistent with the previous AQMP, the current analysis shows that approximately 65% of additional NOX emissions reductions, beyond already adopted rules and measures, will be needed to meet the existing 1997 8-hour ozone standard of 80 ppb in 2023. The Basin can only demonstrate attainment of the 8-hour standard by using the CAA Section 182(e)(5) provision allowing for long-term measures that anticipate the development of new technologies or improving of existing control technologies. This CAA provision requires that these long-term measures be specifically identified at least three years prior to the attainment year (2020).

With less than 8 years remaining to identify these so-called “black box” emissions reductions, it is imperative to move forward with the identification and development of all feasible specific measures to achieve these reductions as soon as possible. If progress is delayed, there will be even less time to develop and implement strategies before the looming deadlines, and thus the resulting necessary measures could be more burdensome and disruptive. Delaying progress will also provide less certainty and lead time to the regulated community for planning compliance with potential new regulatory requirements. The considerable time it takes for new technologies to be developed, assessed and implemented widely, especially in the mobile source sector, also underscores the need to begin immediately. Note that while this Plan commits to the adoption of several ozone measures in the near-term, the implementation date and emissions reduction commitments are at least 2015 and beyond. While the District will need to adopt another ozone plan in 2015 to attain the 75 ppb standard by 2032, we cannot afford to delay implementation of the large “black box” in the existing approved 2007 AQMP (241 fpd NOx & 40 tpd VOC).

Recent litigation regarding U.S. EPA approvals of previous SIPs has focused on the reliance on a relatively large “commitments” to demonstrate attainment and the short time frame available to develop and deploy potential new technologies. The District believes it is important to demonstrate progress towards ozone attainment by making commitments for additional emissions reductions that reduce the size of the “black box” commitments. In U.S. EPA’s comment letter on the Draft 2012 AQMP (August 30, 2012), they state that they “fully support the District’s inclusion in the 2012 AQMP of updates on the implementation of control measures and emission reduction commitments relied upon in the South Coast 2007 AQMP to demonstrate expeditious attainment of the 1997 8-hour ozone NAAQS. We urge the District to continue working closely with EPA staff to identify the specific near-term and long-term control measures that will fulfill the NOx and VOC emission reduction commitments contained

in the SIP-approved South Coast 2007 8-hour ozone plan, and to develop appropriate methodologies for calculating the emission reductions attributed to each such measure.”

Furthermore, U.S. EPA recently proposed to require a new 1-hour ozone SIP for the South Coast Air Basin. In order to demonstrate attainment with this revoked standard by 2022, all feasible measures must be included in the SIP. Making enforceable emissions reductions commitments based on specific measures as they are identified is the best way to demonstrate that the District is dedicated to realizing the emission reductions necessary to achieve the 8-hour and 1-hour ozone standards. Future AQMPs should further identify specific measures and associated emissions reductions that will allow the “black box” commitments to shrink to zero by 2019 for the 1-hour ozone or 2020 for the 8-hour ozone.

**Response to Comment W-2:**

AQMD staff agrees that the proposed PM<sub>2.5</sub> control strategy is the most efficient path in achieving the 24-hour PM<sub>2.5</sub> NAAQS, as well as providing co-benefits in equivalent NO<sub>x</sub> emissions.

**Response to Comment W-3:**

You are correct in your conclusion that the short-term strategy outlined in the Draft 2012 AQMP that incorporates Control Measures BCM-01 and BCM-02 can provide the necessary air quality improvements to demonstrate attainment. As a result, CMB-01 has been removed from the short-term strategy and is listed now in the revised Draft 2012 AQMP as a contingency measure.

**Response to Comment W-4:**

As discussed in the responses to comment S2 and S6, the proposed 2 TPD NO<sub>x</sub> RECLAIM emissions shave will be incorporated into the 2012 AQMP as a contingency emissions reduction measure to be triggered if the Basin does not attain the 24-hour PM<sub>2.5</sub> standard in 2015. If not triggered, the 2 TPD shave will be rolled into the proposed Phase II BARCT rule amendment process. This process will undergo a full assessment of available technology, costs, affordability, and market impacts to the RECLAIM stakeholder community.

**Response to Comment W-5:**

The 2012 AQMP, as with all previous plans, does incorporate growth factors for all sectors of our economy, including the fossil-fueled power plants to meet future demand. Please also note that the revised Draft 2012 AQMP, except for a few technology demonstration measures, does not include any specific zero- and near-zero technology penetration targets that would necessitate commensurate adjustments to the baseline emissions. However, as future revisions to the AQMP begin to better define such

penetration targets, it would be reasonable to expect appropriate adjustments be accounted in emissions inventories and targets. During the BARCT evaluation phase, future needs for electrification will be considered.

**Response to Comment W-6:**

The District partially disagrees with the commenter. The commenter is correct by stating that the California H&SC requires the District to monitor the advancement of BARCT, and if BARCT advances the District is required to reduce the facility RTC holdings as if the equipment located at the RECLAIM facilities would be subject to applicable BARCT. The commenter however is incorrect by stating that the District cannot estimate the projected size of such shave in the AQMP until the District has completed the BARCT evaluations. The current reductions estimates were based on applicable BARCT established for non-RECLAIM sources. However, BARCT continually evolves as new technology becomes available. Therefore, the size of the shave may vary as a result of the rule making process. It is important for the RECLAIM facilities to know as soon as possible the potential impact of the shave and the direction that the District is heading so that the RECLAIM facilities can provide input and engage early in the development of the AQMP. As an example, the BARCT evaluations were refined continuously through the 2005 and 2010 RECLAIM rule development and resulted in larger shaves than those estimated in the 2003 and 2007 AQMPs.

**Response to Comment W-7:**

Staff plans to commence rule amendment for the RECLAIM NO<sub>x</sub> Phase I contingency emissions reductions of 2 TPD in late 2012. The NO<sub>x</sub> shave will target surplus unused RTC's currently in the NO<sub>x</sub> RECLAIM market. The 2 TPD target represents approximately 25 percent of the un-used RTC's in the RECLAIM universe. While staff acknowledges that the economic turndown post 2008 had an impact on the RECLAIM market, the current RECLAIM market has approximately one third (8 TPD) of the total RTC's not being utilized which is a significant safety margin. Therefore, the 2 TPD shave proposed in the 2012 AQMP is expected to have only a minor impact on the program. The rule making process will undergo a fully transparent public evaluation of the potential for emissions reductions, and potential economic impacts.

**Response to Comment W-8:**

As discussed in response to comment S2, staff plans to commence the rule amendment process for the contingency measures in late 2012 targeting a midyear 2013 adoption date. Staff recognizes that this is an aggressive timetable; regardless every effort will be made to expedite the rule amendment process.

**Response to Comment W-9:**

U.S. EPA recently proposed to require a new 1-hour ozone SIP for the South Coast Air Basin. In order to demonstrate attainment with this revoked standard by 2022, all feasible measures must be included in the SIP. Making enforceable emissions reductions commitments based on specific measures as they are identified is the best way to demonstrate that the District is dedicated to realizing the emission reductions necessary to achieve the 8-hour and 1-hour ozone standards. The attainment demonstration for the 1-hour ozone standard was analyzed and the results provided in a separate appendix to the 2012 AQMP for consideration of the Governing Board at the same time. Future AQMPs should further identify specific measures and associated emissions reductions that will allow the “black box” commitments to shrink to zero by 2019, for the 1-hour ozone or 2020 for the 8-hour ozone.

**Response to Comment W-10:**

It is correct that Control Measure MCS-03 is a carry-over measure from the 2007 AQMP. Although the implementation of the control measure has already commenced in terms of gathering information from various facilities, the rulemaking process is far from being complete. Therefore, considering the importance of the control measure in evaluating the potential for additional emission reductions from the start-up, shut-down and turn-around operations and the strong desire and interest from the community to better quantify and reduce emissions from this source category, MCS-03 is included in the 2012 AQMP, which will help insure its enforceability.

**Response to Comment W-11:**

AQMD staff agrees that the 2012 AQMP development schedule was initially compressed. The attainment demonstration modeling could not begin until input data from SCAG’s 2012 RTP and CARB’s emissions inventories were available. AQMD staff has made every effort to provide all data and information to the public as soon as it became available in an open and transparent process. The review period for many of the documents has also been extended, additional workshops and regional public hearings have been added, and the Governing Board adoption hearing date has been delayed to December 2012. The AQMD staff is committed to providing sufficient time for public comment, and continues the enhanced outreach efforts to all stakeholders, while keeping the U.S. EPA submittal deadline of December of 2012 in mind.

**Response to Comment W-12:**

A socioeconomic report on the 2012 AQMP was released to the public on September 28, 2012, with a 45-day public review and comment period until November 12, 2012. The Revised Draft 2012 AQMP had been released three weeks earlier but the ability to comment was extended to overlap with the socioeconomic report comment period. The socioeconomic report provides the cost of the control measures, including capital,

installation, operation and maintenance. The socioeconomic analysis also determines the benefits to clean air as result of implementing the Plan, such as improved health, visibility and material, as well the job impact. The cost effectiveness (in terms of dollars per tons of emission reductions) of each control measure can be found in Appendices IV-A and IV-B if such data was available and/or applicable. Some control measures require technology assessment to establish emission reduction potential and control effectiveness before a cost effective value can be determined (e.g., dairy measure). The ranking of control measures based on cost effective values can be found in Chapter 6. Specifics on how the cost effective values were determined was made available to the public in early August after the July 2012 AQMP Advisory Group meeting and can be found at

[http://www.aqmd.gov/gb\\_comit/aqmpadvgrp/2012AQMP/meetings/2012/july26/agenda.html](http://www.aqmd.gov/gb_comit/aqmpadvgrp/2012AQMP/meetings/2012/july26/agenda.html).

**X. Bear Valley Electric Service, August 31, 2012**



August 31, 2012

Dr. Elaine Chang  
Deputy Executive Officer  
Planning, Rule Development, and Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

SUBJECT: Bear Valley Electric Service Comments on AQMD Draft 2012 Air Quality Management Plan

Dear Dr. Chang:

Bear Valley Electric Service (BVES) is pleased to submit the attached comments on the South Coast Air Quality Management District (AQMD) Draft Air Quality Management Plan (AQMP). We appreciate the opportunity to provide input before it is finalized.

BVES is a division of Golden State Water Company (GSWC), an investor owned utility (IOU). BVES provides electric distribution service to approximately 21,500 residential customers in a resort community with a mix of approximately 40 percent full-time and 60 percent part-time residents. Its service area also includes about 1,400 commercial, industrial and public-authority customers, including two ski resorts.

BVES purchases wholesale power to meet the majority of its energy requirements. To aid in meeting peak demand for electric energy, BVES installed and now operates the Bear Valley Power Plant (BVPP), a natural gas-fired, 8.4 MW generation plant in its service area. The BVPP became commercially operational on January 1, 2005.

BVES is supportive of the goals of the AQMP, including some specific AQMP measures. Listed in the attached are the chapters and measures that we believe are particularly relevant to BVES operations, as well as associated background information and comments. Some of the measures are goals that BVES either has been working toward already, or is willing to consider; others may not be appropriate for a small utility such as BVES. While we are interested in working with the AQMD, it is important to note that BVES is under the jurisdiction of the CPUC, and BVES' actions, therefore, must be approved by the CPUC prior to implementation.

If you have any questions or comments regarding the above, please feel free to contact me at (909) 866-4678.

Sincerely,

A handwritten signature in blue ink that reads "Tracey Drabant".

Tracey Drabant  
Energy Resource Manager

Attachment: Bear Valley Electric Service Comments on the AQMD Draft 2012 Air Quality Management Plan

cc: Dennis Yates, South Coast AQMD                      Shawn Nelson, South Coast AQMD  
Ronald O. Loveridge, South Coast AQMD              Dr. Joseph K. Lyou, South Coast AQMD  
Judith Mitchell, South Coast AQMD                      Megan Buchanan, EN2 Resources, Inc.

P.O. Box 1547, 42020 Garstin Drive, Big Bear Lake, California 92315  
Tel: (909) 866-4678 Fax: (909) 866-5056

Bear Valley Electric Service Comments on the  
AQMD Draft 2012 Air Quality Management Plan

Bear Valley Electric Service (BVES) appreciates the opportunity to submit comments regarding the South Coast Air Quality Management District (AQMD) Draft Air Quality Management Plan (AQMP) that was released on July 19, 2012. Listed below are the chapters and sections that we believe are particularly relevant to BVES operations, as well as associated background information and comments. It is important to note that BVES is under the jurisdiction of the California Public Utilities Commission (CPUC), and BVES' actions, therefore, must be approved by the CPUC prior to implementation.

**Chapter 4, EDU-1: Further Criteria Pollutant Reductions from Education, Outreach, and Incentives (page 4-29)**

**Background:** BVES has made a number of attempts to work with its customers in the area through discussions regarding renewable energy and energy efficiency measures. In 2005, BVES' parent company (Golden State Water Company) installed a 165 kW solar array in Apple Valley that is still in operation. The energy is used onsite, with excess generation contributing to Southern California Edison's grid.

**Comment:** BVES has implemented several energy efficiency programs for its customers that have been in place since 2009. Also, if approved by the CPUC, in 2013 BVES will offer incentives via the Bear Valley Solar Initiative (BVISI). The BVISI will offer rebates similar to those offered by the California Solar Initiative. BVES maintains its interest in trying to work with energy users in its area to promote energy conservation and efficiency. BVES is also seeking approval for a solar demonstration project called the Green Zone (Phase I). The Green Zone would include a rooftop solar array at BVES' offices. BVES welcomes AQMD and other support that may facilitate cooperative initiatives in the future.

X-1

**Chapter 4, ONRD-01: Accelerated Penetration of Partial Zero-Emission and Zero-Emission Vehicles (page 4-31)**

**Background:** BVES has been transitioning into the CPUC-adopted policies of AB 32. BVES evaluates, at least annually, how best to reduce its carbon footprint. BVES recently purchased hybrid vehicles as part of its fleet. BVES has considered purchasing some all-electric vehicles as part of its fleet, but due to BVES' service territory requiring 4-wheel drive capability during the winter season, and because all-electric vehicles are predominantly 2-wheel drive, BVES cannot yet justify acquisition of electric-only vehicles at this time.

**Comment:** BVES would be willing to consider potential electrification of a portion of its fleet. Additionally, BVES would be willing to work with the AQMD to investigate the options for installing a Plug-in Electric Vehicle (PEV) station for public use. A potential first step may be to design and send a survey to BVES customers to determine local interest in PEVs. Electricity rate structures that incentivize off-peak charging and other electricity use would be a major consideration for helping BVES to balance its loads and resources. Any changes to existing customer rate structures would require approval from the CPUC.

X-2

**Chapter 4, Reductions from District's Stationary Source Control Measures (page 4-41)**

Background: Appendix A-IV includes proposed measures for the reduction of pollutants from stationary sources that contribute to ozone, including VOC, NOx, and PM. In reviewing the appendix, it appears (Table IV-A-2) that measure MCS-03 applies to all stationary sources that involve start-up, shutdown, and related operations where emissions are not currently well understood. However, the corresponding discussion section for MCS-03 later in the appendix seems to apply only to refinery flares and similar operations.

Comment: BVES requests that the AQMD clarify that measure MCS-03 applies only to refinery and similar processes, and does not more generally apply to all stationary sources that have start-up and shutdown operations. BVES' Bear Valley Power Plant is a natural gas-fired peaking plant, and energy generation from its operations is not similar to refinery operations. BVES believes it is possible that the AQMD did not intend to include all stationary sources as part of MCS-03. If the AQMD did intend to include all stationary sources, then BVES requests that it become a member of the working group(s) that inventory, assess, and develop recommended control measures for start-up and shutdown operations.

X-3

**Chapter 10, Efficiency Incentives and Financing (page 10-22)**

Background: There are two basic forms of demand-side management. These are energy efficiency and demand response. BVES does not currently have a formal demand response program. In California, there are two general types of ratepayer funded energy efficiency programs. Those programs are low-income energy efficiency (LIEE), which provides direct install energy efficiency upgrades for income qualified residential customers; and non-income specific residential and nonresidential energy efficiency financial incentives/rebates (EE). BVES has offered the LIEE program since 2002 (now called Energy Savings Assistance, or ESA, Program); in its 2009 general rate case decision, BVES received approval to offer ratepayer funded EE rebate programs. BVES' non-low income EE Programs are designed to replace specific customer equipment (lighting, refrigeration, etc.) with more efficient equipment. These programs are now fully operational.

Comment: BVES already has an aggressive energy efficiency program. BVES is willing to consider expanding its programs further to incorporate additional, targeted activities that could contribute to the AQMD's goals of improving air quality in the South Coast Air Basin. Implementing such actions, as noted above, would be subject to the approval of the CPUC.

X-4

**Chapter 10, Southern California's Energy Future (page 10-23)**

Background: As noted above, if approved by the CPUC, in 2013 BVES will offer incentives via the Bear Valley Solar Initiative (BVSI). BVES is also seeking approval for a solar demonstration project called the Green Zone (Phase I).

Comment: If approved by the CPUC, the BVSI will offer rebates similar to those offered by the California Solar Initiative. The Green Zone would include a rooftop solar array at BVES' offices. As part of its Green Zone, BVES would be willing to consider adding a small demonstration wind turbine (Phase II) to further increase public education and awareness, and would also be willing to consider adding a location where the public can properly dispose of CFL light bulbs.

X-5



*Chapter 10, Transformation of the Energy Sector (page 10-25)*

Background: As noted above, BVES has made a number of attempts to work with customers regarding renewables and energy efficiency measures. BVES continues to support programs that help achieve air quality and energy goals.

Comment: BVES maintains its interest in participating in AQMD efforts that promote energy efficiency and renewables. BVES requests that it be notified in advance regarding upcoming opportunities to contribute to AQMD meetings, conferences, and workshops, including interagency working groups, and welcomes AQMD and other support that may facilitate cooperative initiatives in BVES' service territory in the future.

X-6

**Responses to Comment Letter X**  
**Bear Valley Electric**

**Response to Comment X-1:**

Implementation of renewable energy projects such as the one mentioned are good examples of clean air and energy projects to be promoted. We will contact utilities with any support we might provide to incentivize these types of projects through utilities.

**Response to Comment X-2:**

Staff appreciates BVES's offer to partner to further expand the deployment of zero-emission vehicles in the Bear Valley region. Staff will keep BVES apprised of such opportunities.

**Response to Comment X-3:**

Control measure MCS-03 is carried over from the 2007 AQMP. Although the initial scope of review for startup, shutdown and turnaround activities is likely to focus on the minimization of potential flaring emissions at refineries, staff believes that it is possible to develop procedures that can lead to optimization, operational efficiency and emission minimization opportunities applicable to other industries.

The District approach under MCS-03 would be to initially focus on better quantifying emission impacts from startup, shutdown and turnaround activities at refineries, as well as analyzing emission reduction potential. Should the results of these analyses and emission assessments warrant further investigation, a review of potential emission reduction efforts would follow, including a determination of the applicability to other industries. Any subsequent rulemaking efforts would include technical feasibility, socioeconomic impact, and environmental impact assessments, including safety considerations, and certainly involve outreach to affected stakeholders.

**Response to Comment X-4:**

Staff appreciates your support on this measure and will work with utilities during implementation.

**Response to Comment X-5:**

Adding a wind turbine for educational purposes and cfl recycling program are good educational and resource components under this measure. As this measure is implemented we will keep these in mind and partner with utilities.

**Response to Comment X-6:**

We will provide outreach to inform utilities, the public, and other stakeholders in advance regarding meetings, conferences/forums, and workshops relating to implementation of this measure.

**Y. Southern California Edison, August 31, 2012**

August 31, 2012

Dr. Barry Wallerstein  
Executive Officer  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

RE: 2012 Air Quality Management Plan

Dear Dr. Wallerstein:

Southern California Edison (SCE) appreciates the opportunity to comment on the South Coast Air Quality Management District's (District) proposed 2012 Air Quality Management Plan for PM<sub>2.5</sub> (Plan or AQMP) and additional early action measures for ozone (Early Action Measures). Moving the District's air basins into attainment is a step toward improved air quality and improved economic growth by increasing the ability of businesses to operate in this region. The District's proposed Plan is an effective set of control measures that if adopted into rules by the District and other agencies will lead the region toward attainment with the National Ambient Air Quality Standards (NAAQS) for PM<sub>2.5</sub> through cleaner transportation and stationary source technologies. SCE recognizes that adopting the control measures in the AQMP is the first step in the process through which the District, CARB and other agencies will develop the control measures into proposed rules, and that the rulemaking process is the point at which the detailed examination of issues such as cost-effectiveness, feasibility, total cost, environmental impacts and "upstream" energy sectors impacts will occur. SCE also recognizes that many control measures will not become rules but instead require the District and stakeholder community to secure additional funding sources to enable research, development and demonstrations as well as education programs and incentive based commercialization programs. SCE supports this overall direction and effort to bring the region into attainment with NAAQS.

Regarding the Early Action Measures, SCE shares the concerns expressed by CCEEB regarding the legally binding reductions associated with the measures (not with the concepts in the measures). CCEEB is suggesting an alternative approach in which, if these reductions were not met, other sources in the District would not be penalized. We believe this approach is worthy of exploration.

SCE also recognizes that, occasionally, past control measures have not been developed successfully into rules because of issues discovered in the rulemaking process, and that the result was that other rules on different source categories or new incentive programs were developed to replace the emission reductions from the original proposed measures. Given this challenging situation, SCE will continue to work with the District, community stakeholders, and other agencies to determine the most cost-effective, least impact rules resulting from the control measures in this AQMP and to secure funding for cost-effective pollution reductions from incentive programs.

Y-1

Additionally, SCE stresses the need for reform of the New Source Review requirements. The current emission reduction credit (ERC) shortage has resulted in the lack of ability to site new needed natural gas fired electric generation. Unless this problem is resolved, the reliability of the region's electric supply system is at significant risk. Moreover, the District's vision of relying more on electricity to provide clean power for the transportation sector will be threatened. SCE is participating in the Regulatory Flexibility Group represented by Latham & Watkins to develop alternatives to the present NSR process to achieve the goals of the Clean Air Act. The District should look closely at these methods and integrate the ideas into the District's approach to make needed changes to the program.

Y-2

SCE is working with the District to facilitate development of goods movement electrification and public awareness for plug-in electric vehicles. These two programs complement the direction taken in the AQMP for PM<sub>2.5</sub> reduction measures, and in the Early Action Measures for ozone reduction. We also are collaborating with the District and the Southern California Association of Governments (SCAG) to develop plans for new infrastructure for the next AQMP in 2015.

As SCE mentioned in our September 2011 letter on the District's draft Air Quality Related Energy Policy, we believe it is important for the District to work with other state agencies to ensure there is consistency in the state's energy and environmental policies. The District continues to demonstrate inter-agency collaboration in this AQMP and the related Vision for Clean Air process. SCE reiterates our interest working with the District and other agencies to examine complex issues holistically, especially in the rule development process in order to help understand both the positive role that electricity can play in helping meet NAAQS attainment and the impacts of proposed rules on the operation and affordability of the electric energy supply system.

We look forward to continued work with the District on this AQMP and Early Action Measures. Our comments on some specific parts of the Plan follow.

1. Support for Further Controls on Emissions from Berthing of Ships and Port Drayage Trucks

SCE supports control measure ONRD-05, that calls for CARB to develop a new rule by 2015 to require port drayage trucks that service rail yards within five miles of the port to have zero-emission miles by 2020. We also note that four of the five suggested technologies will have significant impacts on the electricity grid, and recommend the examination of this and related "upstream" issues in the rule-development process.

If the grid-connected approach is found to be the preferred approach in the rule development progress, then we note the need to also solve the shortage of ERCs which makes the siting of new generation (likely needed to support ONRD-05) very difficult in the South Coast Air Basin.

SCE supports control measure OFFRD-05, that calls for CARB, SCAQMD, and the San Pedro Bay Ports to develop a rule which, through grid connection or alternative means, further reduces emissions from ocean-going marine vessels while at berth. As with ONRD-05, impacts on the grid and the requirements for adequate generation will need to

Y-3

be examined in the rule development process. SCE also supports the proposed backstop rule for the ports (IND-01).

2. Support for Early Actions to Deploy Advanced Control Technologies

SCE supports the efforts to accelerate the commercialization of advanced control technologies, including the aforementioned electrification technologies in control measures ADV-01, ADV-02, ADV-03, ADV-04, and ADV-06. SCE can provide assistance, as appropriate, to the District regarding aspects of the draft early action control measures' proposed actions, including:

- o Seeking of funding sources
- o Evaluation of technology options and funding mechanisms
- o Demonstrations
- o Deployments and field evaluation / testing
- o Working groups that will examine electrification among other alternatives, and
- o Technology symposiums.

Commercializing new technologies is not easy. The normal process of research, development, prototypes, field testing/demonstrations, and large-scale deployment must be implemented. The AQMP has thoughtfully considered the complexity of the issues and processes and provided time for each stage.

Y-4

3. Support for Continuation and Expansion of Incentive Funds

SCE supports control measures (ONRD-01 and ONRD-03) to extend or supplement the funding of two existing CARB rebate programs (HVIP and CVRP) in order to encourage the purchase of the cleanest on-road vehicles. These programs are important because they encourage the transition to near-zero and zero-emission vehicles.

SCE supports control measures (ONRD-02 and ONRD-03) to fund accelerated retirement of older light-, medium-, and heavy-duty vehicles with a focus on small fleets and/or vehicles that are high-emitting in between smog check tests. SCE similarly supports the similar control measures for off-road equipment (OFFRD-01 and MSC-04C). We further request the inclusion of a sliding-scale incentive in the final control measures, when outlining the design of the proposed voucher program for purchase of a replacement vehicle or equipment. The replacement voucher should provide a larger incentive for the purchase of near-zero and/or zero-emission vehicles/equipment and use a definition that considers multiple environmental issues.

Y-5

4. Support for Continued Education and Outreach

SCE supports EDU-01, which will be used to educate the general public on the environmental benefits of energy-efficiency measures, and the environmental impacts of using high-VOC solvents and cleaners. The general public, in most cases, does not see the clear benefit to air quality that results from their own reduced energy use. We believe this education program will help the public understand this critical connection. In many cases the general public is not aware of the effects caused by the use of certain cleaning products and coating materials. Education on the contribution of VOCs to

Y-6

ozone creation would allow for well-informed consumers to understand the need for changes in cleaning solvents and coatings in order help reduce harmful air pollutants.

SCE also supports education outreach on the use of plug-in electric vehicles and battery electric vehicles as a means to reduce air pollution and move the South Coast Air Basin toward attainment with the NAAQS. Education and outreach in this area would be in agreement with the goals of the District's 2011 Air Quality Related Energy Policy.

Y-6

5. SCAG Control Measures ( Appendix IV-C)

With regard to Appendix IV-C, Regional Transportation Strategy and Transportation Control Measures (TCMs), many of the strategies and TCMs improve efficiency of the existing system and would have no impact on SCE operations. However, the measures in Appendix IV-C call for more than \$150 billion in capital improvements (funded and unfunded) to the local transit, commuter, and high-speed rail and goods-movement systems (pages 7-8), many of which include a "zero or near-zero" emissions component. As noted above, this expansion of electric transportation would have an impact on the electric system and the need for new transmission, distribution and generation, and is yet another example of the need to address New Source Review reform. Another issue that is not clear from TCM Emissions Tables 1 & 2 is whether the District has accounted for emissions from the construction and operation of energy infrastructure to feed the increase in electric, natural gas, and other alternative fuels. While page 10 of the appendix recognizes the need for improved infrastructure planning and investment to support alternative-fueled vehicles, it does not discuss if any TCMs will be updated or amended to account for and support the development of the required infrastructure.

Y-7

SCAG is a strategic partner in a regional effort to accelerate fleet conversion to near-zero and zero-emission transportation technologies. A significant expansion of alternative-fuel infrastructure is also needed throughout the region to accommodate the anticipated increase in alternative-fueled vehicles. SCE is working with SCAG and the District to develop a framework for the necessary infrastructure changes.

SCE encourages the District to support development of infrastructure for alternative-fueled vehicles as part of future TCMs in the 2015 AQMP. Example locations include destination locations or locations such as park-and-ride lots where vehicles park for long period. Future TCMs could also include monetary or non-monetary incentives to encourage infrastructure for zero and near-zero emission transportation. Similarly SCE urges consideration of publicly accessible car-share services to serve as a critical component to completing the "last mile" of trips taken by transit.

6. SCE Supports INC - 01

This proposal will incentivize conversion to near-zero and zero-emission technology for boilers, water heaters, and space heating. These technologies, if developed, could have a significant impact in reducing criteria pollutant emissions. SCE looks forward to the development of this control measure and the introduction of new technology in this area.

Y-8

7. SCE Supports INC - 02

The Southern California region is still suffering the effects from the economic downturn. This control measure would seek to address that by calling for incentives for companies to manufacture zero-and near-zero emission technologies locally. Specifically, the incentives are to include expedited air permits and facilitation of the applicable CEQA documents. The call for accelerated permitting for these new technology projects is an important element for success since there are substantial costs associated with delays during the permitting process.

Y-9

8. Define the Term "zero emissions" Broadly to Include Other Environmental Considerations

The AQMP appropriately recognizes the interrelatedness of air quality and air toxics issues with other environmental issues such as climate change and water quality. SCE recommends the AQMP continue to do this by defining the term "zero emissions" in a broad manner so as to include other environmental considerations. Similarly, the term "near-zero-emissions" should be defined in a broad manner, but keep the AQMP's flexibility to define "near-zero" differently for different control categories.<sup>1</sup>

Y-10

Southern California Edison appreciates the work that has been put into the AQMP and we look forward to working closely with the District during the rulemaking process.

Sincerely,

Michael Hertel

<sup>1</sup> Draft 2012 AQMP Appendix IV-B-5.



**Responses to Comment Letter Y**  
**Southern CA Edison**

**Response to Comment Y-1:**

Consistent with the previous AQMP, the current analysis shows that approximately 65% of additional NOX emissions reductions, beyond already adopted rules and measures, will be needed to meet the existing 1997 8-hour ozone standard of 80 ppb in 2023. The Basin can only demonstrate attainment of the 8-hour standard by using the CAA Section 182(e)(5) provision allowing for long-term measures that anticipate the development of new technologies or improving of existing control technologies. This CAA provision requires that these long-term measures be specifically identified at least three years prior to the attainment year (2020).

With less than 8 years remaining to identify these so-called “black box” emissions reductions, it is imperative to move forward with the identification and development of all feasible specific measures to achieve these reductions as soon as possible. If progress is delayed, there will be even less time to develop and implement strategies before the looming deadlines, and thus the resulting necessary measures could be more burdensome and disruptive. Delaying progress will also provide less certainty and lead time to the regulated community for planning compliance with potential new regulatory requirements. The considerable time it takes for new technologies to be developed, assessed and implemented widely, especially in the mobile source sector, also underscores the need to begin immediately. Note that while this Plan commits to the adoption of several ozone measures in the near-term, the implementation date and emissions reduction commitments are at least 2015 and beyond. While the District will need to adopt another ozone plan in 2015 to attain the 75 ppb standard by 2032, we cannot afford to delay implementation of the large “black box” in the existing approved 2007 AQMP (241 fpd NOx & 40 tpd VOC).

Recent litigation regarding U.S. EPA approvals of previous SIPs has focused on the reliance on a relatively large “commitments” to demonstrate attainment and the short time frame available to develop and deploy potential new technologies. The District believes it is important to demonstrate progress towards ozone attainment by making commitments for additional emissions reductions that reduce the size of the “black box” commitments. In U.S. EPA’s comment letter on the Draft 2012 AQMP (August 30, 2012), they state that they “fully support the District’s inclusion in the 2012 AQMP of updates on the implementation of control measures and emission reduction commitments relied upon in the South Coast 2007 AQMP to demonstrate expeditious attainment of the 1997 8-hour ozone NAAQS. We urge the District to continue working closely with EPA staff to identify the specific near-term and long-term control measures that will fulfill the NOx and VOC emission reduction commitments contained

in the SIP-approved South Coast 2007 8-hour ozone plan, and to develop appropriate methodologies for calculating the emission reductions attributed to each such measure.”

Furthermore, U.S. EPA recently proposed to require a new 1-hour ozone SIP for the South Coast Air Basin. In order to demonstrate attainment with this revoked standard by 2022, all feasible measures must be included in the SIP. Making enforceable emissions reductions commitments based on specific measures as they are identified is the best way to demonstrate that the District is dedicated to realizing the emission reductions necessary to achieve the 8-hour and 1-hour ozone standards. Future AQMPs should further identify specific measures and associated emissions reductions that will allow the “black box” commitments to shrink to zero by 2019 for the 1-hour ozone or 2020 for the 8-hour ozone.

**Response to Comment Y-2:**

District staff is committed to continue to work with all stakeholders in exploring and evaluating alternative approaches and/or enhancements that will ensure the long-term viability of the New Source Review program in meeting the Clean Air Act goals and future demands of our region.

**Response to Comment Y-3:**

Staff appreciates SCE’s support for the ozone implementation measures. As these measures are implemented, the energy demands and capacity will be analyzed and further actions may be needed to enhance current infrastructure. Such analyses will be conducted with all stakeholder input.

**Response to Comment Y-4:**

See Response to Comment Y-3.

**Response to Comment Y-5:**

The incentives measures provided in the AQMP recognize on-going funding programs and the need for such programs in the 2015 – 2023 timeframe. The on-going funding programs do contain a “sliding scale” for funding cleaner technologies. We would expect to have a similar approach with any new programs.

**Response to Comment Y-6:**

We appreciate your support for this control measure and willingness to work with AQMD on implementing this measure.

**Response to Comment Y-7:**

Staff appreciates the comments regarding the need to expand the alternative fuel infrastructure. By definition in EPA's conformity rules, TCMs are projects and programs that reduce emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Per the U.S. EPA's Transportation Conformity Regulations, vehicle technology-based, fuel-based, and maintenance-based measures which control the emissions from vehicles under fixed traffic conditions are not TCMs.

For the next South Coast Ozone SIP, SCAG will consider holding interagency consultation via SCAG's Transportation Conformity Working Group to discuss whether monetary or non-monetary incentives to encourage infrastructure for zero and near-zero emission transportation could be considered as TCMs.

**Response to Comment Y-8:**

We appreciate support for this measure and developing/implementing zero and near-zero new technologies.

**Response to Comment Y-9:**

The District recognizes the effects of the recent recession (see Chapter 1) and has strived to develop a cost-effective control strategy that seeks necessary emission reductions from actions with minimal impact on affected sources and the economic recovery effort. Creative measures, such as INC-02, have been developed to incentivize the manufacturing zero and near-zero emission technology by easing the potential burden of the permitting and CEQA process. We appreciate your support.

**Response to Comment Y-10:**

Staff appreciates the comments regarding the definitions of zero and near-zero emission technologies. As indicated in the ADV measures, staff is seeking every opportunity to commercialize and deploy zero-and near-zero emission technologies as early as possible and where such opportunities are most appropriate.

Z. Orange County COG, August 31, 2012



- Orange County Council of Governments
- Member Agencies
- Aliso Viejo
- Anaheim
- Brea
- Buena Park
- Costa Mesa
- Cypress
- Dana Point
- Fountain Valley
- Fullerton
- Garden Grove
- Huntington Beach
- Irvine
- La Habra
- La Habra
- La Habra
- Laguna Beach
- Laguna Hills
- Laguna Niguel
- Laguna Woods
- Lake Forest
- Los Alamitos
- Mission Viejo
- Newport Beach
- Orange
- Pasadena
- Rancho Santa Margarita
- San Clemente
- San Juan Capistrano
- Santa Ana
- San Ramon
- Stanton
- Tustin
- Vista Park
- Westminster
- Yorba Linda
- County of Orange
- CCTA
- 7CA
- OC Sanitation District
- ISDOC
- South Coast AQMD

August 31, 2012

Dr. Barry Wallerstein  
 South Coast Air quality Management District  
 21865 Copley Drive  
 Diamond Bar, CA 91765

**Subject: Comments of the Draft 2012 Air Quality Management Plan and Notice of Preparation**

Dear Dr. Wallerstein:

The Orange County Council of Governments (OCCOG) welcomes its responsibility to comment on the Draft 2012 Air Quality Management Plan (AQMP) and Notice of Preparation (NOP). Additionally, efforts to reach out to Orange County local jurisdictions and stakeholders by the South Coast Air Quality Management District (AQMD) staff and yourself have been well received.

Given the timing of the 2012 AQMP comment period, the comments below have not been considered by the full OCCOG Board of Directors. The OCCOG Technical Advisory Committee and an ad-hoc group of local jurisdiction have reviewed the draft and their input is included below. We have also collaborated on further review with other stakeholders such as the Association of California Cities-Orange County. I believe these preliminary comments to be a reflective consensus review of OCCOG's 39 member agencies based on what we know to date. As additional information related to the AQMP is released, we may have additional comments.

1. OCCOG is concerned that some required documentation related to the AQMP is, as of the writing of this letter, still not available for review. Specifically the socio-economic report has yet to be released. This document is crucial for local jurisdictions to review. OCCOG requests that all AQMP support documents be released as soon as possible and that the public comment period be extended an additional 45-days to allow for required review and comment. While it is unclear as to when comments are officially due, we have been told by AQMD staff that comments received by August 31, 2012 will be responded to. OCCOG desires to have a response to our comments.



Z-1

Dr. Barry Wallerstein  
August 31, 2012

2. The draft 2012 AQMP is required to address PM 2.5, not ozone, yet ozone is addressed throughout the draft 2012 AQMP. This is distracting to the primary review. It is recommended that the references to ozone and the proposed control measures to address ozone be postponed for further discussion of the 2015 AQMP.
3. Should the AQMP continue to include references to ozone and control measures, we strongly suggest that they are included in an appendix to the document and not in the AQMP itself. Further, OCCOG requests that it be clearly stated throughout the document and in any adopting resolution that the ozone control measures are strictly VOLUNTARY.
4. OCCOG is also interested in how ozone control measures will be addressed in the Draft Environmental Impact Report (DEIR). Since the ozone control measures are voluntary, they should not be included as mitigation measures in the DEIR but should be referenced in an appendix as Best Management Practices that can be voluntarily implemented.

Z-2

Z-3

Z-4

Again, OCCOG appreciates the opportunity to provide preliminary comments on the 2012 AQMP and NOP. We look forward to working with AQMD on a final plan that balances environmental stewardship with the need for projects and programs needed to keep Orange County moving forward. We look forward to receiving your response to our comments.

Respectfully,



Leroy Mills  
OCCOG Chairman

cc: OCCOG Board of Directors

**Responses to Comment Letter Z**  
**OCCOG**

**Response to Comment Z-1:**

AQMD staff agrees that the 2012 AQMP development schedule was initially compressed. The attainment demonstration modeling could not begin until input data from SCAG's 2012 RTP and CARB's emissions inventories were available. AQMD staff has made every effort to provide all data and information to the public as soon as it became available in an open and transparent process. The review period for many of the documents has also been extended, additional workshops and regional public hearings have been added, and the Governing Board adoption hearing date has been delayed to December 2012. The AQMD staff is committed to providing sufficient time for public comment, and continues the enhanced outreach efforts to all stakeholders, while keeping the U.S. EPA submittal deadline in December of 2012 in mind.

**Response to Comment Z-2:**

Consistent with the previous AQMP, the current analysis shows that approximately 65% of additional NOX emissions reductions, beyond already adopted rules and measures, will be needed to meet the existing 1997 8-hour ozone standard of 80 ppb in 2023. The Basin can only demonstrate attainment of the 8-hour standard by using the CAA Section 182(e)(5) provision allowing for long-term measures that anticipate the development of new technologies or improving of existing control technologies. This CAA provision requires that these long-term measures be specifically adopted in regulatory form at least three years prior to the attainment year (2020).

With less than 8 years remaining to identify these so-called "black box" emissions reductions, it is imperative to move forward with the identification and development of all feasible specific measures to achieve these reductions as soon as possible. If progress is delayed, there will be even less time to develop and implement strategies before the looming deadlines, and thus the resulting necessary measures could be more burdensome and disruptive. Delaying progress will also provide less certainty and lead time to the regulated community for planning compliance with potential new regulatory requirements. The considerable time it takes for new technologies to be developed, assessed and implemented widely, especially in the mobile source sector, also underscores the need to begin immediately. Note that while this Plan commits to the adoption of several ozone measures in the near-term, the implementation date and emissions reduction commitments are at least 2015 and beyond. While the District will need to adopt another ozone plan in 2015 to attain the 75 ppb standard by 2032, we cannot afford to delay implementation of the large "black box" in the existing approved 2007 AQMP (241 fpd NOx & 40 tpd VOC).

Recent litigation regarding U.S. EPA approvals of previous SIPs has focused on the reliance on a relatively large “commitments” to demonstrate attainment and the short time frame available to develop and deploy potential new technologies. The District believes it is important to demonstrate progress towards ozone attainment by making commitments for additional emissions reductions that reduce the size of the “black box” commitments. In U.S. EPA’s comment letter on the Draft 2012 AQMP (August 30, 2012), they state that they “fully support the District’s inclusion in the 2012 AQMP of updates on the implementation of control measures and emission reduction commitments relied upon in the South Coast 2007 AQMP to demonstrate expeditious attainment of the 1997 8-hour ozone NAAQS. We urge the District to continue working closely with EPA staff to identify the specific near-term and long-term control measures that will fulfill the NO<sub>x</sub> and VOC emission reduction commitments contained in the SIP-approved South Coast 2007 8-hour ozone plan, and to develop appropriate methodologies for calculating the emission reductions attributed to each such measure.”

Furthermore, U.S. EPA recently proposed to require a new 1-hour ozone SIP for the South Coast Air Basin. In order to demonstrate attainment with this revoked standard by 2022, all feasible measures must be included in the SIP. Making enforceable emissions reductions commitments based on specific measures as they are identified is the best way to demonstrate that the District is dedicated to realizing the emission reductions necessary to achieve the 8-hour and 1-hour ozone standards. Future AQMPs should further identify specific measures and associated emissions reductions that will allow the “black box” commitments to shrink to zero by 2019 for the 1-hour ozone or 2020 for the 8-hour ozone.

**Response to Comment Z-3:**

Please refer to response to comment Z-2 with regard to the ozone control strategies and measures.

**Response to Comment Z-4:**

Since the ozone control measures are included as part of the 2012 AQMP, they are analyzed under CEQA in the same way that the PM<sub>2.5</sub> control measures are analyzed. They are not treated as mitigation measures nor are they treated as best management practices. Regardless of whether or not the ozone control measures are voluntary measures, the analysis takes a conservative approach, uses the assumptions regarding affected sources in the control measure, and analyzes potential environmental impacts accordingly. This approach is consistent with CEQA requirements to analyze the project in its entirety. In addition, the CEQA document does include an alternative of a PM<sub>2.5</sub> control only strategy.

AA. John Wayne Airport, August 31, 2012



August 31, 2012

South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, California 91765-4182  
[2012aqmpcomments@aqmd.gov](mailto:2012aqmpcomments@aqmd.gov)

Via E-Mail

Re: Draft 2012 Air Quality Management Plan

To Whom It May Concern:

This letter is submitted on behalf of the County of Orange ("County") in its capacity as the owner and operator of John Wayne Airport, Orange County ("JWA"). This letter contains JWA's written comments on the Draft 2012 Air Quality Management Plan ("2012 AQMP") issued by the South Coast Air Quality Management District ("SCAQMD" or "District") in July 2012. JWA appreciates the opportunity to comment on the 2012 AQMP, which is an important planning and regulatory document for purposes of improving air quality in the South Coast Air Basin. In order to advance the overall objectives of the District, and the 2012 AQMP, JWA offers the following comments:

**A. ABSENCE OF AIRPORT-SPECIFIC INVENTORY DATA**

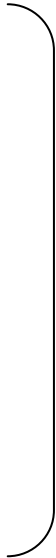
As noted in our July 27, 2012 comment letter on the District's Notice of Preparation and Initial Study for the 2012 AQMP, in early May 2012, JWA provided the District with aircraft activity data specific to JWA for incorporation into the 2012 AQMP. JWA provided additional airport-specific data in a number of enclosures to its July 27 letter. In light of JWA's good faith efforts to provide accurate baseline information on airport operations, we anticipated that the 2012 AQMP would include emissions inventories specific to the aviation sector on an airport-by-airport basis.

However, based on our review of the 2012 AQMP, it is difficult to discern whether the airport-specific data provided by JWA was utilized when preparing the aviation forecasts. There is little information in the 2012 AQMP on the aviation forecasts; and, JWA is not broken out in the forecasts as all aviation sector emissions – from 43 airports – are reported on a combined basis.

Relative to the emissions estimate for the 2012 AQMP's 2008 base year, page III-1-15 of Appendix C states that the "sources of activity data included airport operators (for several commercial and military airports), Federal Aviation Administration's (FAA) databases ..., and SCAG's projections." Relative to future emission projections, as provided on page 3-9 of the 2012 AQMP:

"For commercial air carrier operations, SCAG's 2035 forecast, which is consistent with the forecast adopted for the 2012 RTP, reflects the future aircraft fleet mix. The emissions calculation methodology is primarily based

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949.252.5171  
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[www.ocair.com](http://www.ocair.com)



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on the application of FAA's [EDMS] model for airports with detailed activity data for commercial air carrier operations (by aircraft make and model). For other airports and aircraft types (i.e., general aviation, air taxi, military), the total number of landing and takeoff activity data is used in conjunction with the U.S. EPA's average emission factors for major aircraft types (e.g., general aviation, air taxi, military)."

Further, Appendix III of the 2012 AQMP states that "[a]ircraft GHG emissions were determined from jet fuel consumption in California from the Energy Information Administration. The fuel consumption for the Basin was obtained by a ratio of the SOx emissions for the state and the Basin."

As a result of the ambiguities concerning what aircraft activity data specific to JWA was utilized in preparing the emissions inventories presented in the 2012 AQMP, JWA authorized one of its consultants – Fred Greve of Landrum & Brown – to contact SCAQMD and request additional information regarding the emissions inventories' data inputs. On August 28, 2012, Mr. Michael Krause (SCAQMD) provided Mr. Greve with a copy of the *Aircraft Emissions Inventory For 2008 and 2035* (August 2012) prepared by Integra Environmental Consulting, Inc. ("Integra Report") for the District.

Because Mr. Greve did not receive the Integra Report until three days before the close of the public comment period on the 2012 AQMP, JWA is not able to provide detailed comments on the assumptions utilized in preparing the 2012 AQMP's emissions inventories at this time. However, JWA will expeditiously review the Integra Report and anticipates providing additional comments, as necessary, by Friday, September 7, 2012.

**B. CONTROL MEASURE REQUIRING FURTHER EXPLANATION**

Based on our review of the control measures outlined in the 2012 AQMP, we also have the following specific comment.

**ADV-07, Actions For The Deployment Of Cleaner Aircraft Engines**, calls for the District to "work with the airlines and local airport authorities to *develop mechanisms to route the cleanest aircraft to serve the South Coast Air Basin.*" (2012 AQMP, p. 4-40; italics added.) The parameters of this measure need to be better explained in order to verify that the regulatory purview of the District and local airport authorities is not being incorrectly described because neither the District nor airport operators can ensure that only the "cleanest aircraft" operated by commercial airlines serve the basin; such a requirement would trigger federal preemption and interstate commerce implications.

AA-1

AA-2

South Coast Air Quality Management District  
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Page 3

In 2010, and as acknowledged in the 2012 AQMP (page 4-40), the FAA initiated the Continuous Lower Energy, Emissions and Noise ("CLEEN") Program. The CLEEN Program is designed to spur the creation of aircraft technology that reduces fuel burn, energy consumption, greenhouse gas emissions, NOx emissions associated with the landing-and-takeoff cycle, and noise. To the extent that ADV-07 is intended to provide support for the CLEEN Program, JWA has no immediate objections. However, to the extent that ADV-07 is intended to impose some other affirmative obligation on the District or local airport authorities to regulate the aircraft fleet mix serving the South Coast Air Basin, JWA objects to the measure as being incompatible with the jurisdictional authorities and powers of both the District and airport owners/operators. Therefore, JWA requests that the 2012 AQMP be revised to provide more information on the ultimate intent of ADV-07.

AA-2

**C. EXPANDED SCOPE OF 2012 AQMP**

As provided in the 2012 AQMP's Preface, the "primary task" of the 2012 AQMP is to bring the South Coast Air Basin into attainment with the federal National Ambient Air Quality Standards ("NAAQS"). This particular AQMP is focused on achieving the U.S. Environmental Protection Agency's NAAQS for fine particulate matter ("PM<sub>2.5</sub>") by 2014, and ozone by 2023. Nonetheless, the scope of the 2012 AQMP is broader than its stated regulatory purpose. More specifically, the 2012 AQMP includes two chapters – Chapter 9 (Near Roadway Exposure and Ultrafine Particles) and Chapter 10 (Energy and Climate) – that address issues beyond the current regulatory framework established by the U.S. Environmental Protection Agency via the NAAQS program, including ultrafine particles, black carbon, and greenhouse gases.

JWA supports further study and evaluation of ultrafine particles, black carbon, and greenhouse gases so that future regulatory or rulemaking efforts, if any, are fully informed. That being said, JWA is concerned about the inclusion of such discussion in the 2012 AQMP, and fears that it may confuse the public regarding the current scope of regulated pollutants. Therefore, JWA encourages the District's Board to adopt a focused, on-point AQMP that exclusively addresses achievement of the PM<sub>2.5</sub> and ozone NAAQS; the issues addressed in Chapters 9 and 10 of the current draft of the 2012 AQMP then can be separately addressed through the consideration and adoption of stand-alone policy documents considered by the Board.

AA-3

JWA also supports such a bifurcated approach in light of the expedited public review and hearing process that District staff has identified for the 2012 AQMP. Stated differently, while the federal Clean Air Act requires submittal of a plan by December 14, 2012 outlining how the District will achieve the NAAQS for PM<sub>2.5</sub> in the South Coast Air Basin (see 2012 AQMP, p. ES-2), there is no such deadline for ultrafine particles, black carbon, and greenhouse gases, which are not regulated by NAAQS. We believe it would be prudent for the District and the stakeholders to focus their attention on NAAQS achievement within the narrow window of time available; other air quality-related issues can be addressed via a separate and subsequent process.

South Coast Air Quality Management District  
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In closing, JWA thanks the District again for this opportunity to comment on the 2012 AQMP. We look forward to engaging in an open, thorough and responsive public process on the 2012 AQMP, and continuing to assist the District with its efforts to improve air quality in the South Coast Air Basin. If you have any questions regarding the comments set forth in this letter, please do not hesitate to contact me at your convenience.

Sincerely,



Alan L. Murphy  
Director

ALM:kr

cc: Vice Chair, Shawn Nelson, Orange County Board of Supervisors  
Michael Krause, South Coast Air Quality Management District

**Responses to Comment Letter AA**  
**John Wayne Airport**

**Response to Comment AA-1:**

AQMD staff has revised the draft emissions inventory to reflect the updated information provided by the airport authority.

**Response to Comment AA-2:**

Control measure ADV-07 recognizes the efforts with the CLEEN Program to develop cleaner aircraft engines. However, in order to route cleaner aircraft to region, the AQMD staff is proposing to work with the local airport authorities to determine if there are mechanisms, which may include incentives, that will bring cleaner aircraft to the region. We recognize that this effort will involve state and federal agencies and the airlines.

**Response to Comment AA-3:**

Chapters 9 and 10 of the Draft 2012 AQMP are informational only, and do not contain any SIP-related commitments. As you state, the issues surrounding GHG emissions and near roadway exposure to non-regulated pollutants such as ultrafine particles and black carbon are important topics of concern to Southern California residents. These chapters merely provide background information to inform potential future actions. In Chapter 9, it is clearly stated that ultrafine particles are as yet unregulated in the U.S. One of the main purposes of Chapter 10 is to describe the air quality implications of California's regulatory GHG programs. The Energy discussion in Chapter 10 is a direct follow up to our Governing Board's Air Quality-Related Energy Policy adopted last year, and the inclusion of Chapter 10 in the AQMP is one of the specific actions (Action 10) called for in this Policy. Therefore, we feel these chapters help to educate, rather than confuse, the public regarding the information and current regulatory framework for these pollutants.

## BB. California Council for Environment and Economic Balance (CCEEB), August 31, 2012



### California Council for Environmental and Economic Balance

100 Spear Street, Suite 805, San Francisco, California 94105  
415-512-7890 phone, 415-512-7897 fax, www.cceeb.org

August 31, 2012

Elaine Chang, Dr. P.H.  
SCAQMD  
21865 Copley Drive  
Diamond Bar, CA 91765

RE: Initial Comments – 2012 Draft AQMP

Dear Dr. Chang,

The California Council for Environmental and Economic Balance (CCEEB) is a coalition of business, labor and public leaders that strives to advance collaborative strategies that protect public health and the environment while allowing California's economy to grow. CCEEB greatly appreciates the time that you, Dr. Wallerstein and your staff have spent with CCEEB and other stakeholders in developing the draft 2012 Air Quality Management Plan. The following are CCEEB's initial comments.

#### Scope

EPA requires the SCAQMD to submit a 2012 AQMP to show attainment of the 2006 24-hour PM<sub>2.5</sub> standard by 2014. EPA does not require this plan to address ozone. CCEEB is well aware of the enormous challenge facing the District with regard to ozone, but we are highly concerned about including an "early action" ozone strategy with associated legally binding emissions reductions when not required by EPA.

A good example of our concern can be found with Proposed Control Measure OFFRD-01 "Extension of the SOON (Surplus Off-Road Opt-In for NO<sub>x</sub>) Provision for Construction/Industrial Equipment." It commits the District to a 7.5 tpd NO<sub>x</sub> reduction by 2023. This is a highly ambitious goal (half the inventory for this category) that relies on \$30 million per year of incentive funding. The District has no history of achieving reductions of this magnitude from one source category in such a short time. Our concern is not with the measure, but with the legally binding commitment as part of the State Implementation Plan (SIP). If the funding source for this program falls short, it is unlikely the reductions will be met. If this were to occur, the District would be required to make up the shortfall by turning to other sources. We suggest that the staff recommendation to the Board should identify this control measure, as well as all control measures in the ozone strategy (with suggested changes), as a locally approved measure only, and not submitted to EPA as part of the SIP. As a locally approved measure, other

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Elaine Chang, Dr. P.H.  
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sources in the District would not be penalized for failure to achieve targeted reductions under this measure.

CCEEB is aware that as a result of a court order, EPA staff is close to providing the District with guidance, a SIP call or other information associated with the federal one-hour ozone standard. Should that material influence our views on this AQMP, we will notify you in a timely manner.

With regard to scope and SIP submittal for this plan, CCEEB recommends the following:

- For the PM<sub>2.5</sub> - 24 hour standard, adopt the plan (with suggested changes) and include as part of SIP.
- For measures in the ozone strategy, keep them in plan (with suggested changes) and seek Board approval as locally approved measures, but do not include them in the SIP.

RECLAIM

CCEEB has several comments with regard to RECLAIM. Our primary concern is the multiple shaves in the NO<sub>x</sub> RECLAIM market over the next few years. The Southern California economy is slowly recovering from recession. Particularly in this fragile period, businesses in the RECLAIM program want greater certainty in order to plan needed emission reduction programs and to assess the market. As currently proposed, facilities would face a 2-3-tpd shave in 2014. In a second phase, staff would determine the amount of the shave through an extensive BARCT analysis. An additional shave will likely be included as a control measure in the 2015 AQMP. Finally, as discussed above, we have yet to see the SIP call for the one-hour ozone standard, and we are concerned that it may result in a RECLAIM shave as well.

We recognize that any shave to meet the SIP call may be in-lieu of the 2015 shave, but even under this scenario, the NO<sub>x</sub> RECLAIM community is facing at least three shaves in a very short period of time. Because so little is known about these shaves, (percent reduction, timing, impacted facilities, etc.), a high level of uncertainty results for those in the program. Business decisions necessary to establish long-range capital and compliance plans are severely jeopardized due to a lack of certainty.

Our next area of concern with regard to RECLAIM is its inclusion as a control measure for PM<sub>2.5</sub> (CMB-01). We believe using NO<sub>x</sub> RECLAIM to achieve PM<sub>2.5</sub> reductions is not cost-effective. We instead suggest taking credit for the NO<sub>x</sub> emissions associated with "Further Reductions from Residential Wood Burning Devices" (BCM-01) and "Further Reductions from Open Burning" (BCM-02).

In addition to the shaves discussed here, we ask staff to further explain the accounting of the shave that occurred from 2008 to 2011. Specifically, what happened to the 3.7 tpd of NO<sub>x</sub> reduction and how was this reduction applied to the SIP? We note that 3.7 tpd of NO<sub>x</sub> equates to .26 tpd of PM<sub>2.5</sub>, a reduction that would help show attainment of PM<sub>2.5</sub>.

BB-1

BB-2

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During a recent meeting of the AQMP Advisory Committee, members were told that there is zero cost associated with a RECLAIM shave if there is a surplus in the system. We do not agree. Based on our review of recent data, there is no surplus for the top 24 emitters. These facilities will incur significant cost, either through the purchase of credits or the installation of pollution control equipment. We ask for greater clarification on this point.

BB-2

In summary with regard to RECLAIM, CCEEB recommends that staff delay implementation of all RECLAIM measures until the next required ozone submittal. At that time, any reduction should be based on a complete BARCT analysis.

Cost Effectiveness

The current draft identifies additional steps necessary to approve a measure that exceeds certain cost thresholds. We support the concept of including such language in the plan, but encourage staff to consider additional steps or a cap, to limit exposure to all stakeholders. There is strong sentiment, particularly with respect to the ozone aspects of the plan, that there is no limit to the ever-spiraling costs of the ozone precursor control measures. At some point, the cost of the draft plan will become unbearable and a legislative fix, as discussed in Board committee meetings, must be undertaken. We look forward to seeing the full socio-economic report and hope that it will address this concern.

BB-3

Enhanced Environmental Analysis

CCEEB notes that in Chapter 9 (Near Roadway Exposure and Ultrafine Particulates), there is discussion of an enhanced environmental analysis for projects that would locate sensitive populations close to freeways. In particular, the plan states, "Because of the District's concern about the potential public health impacts of siting sensitive populations within close proximity of freeways, District staff will continue to recommend that, prior to approving the project, lead agencies consider the impacts of air pollutants on people who will live in a new project and provide mitigation where necessary." CCEEB supports this approach. In addition, we suggest that you consider broadening the approach so that it also applies to all projects that would locate residences near industrial facilities.

BB-4

Elaine Chang, Dr. P.H.  
August 31, 2012  
Page 4

Thank you for considering our views. We would be pleased to discuss our comments with you and your staff at any time.

Sincerely,

A handwritten signature in blue ink that reads "Bill Quinn". The signature is written in a cursive style with a large, prominent "B" and "Q".

William J. Quinn  
Vice President & Chief Operating Officer

cc: Dr. Barry Wallerstein  
Dr. Phillip Fine  
Mr. Gerald D. Secundy



**Responses to Comment Letter BB**  
**CCEEB**

**Response to Comment BB-1:**

Consistent with the previous AQMP, the current analysis shows that approximately 65% of additional NOX emissions reductions, beyond already adopted rules and measures, will be needed to meet the existing 1997 8-hour ozone standard of 80 ppb in 2023. The Basin can only demonstrate attainment of the 8-hour standard by using the CAA Section 182(e)(5) provision allowing for long-term measures that anticipate the development of new technologies or improving of existing control technologies. This CAA provision requires that these long-term measures be specifically identified at least three years prior to the attainment year (2020).

With less than 8 years remaining to identify these so-called “black box” emissions reductions, it is imperative to move forward with the identification and development of all feasible specific measures to achieve these reductions as soon as possible. If progress is delayed, there will be even less time to develop and implement strategies before the looming deadlines, and thus the resulting necessary measures could be more burdensome and disruptive. Delaying progress will also provide less certainty and lead time to the regulated community for planning compliance with potential new regulatory requirements. The considerable time it takes for new technologies to be developed, assessed and implemented widely, especially in the mobile source sector, also underscores the need to begin immediately. Note that while this Plan commits to the adoption of several ozone measures in the near-term, the implementation date and emissions reduction commitments are at least 2015 and beyond. While the District will need to adopt another ozone plan in 2015 to attain the 75 ppb standard by 2032, we cannot afford to delay implementation of the large “black box” in the existing approved 2007 AQMP (241 fpd NOx & 40 tpd VOC).

Recent litigation regarding U.S. EPA approvals of previous SIPs has focused on the reliance on a relatively large “commitments” to demonstrate attainment and the short time frame available to develop and deploy potential new technologies. The District believes it is important to demonstrate progress towards ozone attainment by making commitments for additional emissions reductions that reduce the size of the “black box” commitments. In U.S. EPA’s comment letter on the Draft 2012 AQMP (August 30, 2012), they state that they “fully support the District’s inclusion in the 2012 AQMP of updates on the implementation of control measures and emission reduction commitments relied upon in the South Coast 2007 AQMP to demonstrate expeditious attainment of the 1997 8-hour ozone NAAQS. We urge the District to continue working closely with EPA staff to identify the specific near-term and long-term control measures that will fulfill the NOx and VOC emission reduction commitments contained

in the SIP-approved South Coast 2007 8-hour ozone plan, and to develop appropriate methodologies for calculating the emission reductions attributed to each such measure.”

Furthermore, U.S. EPA recently proposed to require a new 1-hour ozone SIP for the South Coast Air Basin. In order to demonstrate attainment with this revoked standard by 2022, all feasible measures must be included in the SIP. Making enforceable emissions reductions commitments based on specific measures as they are identified is the best way to demonstrate that the District is dedicated to realizing the emission reductions necessary to achieve the 8-hour and 1-hour ozone standards. Future AQMPs should further identify specific measures and associated emissions reductions that will allow the “black box” commitments to shrink to zero by 2019 for the 1-hour ozone or 2020 for the 8-hour ozone.

The commenter suggests it would be appropriate to include the ozone measures as part of the locally adopted AQMP, but not included as enforceable SIP measures. Staff disagrees. With so little time remaining to replace the “black box” with concrete measures, it is important that the relatively modest proposed ozone measures be committed and enforceable. This action will demonstrate that the region and state fully intend to attain the 8-hour ozone standards on time and are committed to the actions needed to do so. The committed reductions represent a small fraction of total reductions needed (i.e., approximately 5% of needed NO<sub>x</sub> reductions). Therefore, should substitution measures be needed to meet the SIP commitment, they most likely are needed anyway to meet the standard.

**Response to Comment BB-2:**

The two tons per days reduction proposed for the 1<sup>st</sup> phase of the RECLAIM shave will be incorporated as a contingency emissions reduction measure to satisfy CAA requirement to be triggered only if the NAAQS is not attained by 2015. The BARCT assessment phase of the NO<sub>x</sub> RECLAIM shave is to be completed in 2015 and fully achieved by 2020. Approximately 30 percent of the RTC’s in the NO<sub>x</sub> RECLAIM market are currently not being utilized. The 2 TPD shave proposed in the 2012 AQMP represents approximately 25 percent of the un-used RTC’s in the RECLAIM universe. The 2 TPD target will have only a minor impact on the stakeholders as a whole, recognizing that there will be buyers and sellers individually.

Moving the proposed RECLAIM shave control measure to the 2015 ozone AQMP could postpone full implementation of the Phase II reduction to a later date. Staff believes that there are currently sufficient unused RTCs available in the RECLAIM market to provide a cushion for the transition. As part of the Phase II BARCT assessment technology availability, cost, and market impacts will be thoroughly addressed. The rule making process will undergo a fully transparent public evaluation of the potential for emissions reductions coupled with the key element of the BARCT

assessment listed above. It should also be noted that the state law requires the RECLAIM program not only undergo periodic BARCT review, but also achieve equivalent reductions as the command and control program.

As previously stated, as of the most recent RECLAIM annual report (July 2012), there existed approximately a 30 percent surplus of unused credits in the market. Overall, there is expected to be no regional socioeconomic impact associated with the 2 TPD shave since the impact to buyers will be offset by the gains made by the sellers in the market. Staff recognizes that some stakeholders will be impacted whereby they would need to ascertain additional RTC's to meet the shave requirement. Conversely, others will be able to sell surplus credits at profit. The potential costs to some stakeholders will be analyzed during the rule making process.

**Response to Comment BB-3:**

The Socioeconomic Report on the 2012 AQMP was released on September 28, 2012, and includes the costs, benefits, and employment impact from implementing the Plan. Most of the proposed control measures (see Appendix IV-A and Appendix IV-B) include cost effectiveness values in dollars per ton of emission reduction, and the proposed control measures are ranked (see Chapter 6 of the Plan) based on these cost effectiveness values. As noted in Chapter 4 of the Plan, the District proposes to establish a cost effectiveness threshold of \$16,500 per ton of VOC reduction and \$22,500 per ton of NO<sub>x</sub> reduction. This threshold will trigger further analysis and a Board pre-hearing before the final rule proposal is presented. Only one control measure, CTS-01, has the potential to exceed the VOC threshold on the upper end of the cost effectiveness range. All the other proposed control measures have a cost effective value less than the threshold. Regardless, it should be noted that during rule development a public review and decision process is instituted to seek lower viable cost alternatives.

**Response to Comment BB-4:**

Staff appreciates CCEEB's support on the District's approach encouraging an enhanced environmental analysis for projects that would locate sensitive populations close to freeways. Staff also agrees that broadening the approach for all projects would locate residences near industrial facilities, particularly those facilities that would pose a health risk, is health protective. CARB's Air Quality and Land Use Handbook does address locating residences and other sensitive land uses near certain types of industrial facilities and provides recommended siting distances. As part of the AQMD's Clean Communities Plan, the AQMD staff will be developing a document entitled "Proximity Matters." This document will expand the list siting recommendations included in CARB's handbook as well as provide additional guidance to reduce exposure toxic air contaminants to residential and sensitive land uses.

**CC. Paramount Petroleum, August 30, 2012**



14700 Downey Avenue  
P.O. Box 1418  
Paramount, CA 90723-1418  
(562) 531-2050

VIA E-MAIL to 2012aqmpcomments@aqmd.gov

August 30, 2012

Dr. Elaine Chang  
Deputy Executive Officer  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

Subject: Comments on the Draft 2012 Air Quality Management Plan

Dear Dr. Chang:

Paramount Petroleum Corporation (Paramount) appreciates the opportunity to comment on the Draft 2012 Air Quality Management Plan. Paramount requests that the South Coast Air Quality Management District reconsider the magnitude of NOx reductions proposed in CMB-01 phase 1 and phase 2, as significant financial harm may result to regulated entities from the proposed measures.

In Appendix IV-A of the Draft 2012 AQMP it is stated that the estimated target reduction on a tons per day basis of NOx RTC allocations will account for approximately 38-63 percent of unused RTC holdings. The NOx RTC availability was analyzed for years 2008, 2009, and 2010. Due to recent economic downturn these three years are not representative of potential emissions under normal or preferred financial conditions. Should RECLAIM facility operators have the opportunity to return to the capacity they were at prior to this time period, the proposed NOx shave will have significant negative impacts on their ability to do so. Paramount therefore requests that the District take into account not only the potential for growth within the RECLAIM universe, but also take into consideration the emissions from past years when many facilities were operating under more favorable economic conditions and therefore higher

CC-1

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capacities. Considering all these facts, the magnitude of the proposed NOx RTC reduction will be largely detrimental.

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Additionally please take into account the fact that many facilities retain a buffer of RTCs as a precautionary measure to avoid potential future compliance issues. This buffer accounts for a significant portion of the current unused RTC holdings that the District plans to target for reductions. The significance of the NOx RTC reduction would therefore be under accounted for by the assumption that all unused RTCs are available or otherwise not needed on the market. When realized, the actual percentage of the unused RTCs that the proposed reduction will eliminate will be much greater.

CC-2

Thank you again for the opportunity to participate in the AQMP process. If any additional information is required, please contact Rebecca Nolan at (562) 748-4706.

Regards,

June Christman  
Managing Director of Environmental Affairs

**Responses to Comment Letter CC**  
**Paramount Petroleum**

**Response to Comment CC-1:**

District staff has factored the potential of growth in the estimation of future emission inventory and will include growth to refine the emission reductions (or shave) during the rule development phase of CMB-01. Please note that the petroleum industry has firmly asserted that its growth factor is 1.0 (or no growth) ever since the inception of the RECLAIM program. Economic downturn may result in a small increase in RTC surplus (as shown in the RECLAIM audit reports, the surplus for 2009-2010 were 29%-30% of the total allocations in comparison to the surplus of 17%-23% for 2002-2008.) The audit reports reveal that under the favorable economic conditions, there is an average of about 20% surplus RTCs for each compliance year, or about 26.48 tpd x 20% = 5 tpd. This 5 tpd surplus coincides with the upper end of the emission reduction range (3 tpd -5 tpd) proposed by CMB-01. The District is committing to submit only 3 tpd into SIP. Therefore, the District believes that the magnitude of the proposed range reductions for CMB-01 is reasonable. Please note that under the 24-hour PM2.5 attainment strategy, CMB-01 is now being proposed as a contingency measure to deliver 1-2 tpd of NOx reductions. Under the proposed 8-hour ozone attainment, a subsequent phase of CMB-01 will seek to reduce 3-5 tpd reductions beginning in 2017. As stated above, only 3 tpd of reduction range is proposed to be included as a SIP commitment.

**Response to Comment CC-2:**

District staff disagrees with the commenter. The RECLAIM facilities are expected to operate their equipment efficiently to comply with the facility caps and resolve potential compliance issues either by installing control equipment to reduce the facility's emissions or purchasing RTCs to offset the facility's emissions increase. District staff understands the desire for retaining a buffer of RTCs as a precautionary measure to cope with unexpected adversary scenarios. As such, during the rule development phase in 2005 and 2010, the District incorporated a compliance margin of 10% when determining the shaves. In addition, the District has incorporated other necessary safety valves to sustain market viability, e.g. the District added rule language to establish a non-tradable RTC account starting in 2015 so that whenever the market price of discrete RTCs is higher than \$50,000 per ton, the Governing Board can hold public hearings to decide whether or not to convert any portion of the non-tradable RTCs to tradable and help balance the trading market. The 10% compliance margin and safety valves are applied to assure that there is sufficient buffer of RTCs available for RECLAIM facilities.

## DD. Latham & Watkins, August 31, 2012

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### LATHAM & WATKINS LLP

August 31, 2012

*By Electronic Mail*  
[2012aqmpcomments@aqmd.gov](mailto:2012aqmpcomments@aqmd.gov)

William Burke  
Chairman  
and Members of the SCAQMD Governing Board  
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File No. 018282-0000

Re: Regulatory Flexibility Group Comments

Dear Chairman Burke and Members of the SCAQMD Governing Board

Thank you for the opportunity to provide comments regarding the draft SCAQMD 2012 Air Quality Management Plan (AQMP). These comments are submitted on behalf of the Regulatory Flexibility Group (RFG), a coalition of California entities whose operations are subject to regulation under the Clean Air Act and corresponding state and regional air quality programs. RFG members include aerospace and electronics manufacturers, electric utilities and electric generating facilities, natural gas utilities, oil and chemical companies and other regulated entities. RFG members have participated in the review of and comment on SCAQMD regulations since the fall of 1990, when the coalition was formed.

#### I. OVERVIEW AND MAJOR RECOMMENDATIONS

We appreciate the Board's increasing sensitivity to the delicate balance between the region's economic health and continued air quality progress. We believe that the next decade poses unique and unprecedented challenges in crafting an air quality strategy that can meet the region's dual economic and environmental goals. Most of the readily identifiable control strategies for sources within the District's traditional jurisdiction already have been implemented. Future regulation thus will require that the District craft new approaches that are tailored to the region's unfinished business. Future strategies may need to focus to a greater degree on sources that have not yet been fully regulated and for which some opportunities may still remain to achieve cost-effective reductions (e.g., legacy fleets). We also agree with the SCAQMD staff recommendation that the District should consider selective time and place control measures to address specific problem areas without harming the economy.

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Recognizing the extent of existing stationary source regulation, future measures for such sources should proceed only after very careful technical evaluation of the feasibility of achieving further reductions at a reasonable cost. Given the economic and employment risk of further burdening stationary sources, we strongly believe that future stationary source regulation should include very clear incremental cost-effectiveness benchmarks to ensure that control measures, as implemented, remain within reasonable economic boundaries.<sup>1</sup> Furthermore, any future stationary source measures should contain appropriate alternative compliance mechanisms (e.g., an alternative compliance fee set at the relevant incremental cost benchmark level and used to fund clean technologies) to ensure that sources have a ready compliance alternative when costs near the benchmark level. We applaud the District for considering the adoption of cost benchmarks in the draft AQMP and urge the District to use the benchmarks appropriately, as noted below.

DD-1

Although the current draft AQMP is limited in scope to the attainment of the PM2.5 standard, we note that the plan contains the seeds of an emerging ozone attainment strategy.<sup>2</sup> Because both attainment strategies raise significant policy issues, we believe that the development of this year's plan is an appropriate time for the Board to consider some of the most important, overarching challenges that have emerged in recent years. These include the need to streamline stationary source permitting, to constrain regulatory costs and to reform significantly the region's offset program.

Before discussing the RFG recommendations in each of these three areas, we note the reasons why we believe that such reform will be critically important to the region. First, although we believe that, in theory, economic and environmental health can go hand in hand, coincident outcomes are unlikely without major change. Currently there is a material risk that the traditional burdensome permitting process, offset scarcity and continued imposition of technology-forcing regulations will result in environmental regulations thwarting economic health. This can happen whenever stationary sources choose not to site their operations, and their jobs, in Southern California due to the length, uncertainty and relatively high cost of seeking a permit here rather than in more hospitable regions. In many circumstances, we find that it is not even practical or cost-effective to site new "cleantech" operations (e.g., renewable energy projects for electricity generation or low-carbon transportation fuels) in the South Coast Air Basin. We are also concerned that we may lose many of the businesses currently operating

DD-2

<sup>1</sup> For some context on this subject, consider President Clinton's July 16, 1997 memorandum to EPA ("Presidential Memorandum"), issued contemporaneously with the adoption of the eight-hour ozone and fine particulate standards. 62 Fed. Reg. 38421 (July 18, 1997). As stated in the Memorandum, "[i]t was agreed that \$10,000 per ton of emission reduction is the high end of the range of reasonable cost to impose on sources."

<sup>2</sup> As explained below, because the 2012 AQMP does limit its scope to the attainment of the PM2.5 standard, we also believe that the Clean Air Act 182(e)(5) commitments in the draft AQMP are premature and better left for the 2015 AQMP. Waiting for the 2015 AQMP will allow the various stakeholders sufficient time to work with the District in identifying, fully vetting, and implementing "black box" control strategies without the expedited timing pressures associated with this 2012 AQMP process.



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in the District if they believe they will be unable to achieve or afford emerging regulations. These unfavorable conditions can be avoided, or at least substantially reduced, by reforming the current regulatory program.

Significant reform can no longer wait. As recently as 1990, there were reported to be 1,141,167 manufacturing jobs in the Los Angeles-Long Beach-Santa Ana region. In just 20 years (by 2010), this number has dropped by fifty percent, to only 569,085, while population in the region has grown during the same period from 11.3 million to 12.8 million.<sup>3</sup> We understand that the loss of manufacturing is not unique to Southern California and has been experienced to some degree throughout the United States. But, given the economic opportunity value associated with manufacturing and manufacturing jobs, we want Southern California to preserve those manufacturing jobs that it still has and to capture those that may become available. This opportunity is currently being squandered *because our region cannot permit new facilities fast enough or cheaply enough to compete with alternative destinations*. When such projects go elsewhere, we often lose not just the jobs but also the opportunity to build a more sustainable community, in which energy and consumer good production and consumption are co-located.<sup>4</sup>

DD-2

We recommend three major actions to preserve existing manufacturing and to capture new opportunities:

A. Expedite and Streamline Stationary Source Permitting

The District now has almost forty years of experience in evaluating control options (e.g., Best Available Control Technology (BACT)) for the permitting of new and modified stationary sources. Certainly, the time has come when the District can identify, in advance, for the vast majority of the stationary sources it permits in the region, precisely what the control technologies will be for sources permitted here. We urge the District to develop a presumptive BACT approach by which sources can immediately receive a permit for most equipment types without the traditional extensive review period. We believe that such an approach can be approved under existing law provided that the District develops a process for distinguishing between permit applications that reasonably require further evaluation and those that do not.

DD-3

<sup>3</sup> See US Department of Commerce Bureau of Economic Analysis; <http://bea.gov/iTable/iTable.cfm?ReqID=70&step=1>. Manufacturing employment in the same region was as high as 24% of the employable population in 1970 and is now only 7.8%.

<sup>4</sup> Remarkably, it takes truly extraordinary effort, including special state legislation (e.g., Assembly Bill 1318) and litigation, to permit the very cleanest natural gas-fired power plants in the region even when those plants are essential to back up the state's growing renewable energy portfolio or are essential to avoid blackouts. These problems have existed for over a decade - recall the need for special federal, state and regional executive orders and special administrative orders during the 2000-01 power crisis to allow Southern California to bring in even the cleanest new generation.

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**B. Reform the Offset Program**

For over a decade we have urged the SCAQMD, the ARB and the EPA to pursue major offset reform. The current system is seriously broken and the result is that it is near impossible for a manufacturing or energy project to be sited in the South Coast even though any such facility would necessarily install BACT. We have proposed a three-tier approach to reform the current system. Under this approach, (1) a facility would seek to obtain any available offsets at or below a predetermined offset price (e.g., similar to the AQMP cost-effectiveness benchmarks); (2) if a sufficient supply is not available on the market, then the facility would purchase offsets from a pre-funded clean air investment fund (CAIF)<sup>5</sup> administered by the District or by other appropriate publicly-accountable entities; and (3) to the extent a sufficient offset supply is still not available, then the facility would pay the benchmark fee to the CAIF. The CAIF would invest in appropriate emerging low-emissions technologies that the Board determines will be necessary for attainment and to meet the region's public health objectives.

DD-4

**C. Ensure AQMP Flexibility and Compliance Flexibility and Provide Safe Harbor**

As the District considers even more stringent, technology-forcing regulations, it must recognize that some of the anticipated technologies may never develop, may emerge later than predicted or may cost more than anticipated.<sup>6</sup> Accordingly, the District should take special care to ensure that control measures can in fact be achieved at the projected scale and the predicted cost.<sup>7</sup> We strongly recommend

DD-5

<sup>5</sup> See, e.g., Presidential Memorandum, *id.* at 38429 ("The EPA will encourage the use of concepts such as a Clean Air Investment Fund, which would allow sources facing control costs higher than \$10,000 a ton for any of these pollutants to pay a set annual amount per ton to fund cost-effective emissions reductions from non-traditional and small sources. Compliance strategies like this will likely lower the costs of attaining the standards through more efficient allocation, minimize the regulatory burden for small and large pollution sources, and serve to stimulate technology innovation as well.")

<sup>6</sup> We are particularly concerned about proposed further volatile organic compound (VOC) reductions from the reformulation of coatings and solvents. We are highly skeptical of whether yet another tightening of such rules can be achieved without harming the regional economy, which relies heavily on the use of such materials.

<sup>7</sup> We note, for example, that the current draft AQMP contains some measures for which the necessary technical and economic feasibility work has not been done. Early indications are, for example, that the available emission reductions for off-road industrial equipment (SOON) may be only a fraction (e.g., ~10%) of the estimated 7.5 tons per day of NOx. Further, while we fully support the SOON program and its ability to achieve near-term NOx emission reductions (and obtain these reductions effectively for both the regulators and the regulated entities through incentives), in these budgetary times, the continued funding for the SOON program unfortunately cannot be counted upon moving forward. We argue that the more prudent approach is to vigorously pursue programs like SOON,

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that the District take the following steps to protect against unintended harm to regulated stationary sources. It should:

1. Conduct appropriate technology evaluations before placing measures in the AQMP;
2. Avoid making SIP emission reduction commitments until it has very high confidence that a measure can be achieved at the anticipated cost;
3. State emission reduction commitments in a manner that maximizes the District's flexibility to shift reductions, as necessary, should technologies not emerge as hoped, without the need to seek EPA approval for necessary reduction in credit for technology-forcing rules; and
4. Ensure that future stationary source regulations include both alternative compliance options and an appropriate safe harbor (e.g., ceiling price "in lieu" payment to a CALF) or some other appropriate cost-containment mechanism.

DD-5

We stand ready to work closely with the District and other stakeholders on these major recommendations.

**II. SPECIFIC ADDITIONAL AQMP COMMENTS**

In addition to the foregoing, we wish to share the following specific comments regarding the draft AQMP:

**A. RECLAIM**

Ever since the 2001 RECLAIM amendments, we have been concerned that the program is no longer a true market, but is instead being used as a transitional device to compel the installation of Best Available Retrofit Control Technology (BARCT). So long as this is how the program is used, we believe the District should allow sources that have installed BARCT to be removed from RECLAIM. Otherwise, the program merely becomes a tax on already well-controlled units. The proposed RECLAIM control measure raises this risk by suggesting that a ratchet wholly unrelated to BARCT equivalency should be included in the AQMP simply because there is a belief that there are surplus RECLAIM Trading Credits in the market. If the District wishes to return RECLAIM to a market model, instead of a BARCT transition model, then it should specify a formal price cutoff – i.e., a price point at which the program would automatically come to a stop - or implement a ceiling price for RTCs that can guarantee compliance. Without such a circuit breaker, the District runs that risk that it may be wrong about the excess credits in the market. We note, for example, that many of the largest RECLAIM

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but not make legally binding emission reduction commitments in the 2012 AQMP. We are also highly skeptical of whether the estimated RECLAIM ratchet would be warranted by a more detailed analysis of available control technologies. See further discussion of the RECLAIM in this letter.

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facilities are in fact short, not long, on RTCs and that the weak economy may mask the actual long-term demand for credits. We strongly recommend that the District defer further RECLAIM NOx reductions until it has conducted a thorough BARCT equivalency analysis. The risk of harming the market prematurely is too great.

DD-6

**B. Cost-Effectiveness Benchmarks**

We applaud the use of cost-effectiveness benchmarks, but urge the District to define such benchmarks so that costs are calculated individually for each specific type of technology or source. To be useful, control costs must be highly differentiated and must reflect incremental, not average, cost-effectiveness. Further, as noted above, we recommend that the District take other precautions to ensure that errors in predictions about technology development pace or cost do not result in harm to businesses or jobs.

DD-7

**C. Clean Air Act 182(e)(5) Commitments**

While the current draft of the AQMP limits the scope of attainment to the PM2.5 standard, it also includes Clean Air Act §182(e)(5) proposed implementation measures with binding ozone reduction commitments. We acknowledge that significant ozone emission reductions will be needed to demonstrate attainment in 2023 and 2032 and are committed to working with the District and fellow stakeholders to identify and implement control measures for VOC and NOx that will provide these "black box" reductions. However, the abbreviated planning process for the 2012 AQMP does not afford stakeholders the time to fully review, analyze, and offer input on the proposed control measures currently in the draft AQMP. As touched on above, while we think many of the identified actions have value, we think additional technical and economic feasibility studies are necessary prior to committing to reductions. These control measures and reduction commitments are better left for the 2015 AQMP (or if the upcoming SIP call for the one hour ozone standard requires them), which will give the District and the various stakeholders time to develop a comprehensive and fully vetted ozone attainment plan without the expedited timing pressures of this 2012 AQMP.

DD-8

Thank you for the opportunity to submit these comments. We look forward to further discussions with the SCAQMD staff and with other stakeholders.

Sincerely,



Robert A. Wyman  
of LATHAM & WATKINS LLP

**Responses to Comment Letter DD**  
**Latham & Watkins**

**Response to Comment DD-1:**

District staff is very cognizant of the environmental and economic challenges our region is facing. We recognize that that the road to attainment is steep and that there are cost implications associated with future regulatory actions intended to improve air quality and protect the health of the breathing public. Undoubtedly, the state of our economy renders the task at hand all the more difficult. But such challenges should not be a cause for complacency because there are even greater societal costs associated with inaction. Therefore, given the challenges at hand, we agree with you that any future regulatory proposals must be very carefully designed and implemented. To that end, in developing the current attainment strategy for the federal 24-hour average PM2.5 standard, staff and the stakeholders as you know, collectively, invested countless hours sifting through volumes of information to arrive at the current control strategy proposal which reflects the shortest and least costly path to attainment. We are committed to do the same with respect to the 8-hour ozone and other future attainment demonstrations. Furthermore, in an effort to reflect our commitment and sensitivity toward addressing the cost concerns that many stake holders articulated during the plan development process, the 2012 AQMP, as you point out, includes specific cost-effectiveness bench marks that, if triggered, would necessitate even more robust and detailed evaluation and analysis of the cost impacts of a proposed regulation than what would currently be conducted.

With respect to your comments regarding the 182(e)(5) measures, please note that the District is committed to develop a comprehensive attainment plan for the new 0.75 ppm 8-hour ozone standards in the 2015 timeframe. However, given the fact that the attainment year for the 1997 0.80 ppm 8-hour ozone standard is 2023 and considering the sizable “black box” of the 2007 AQMP and, hence, the significant level of emission reductions that must be achieved during the few remaining years, it is of paramount importance that the emission reduction effort is maintained. The proposed ozone control measures, while constituting about 5% of reductions included in the black box, are intended to provide a modest but significant advanced payment towards the black box obligation.

**Response to Comment DD-2:**

As indicated in response to comment Y-2, staff is committed to continue to work with all stakeholders to evaluate and explore avenues to further improve the efficacy of the New Source Review (NSR) program, including offsets. As indicated in response to comment DD-1, staff is also committed to redouble its efforts in evaluating the cost impacts of its proposed regulations. Similarly, staff is open and would always welcome permit streamlining suggestions that would allow the District to achieve the Clean Air

Act goals in a more efficient manner. Please note that the Draft 2012 does include two incentive measures: Control Measure INC-01 intended to promote and encourage adoption and installation of cleaner more-efficient equipment and Control Measure INC-02 intended to provide expedited permitting and CEQA preparation to facilitate the manufacturing of zero- and near-zero technologies. Staff is certainly open to additional suggestions. While identifying NSR offsets with respect to certain pollutants (especially for PM10) in the open market could be highly challenging, the District has taken several creative steps in recent years to address the challenge and meet the demand for offset credits. Please note that these efforts allowed the District to continue to issue annually approximately 10,000 permits to new and existing facilities. Staff would be interested in hearing more concrete examples of sources having difficulty in locating to the District and the specific reasoning.

**Response to Comment DD-3:**

Thank you for your suggestions regarding expediting and streamlining stationary source permitting. Staff would like to receive additional clarification with regards to the presumptive BACT approach. Please be mindful that when identifying BACT for major sources, the District is obligated to rely on the LAER Clearinghouse. With respect to minor sources, please note that the District's BACT can act as a presumptive BACT.

**Response to Comment DD-4:**

We appreciate your concern about the availability of offset credits and thank you for your suggestions to address the issue. As discussed in response to comment DD-2, District staff has taken a number of steps to address the offset scarcity in the open market with respect to certain pollutants by opening its internal bank for certain critical projects for our region. Unfortunately, a portion of our past efforts intended to provide relief to a larger number of regionally critical projects did face legal challenges and was held up by the courts. We acknowledge that much more needs to be done and are open to new and all ideas that would contribute to the resolution of this very important issue provided they are within the bounds of the Clean Air Act and approvable by CARB and USEPA, and would not set our local stakeholders in legal jeopardy.

**Response to Comment DD-5:**

Thank you for your AQMP flexibility and compliance flexibility suggestions. Please note that the District is already implementing many of your suggestions in designing the AQMP control strategy and in developing its regulations. For instance, we do conduct technology evaluations prior to including a control measure into the AQMP. Granted, the District conducts a much more thorough and detailed technology assessment during the rule making stage, initial technology evaluations such as those conducted in support of a control measure are critical in determining the emission reduction potential of the measure and its cost impacts. To address uncertainties with

respect to these initial evaluations, often the emission reduction potential and cost effectiveness are expressed as ranges that include a lower and an upper bound estimate. The AQMP would typically commit the lower bound emission reduction estimate into the SIP. Furthermore, in formulating its emission reduction commitment for the SIP, the AQMP, typically, commits to a grand total emission reduction figure that reflects the grand sum of the lower bound reduction estimates of the emission reduction ranges of each measure in a manner that allows emission reduction substitution among measures to cover any potential shortfall from a particular measure(s). The idea of providing alternative compliance options, including “in lieu fee” payments to extend effective dates has been used in numerous prior rulemakings and we intend to continue this practice in the future, as necessary. Relative to your comment regarding the technology not evolving to the level set by a technology forcing limit by the applicable dates, in addition to exploring the “in lieu fee” option, the District often revisits the rule in question and either extends the effective dates or modifies the applicable limits to reflect the state of the technology or both. The existing 2007 AQMP includes a “set-aside” of emission reductions that can be used if rule limits are modified. We would welcome further discussion on these issues.

**Response to Comment DD-6:**

As indicated elsewhere, Control Measure CMB-01 is no longer an element of the control strategy for the 24-hour average PM<sub>2.5</sub> standard and is now listed as a contingency measure for the 24-hour PM<sub>2.5</sub> attainment demonstration. Based on the initial analysis conducted to support this control measure, it appears that there are additional reductions to be gained through the installation of BARCT to certain emission sources. Many of your concerns that you express in your comment are germane to how these reductions are translated into percent RTC shave and how the shave is distributed among the facilities participating in the program. The control measure deliberately does not commit to a specific shave methodology to allow the discussion of various different approaches during the rulemaking process, which staff intends to initiate promptly.

**Response to Comment DD-7:**

Thank you for supporting the cost-effectiveness bench marks proposed for inclusion in the 2012 AQMP. These bench marks, if triggered during the rulemaking process, would necessitate a more robust cost analysis compared to the one normally conducted, and would trigger a Board “pre-hearing” on the measure, but would not act as a bar to preclude adoption of the measure. Please be cognizant that costs and cost-effectiveness are typically estimated based on specific technology or set of technologies. While estimating source specific cost-effectiveness may be desirable from the affected facility’s perspective, it may not be practical, especially with industry sectors with multiple sources (i.e. industry sectors with hundreds or even thousands of sources).

Using cost-effectiveness ranges that reflect the variability in cost effectiveness across a source category would be a more reasonable approach.

**Response to Comment DD-8:**

Consistent with the previous AQMP, the current analysis shows that approximately 65% of additional NOX emissions reductions, beyond already adopted rules and measures, will be needed to meet the existing 1997 8-hour ozone standard of 80 ppb in 2023. The Basin can only demonstrate attainment of the 8-hour standard by using the CAA Section 182(e)(5) provision allowing for long-term measures that anticipate the development of new technologies or improving of existing control technologies. This CAA provision requires that these long-term measures be specifically identified at least three years prior to the attainment year (2020).

With less than 8 years remaining to identify these so-called “black box” emissions reductions, it is imperative to move forward with the identification and development of all feasible specific measures to achieve these reductions as soon as possible. If progress is delayed, there will be even less time to develop and implement strategies before the looming deadlines, and thus the resulting necessary measures could be more burdensome and disruptive. Delaying progress will also provide less certainty and lead time to the regulated community for planning compliance with potential new regulatory requirements. The considerable time it takes for new technologies to be developed, assessed and implemented widely, especially in the mobile source sector, also underscores the need to begin immediately. Note that while this Plan commits to the adoption of several ozone measures in the near-term, the implementation date and emissions reduction commitments are at least 2015 and beyond. While the District will need to adopt another ozone plan in 2015 to attain the 75 ppb standard by 2032, we cannot afford to delay implementation of the large “black box” in the existing approved 2007 AQMP (241 fpd NOx & 40 tpd VOC).

Recent litigation regarding U.S. EPA approvals of previous SIPs has focused on the reliance on a relatively large “commitments” to demonstrate attainment and the short time frame available to develop and deploy potential new technologies. The District believes it is important to demonstrate progress towards ozone attainment by making commitments for additional emissions reductions that reduce the size of the “black box” commitments. In U.S. EPA’s comment letter on the Draft 2012 AQMP (August 30, 2012), they state that they “fully support the District’s inclusion in the 2012 AQMP of updates on the implementation of control measures and emission reduction commitments relied upon in the South Coast 2007 AQMP to demonstrate expeditious attainment of the 1997 8-hour ozone NAAQS. We urge the District to continue working closely with EPA staff to identify the specific near-term and long-term control measures that will fulfill the NOx and VOC emission reduction commitments contained



in the SIP-approved South Coast 2007 8-hour ozone plan, and to develop appropriate methodologies for calculating the emission reductions attributed to each such measure.”

Furthermore, U.S. EPA recently proposed to require a new 1-hour ozone SIP for the South Coast Air Basin. In order to demonstrate attainment with this revoked standard by 2022, all feasible measures must be included in the SIP. Making enforceable emissions reductions commitments based on specific measures as they are identified is the best way to demonstrate that the District is dedicated to realizing the emission reductions necessary to achieve the 8-hour and 1-hour ozone standards. Future AQMPs should further identify specific measures and associated emissions reductions that will allow the “black box” commitments to shrink to zero by 2019 for the 1-hour ozone or 2020 for the 8-hour ozone.

EE. Dairy Cares, August 31, 2012



VIA EMAIL to [2012aqmpcomments@aqmd.gov](mailto:2012aqmpcomments@aqmd.gov)

August 31, 2012

Dr. William A. Burke  
SCAQMD Governing Board Chairman  
21865 Copley Dr.  
Diamond Bar, CA 91765

Re: Comments on Draft 2012 Air Quality Management Plan

Dear Dr. Burke:

On behalf of Dairy Cares, we submit the following comments on the Draft 2012 Air Quality Management Plan for the South Coast Air Quality Management District (SCAQMD). Dairy Cares is a coalition of California's dairy producer and processor associations, including the state's largest producer trade associations (*Western United Dairymen*, *California Dairy Campaign*, and *Milk Producers Council*) and the largest milk processing companies and cooperatives (including *California Dairies, Inc.*, *Dairy Farmers of America-Western Area Council*, *Hilmar Cheese Company*, *Joseph Gallo Farms*, *Producer Bar 20 Dairy*, and *Land O'Lakes*). Formed in 2001, Dairy Cares is dedicated to promoting the long-term sustainability of California dairies.

SCAQMD released the draft version of the 2012 Air Quality Management Plan (2012 AQMP) in July 2012. As a stakeholder group, dairy representatives have reviewed material related to dairy control measures before the Draft 2012 AQMP was released. We appreciate the SCAQMD staff taking the time to meet with our representative, Rob Vandenneuvel of Milk Producers Council, on June 29 regarding the proposed control measure "BCM-04: Further ammonia reductions from livestock waste."<sup>1</sup> We appreciate that several changes have been made to the current version of the measure consistent with our requested revisions.

The Draft 2012 AQMP states that Phase I will consist of a technical assessment of the application of SBS at local dairies to evaluate the technical and economic feasibility of the measure. We support the decision to complete this technical assessment before any rulemaking for dairy control.

EE-1

<sup>1</sup> Previously MCS-04B.

We have a few remaining comments about the existing language listed below.

**Technical Comments**

We would like to reiterate the technical concerns we have, as described in more detail in the summary<sup>2</sup> (Attachment A) we provided in advance of our meeting.

1. Evidence of ammonia reductions is limited to laboratory experiments of dairy slurry, not corrals. As you are aware, dairy slurry reacts very differently than dry corral manure.
2. Field experiments using SBS on dairies, which SCAQMD previously used to determine proposed application rates and calculate cost effectiveness, are not applicable to the proposed measure.
3. SBS impacts to worker safety and animal health are unknown for the proposed use.
4. SBS threatens groundwater quality by adding salt to manure that will be used as a fertilizer. This is particularly important in the Inland Empire where the Chino Water Basin and San Jacinto district face severe salt issues.

EE-2

**Suggested Revisions**

We suggest that the following changes be made to the language for BCM-04 included in the draft AQMP:

1. **Applicability to other jurisdictions.** The Draft 2012 AQMP states that the Phase I technical assessment “will evaluate the application of SBS at *local dairies*” (emphasis added). Any determination resulting from this technical assessment should clearly state that the suitability of SBS as a dairy NH<sub>3</sub> control measure is specific to the area in the jurisdiction of the SCAQMD – or, more specifically, to the dairies in the South Coast Basin (Basin) similar to the local dairies where this type of SBS application will be evaluated. This can in no way be presumed to be a “Reasonably Available Control Measure” in other nonattainment areas, such as the San Joaquin Valley. Multiple research projects and modeling analyses have shown that in the San Joaquin Valley, NO<sub>x</sub> controls, and not NH<sub>3</sub> controls, would be the most effective control strategy to reduce PM<sub>2.5</sub> concentrations.
2. **Excessive salt loading.** The Draft 2012 AQMP states that “the use of SBS should be carefully considered in areas that are sensitive to salts and/or with existing high salt loading in soil.” However, we encourage the SCAQMD to be clearer in the Draft 2012 AQMP that applying large quantities of SBS to manure (as may be needed to achieve potential reductions) that will eventually be land applied may not be feasible or allowed. The Regional Water Quality Control Board (RWQCB) would need to be consulted to determine if current or proposed regulations would prohibit or restrict the application to land of manure treated with SBS. BCM-04 should indicate that is a required component of the Phase I assessment.

EE-3

EE-4

<sup>2</sup> Acid salt (SBS) ammonia reduction claims lack evidence from 'real-world' dairies.

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3. **Worker safety and animal health.** SBS is a caustic salt that irritates skin and is hazardous if ingested or inhaled.<sup>3</sup> There is minimal discussion in the Draft 2012 AQMP of the effects of SBS on animal health and no discussion on the impacts to worker safety. We strongly suggest that SCAQMD review the potential safety hazards to workers and impacts to animal health and include these risks in the AQMP measure. These impacts must be analyzed in the Phase I assessment.

EE-5

Sincerely,



J.P. Cativiela  
Dairy Cares Program Coordinator

- C: William C. Van Dam, Dairy Cares Chairman  
Robert Vandenheuvel, Milk Producers Council  
Michael L.H. Marsh, Western United Dairymen  
Dr. Julia Lester, ENVIRON

<sup>3</sup> See MSDS, <http://www.sciencelab.com/msds.php?msdsId=9927267>.

## ATTACHMENT A

### ACID SALT (SBS) AMMONIA REDUCTION CLAIMS LACK EVIDENCE FROM 'REAL-WORLD' DAIRIES

*Current research doesn't support effectiveness, while potential concerns remain for animal health, worker safety and water quality*

South Coast Air Quality Management District (SCAQMD) is considering episodic application of acid salt (sodium bisulfate or SBS) to fresh dairy livestock waste to reduce ammonia emissions. This proposal is premature, given no evidence quantifying SBS' ammonia reduction efficiency in real-world dairy conditions.

Laboratory experiments suggest SBS may reduce ammonia under tightly controlled conditions. But no known experiments quantify actual ammonia reductions under non-optimal, real-world conditions outside the lab. Even if future study validates field effectiveness, SCAQMD should consider worker safety, animal health, groundwater quality and other environmental impacts before suggesting dairies apply large amounts of caustic acid salts:

1. Evidence of ammonia reductions in dairy slurry is limited to laboratory experiments. UC Davis researchers (Sun et al, 2008)<sup>4</sup> collected and carefully mixed manure in a lab, creating ideal conditions to maximize ammonia emissions in the control, and for even application of SBS for maximum effectiveness. These ideal conditions simply do not exist on real-world dairies, where mixing of manure, temperature variation, wind, drying, disturbing of manure by animals and many other factors would influence effectiveness of mitigation, likely reducing both initial emissions and mitigation effectiveness. Without field information, no effectiveness or cost-effectiveness analysis is possible, nor can SCAQMD determine what impact the rule would have on design values used for modeling air quality improvements.
2. Field experiments using SBS on dairies, which SCAQMD uses to determine proposed application rates and calculate cost effectiveness, are not applicable to the proposed measure. Limited work (Stackhouse et al)<sup>5</sup> in dairy corrals *did not* measure ammonia reductions and therefore is not applicable.
3. SBS impacts to worker safety and animal health are unknown for the proposed use. A caustic salt, SBS irritates skin and is hazardous if ingested or inhaled.<sup>6</sup> In other settings, such as poultry, SBS use requires special protective equipment and management to safeguard workers and animals. It's not clear that SBS safety to workers or animals is established for the proposed use, which generally would require larger and more frequent application than in other uses and settings. Exposure may increase due to open-air use and mixing with corral dust that can become windblown.
4. SBS threatens groundwater quality by adding salt to manure that will be used as fertilizer. Even if SBS were to be proven effective and safe for ammonia control, it would likely result in significant

<sup>4</sup> "Effects of Sodium Bisulfate on Alcohol, Amine and Ammonia Emissions in Dairy Slurry," Journal of Environmental Quality, 37:608-14, 2008.

<sup>5</sup> "Effects of Acidifier Application Reducing Emissions from Dairy Corrals," [http://www.aq.iastate.edu/wastemgmt/Mitigation\\_Conference\\_proceedings/CD\\_proceedings/Animal\\_Housing\\_Amendments/Stackhouse-Acidifier\\_Applications.pdf](http://www.aq.iastate.edu/wastemgmt/Mitigation_Conference_proceedings/CD_proceedings/Animal_Housing_Amendments/Stackhouse-Acidifier_Applications.pdf)

<sup>6</sup> See MSDS, <http://www.sciencelab.com/msds.php?msdsid=9927267>

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additional impacts to groundwater by adding salt to manure, all of which is used as fertilizer for agricultural crops. Use of SBS would add at least 70,000 pounds of sodium<sup>7</sup> and up to 930,000 pounds of sodium to manure every week it is used in the air basin. Virtually all of this salt could be expected to end up in groundwater, even if the manure were exported outside of the basin.

**Conclusion**

SBS on dairies should be approached with caution. Its efficacy, safety, impacts to animal health and the environment and cost-effectiveness should be fully investigated before considering actions that could result in expanded use.

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<sup>7</sup> Assuming the product is only used on about 7.5 percent of dairy surface areas, otherwise identified as "high traffic" areas.

**Responses to Comment Letter EE**  
**Dairy Cares**

**Response to Comment EE-1:**

AQMD staff appreciates the support of the dairy industry to conduct a technical assessment of sodium bisulfate (SBS) in advance of seeking additional rule requirements and would appreciate feedback as part of the stakeholder process.

**Response to Comment EE-2:**

For the technical assessment, staff is seeking one or more dairy partners that are representative of the majority of operations here in the South Coast Air Basin. The AQMD will conduct the assessment at its own expense and is optimistic that application may contribute to improved air quality, with a focus of application during episodic periods of forecasted poor air quality.

**Response to Comment EE-3:**

AQMD staff acknowledges that, due to climatic conditions, there is a certain uniqueness of local dairy operations as compared to elsewhere in the state and country. As such, the requirements may not be applicable to dairies elsewhere where a site-specific assessment would need to be made relative to those particular operations. Each air district will likely need to conduct its own assessment as to application of SBS in their jurisdiction. This has been clarified in the control measure.

**Response to Comment EE-4:**

AQMD staff intends to assess the potential impact of salt loading on groundwater from the land spreading of manure treated with SBS. Although the incremental increase is expected to be low, the overall impact relative to Regional Water Quality Control Board threshold requirements will need to be examined. Staff intends to work with stakeholders at the water board relative to the potential ground water impacts. This too has been clarified in the control measure.

**Response to Comment EE-5:**

Although not noted in the control measure, health impacts associated with use of SBS would be included in the Phase I technical assessment. Upon review of the MSDS and the comment letter attachment, staff has added to the control measure that the technical assessment will also examine impacts to animal and worker health and safety associated with uses of SBS.

FF. Clean Energy, August 31, 2012

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Todd R. Campbell, MEM, MPP  
Vice President, Public Policy and Regulatory Affairs



August 31, 2012

Dr. Elaine Chang  
South Coast Air Quality Management District  
21865 Copley Dr  
Diamond Bar, CA 91765

Re: Clean Energy's comments on SCAQMD's 2012 Air Quality Management Plan

Dear Dr. Chang,

Clean Energy is appreciative for the opportunity to comment on the draft "2012 Air Quality Management Plan" (2012 AQMP), a plan focused on reducing particulate matter and ozone emissions by the South Coast Air Quality Management District. Clean Energy, a California-based company and AB 32 success story, fuels approximately 26,000 vehicles daily at over 310 strategically located refueling stations nationwide with compressed natural gas (CNG), liquefied natural gas (LNG) and renewable natural gas (RNG).

Upon reviewing the 2012 AQMP, we believe the document would benefit from a broader discussion of promising strategies that could provide environmental, economic and energy security benefits to the South Coast Air Quality Management District (AQMD). As a California-based company focused on delivering clean lower carbon fuels to market, we support the goal to advance zero and near-zero emission strategies. However, we believe that if the 2012 AQMP is to achieve the attainment goals outlined, the 2012 AQMP must include an informed discussion of natural gas, conventional and renewable, used as a transportation fuel in compressed and liquefied form. These fuels, inherently and in combination with existing or developing clean air technologies, can play a significant role in tackling the AQMD's air quality challenges for ozone (O<sub>3</sub>) and fine particulate matter (PM), as well as other criteria pollutants and greenhouse gases (GHG).

FF-1

While the 2012 AQMP outlines the benefits of zero and near zero emission technologies with an extraordinary focus on hydrogen fuel cell and electric vehicles, the draft would be more comprehensive in scope if the specific 2050 emissions inventories needed were identified with corresponding vehicle emissions in grams/mile or grams/bhp-hr for the number of vehicles proposed to be in the marketplace in 2050. Then clean alternatives to electric and hydrogen technologies could also be identified. This would be the appropriate fuel neutral signal to the transportation industry that AQMD should send. Highlighting certain fuels more than others throughout the report could erupt into a battle between fuel types and drastically hinder progress. It would be much more beneficial to the transportation industry and the air if various alternative fuels worked together to create optimal strategies.

FF-2

Further, natural gas applications should be viewed in this document as a fuel strategy that can offer low to ultra low carbon results, capable of achieving near zero emissions for oxides of nitrogen and particulate matter with indications of further reductions by engine manufacturers, one that can be combined with efficiency strategies, and one that can deliver these benefits in the near, mid- and long-term to each class of vehicle today.

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Lastly, while the report mentions the importance of economics briefly throughout, it needs a more in depth economic analysis for each fuel type in order to better evaluate the feasibility of implementation. Without economics, the report optically reads that fuel cell and battery technologies are better than all other clean air strategies when in reality this may not be the case. Instead of foregoing economic analyses of clean fuel strategies and presenting illustrative zero emission scenarios (even though they are extremely costly and not technologically capable) that appear to demonstrate favoritism, the report should provide a balanced analysis that broadly covers all promising strategies capable of helping the AQMD attain its air quality goals.

As the report itself states, "*it is imperative for the District to work closely with businesses and industry groups to identify the most cost-effective and efficient path to meeting clean air goals*" (1-20). Natural gas as a vehicle fuel can achieve this goal exactly. This point would become clearer if the AQMD performed a more in-depth economic analysis of each fuel type to recognize that natural gas is one of the most cost-effective strategies that can meet the Air Basin's standards while hydrogen fuel cell and battery electric are much more expensive, experimental and in need of significant development and technological advancement.

FF-4

#### Natural Gas Can Help the AQMD Meet State and Federal Air Quality Goals

Heavy-duty trucks are constantly on California's roads and consume on average 15,000-20,000 gallons of diesel fuel per year. The significant cost savings associated with natural gas, up to \$2.00 per gallon, could therefore present a market pull scenario for clean trucks operating throughout the South Coast Air Basin. For example, the emissions benefits associated with the conversion of a *single* diesel truck to natural gas has the potential to reduce up to 23 tons of criteria emissions over the lifetime of the truck (Calculated using Moyer Calculator, pre-2002 trucks). When RNG is applied, emissions reduction benefits can be nearly four times greater. Because emissions from the ports of Los Angeles and Long Beach are large emitters of criteria and climate change pollutants, heavy-duty trucks that run on natural gas instead of diesel can directly and significantly combat these harmful emissions threatening both federal attainment and the state's AB 32 goals.

##### A. Natural Gas Vehicles Significantly Reduce NOx Pollution

In Figure 3-8 and 3-9 of the AQMP, the graphs show heavy-duty diesel trucks are by far the largest contributor to NOx. In order to significantly curb this, heavy-duty diesel trucks could be converted to natural gas, and natural gas engine technologies and fuels could be further advanced. Natural gas engines have historically achieved low NOx emissions performance and have made the case for tighter NOx emission standards for medium- and heavy-duty trucks. In fact, SULEV was a category created by natural gas light-duty vehicles as these vehicles achieved a 90% reduction of emissions from the ULEV standard. Another and more recent example would be the fact that natural gas engines were able to meet the 2010 NOx

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and PM standards as early as 2007 – three years in advance of the federal deadline. In fact, today’s natural gas engines far surpass the existing NOx emissions standard for heavy-duty truck engines by 35%, and engine manufacturers have since announced plans to target a 75% reduction in NOx over the next few years.

What’s more, newer technology that is currently being demonstrated promises even cleaner NOx results. Clean Energy supports the immediate adoption of a series of optional low NOx standards for California that will allow manufacturers to begin the process of receiving credit for lower emissions technology. Clean Energy also would like AQMD to identify emissions targets needed to meet attainment of both NOx and PM emissions rather than implicate certain “preferred” clean air strategies so that the 2012 AQMP can be a more “fuel neutral” document that will encourage all clean air strategies to blossom.

*B. Natural Gas Engines Significantly Reduce PM Pollution*

Figure 3-14 from the draft shows that heavy-duty diesel trucks are the second largest contributor to PM 2.5. According to certification data produced by the California Air Resources Board, natural gas engines can reduce particulate matter emissions by 80% below the federal 2010 heavy-duty truck standard. These superior PM emissions have been achieved using a simple three-way catalyst technology and certainly could be improved upon with further technology advancement.

*C. Natural Gas Engines Significantly Reduce GHG Pollution*

Both CNG and LNG are listed as low carbon fuels under California’s Low Carbon Fuel Standard and can reduce GHG emissions by up to 23% for heavy-duty vehicles and 29% for light-duty vehicles when compared to their diesel and gasoline counterparts. If RNG is used to power a natural gas vehicle, GHG emissions can be further reduced by up to 88.1%, which exceeds the federal and state’s 2050 emissions goals today. Not only is RNG listed as an ultra low carbon fuel, it is the best performing ultra low carbon fuel across the board and it can be delivered to natural gas vehicle engines in both compressed and liquefied form.

*D. Emissions Performance for Natural Gas Engines Are Bound to Improve on Near Zero Emissions Levels*

While current natural gas engine technology is achieving near zero emissions already, it is about to significantly improve further. Recently, Cummins-Westport announced plans to develop an engine with <0.05 g/bhp-hr NOx. Their focus is on NOx because Cummins-Westport engines already provide virtually zero PM emissions. The development of this near zero engine technology is currently underway and is expected to be commercially available in 3 to 5 years.

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In addition, ICR Turbine Engine Corporation (ICRTEC) has teamed up with Kenworth to create a natural gas hybrid engine with NOx emissions of 0.0249 g/bhp-hr (8x lower than EPA standards) and CO emissions of 0.0205g/bhp-hr (750x lower than EPA standards). This new engine is cheaper than current natural gas engines and is estimated to retail for the same price as a diesel engine, yet it has the potential to deliver near zero emissions. It also provides 10-20% better fuel efficiency, is half the size of a conventional diesel or natural gas engine, significantly reduces maintenance, and significantly reduces emissions far below CARB/EPA standards without sophisticated pre- or after-treatments.

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**NGVs Offer the South Coast Air Basin with a Great Opportunity to Improve Air Quality Today and Well Into the Future**

*A. Natural gas and renewable natural gas are both abundant and domestic.*

Not only is natural gas clean, it is domestic and abundant in North America with over a 100-year supply, and new reserves are being discovered almost daily. In fact, the United States currently produces about 20 billion cubic feet per day from shale, and that number is predicted to double by 2020 [Navigant Consulting, Inc. (2012, January). Drilling Redirection, Supply Abundance, and Exports. Retrieved August 13, 2012, from [www.navigant.com/http://www.navigant.com/~media/www/site/downloads/energy/ngmarket\\_notejanuary2012pdf.aspx](http://www.navigant.com/~media/www/site/downloads/energy/ngmarket_notejanuary2012pdf.aspx)].

*B. Greater natural gas use as a transportation fuel can boost the economy.*

Due to its abundance, natural gas as a transportation fuel is extremely cheap and is thereby capable of providing high discounts to its users. For whatever reason, the 2012 AQMP draft appears to overlook the importance of cost-effectiveness.

For business and government funding alike, based on our experience, cost-effectiveness is one of the most important aspects for justifying the transition of a vehicle or fleet to an alternative fuel. Most of the energy sources mentioned in the 2012 AQMP are more expensive than gasoline or diesel, except for one source – natural gas. With all of the new shale discoveries in recent years, natural gas prices have dropped considerably and can save consumers up to \$1.50 per gallon over the energy equivalent of gasoline and diesel. This is a huge benefit that provides businesses and individuals with a cost-effective way to fuel cleanly. Due to the fuel savings, more people will buy natural gas vehicles, which will ultimately lead to greater emissions reductions across the board. Furthermore, as more heavy duty trucks switch from diesel to natural gas as a cheaper alternative fuel, their aggregate fuel usage will displace a significant proportion of emissions.

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*C. The economics of natural gas is creating a competitive market for the NGV Industry*

At last count, Clean Energy has identified more than 40 private competitors in the NGV space providing services to build out infrastructure:

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**Air and Gas Technologies**  
- CNG and LNG Station Provider

**Allsup**  
- CNG Station; Owner/Operator

**ALT**  
- LNG Plant Owner; LNG Fuel Provider

**American CNG**  
- CNG and LNG Station Owner/Provider

**American Natural Gas**  
- LNG Station Owner

**Atlas Copco-Greenfield Compression**  
- Equipment Provider

**AVSG LP**  
- CNG Station Network; Owner/Operator

**CH-4**  
- LNG Station; Owner/Operator

**Chart Industries**  
- LNG Equipment Provider; Station Installer

**Chesapeake Energy**  
- CNG Station Owner/Operator

**Clean Energy Fuels**  
- CNG, LNG Fuel Provider; Station Network Owner/Operator

**CN Gas Group Corp.**  
- CNG Equipment & Stations/US Agira Representative

**Enviro Express Natural Gas LLC**  
- LNG Station; Owner/Truck Operator

**General Electric**  
- CNG and LNG Equipment Provider

**Go Natural Gas**  
- CNG Station; Owner/Operator

**General Physics**  
- LNG Equipment Provider; Station Installer, Operator

**Gulf Oil**  
- CNG Station Owner

**Integrlys**  
- Pinnacle Gas Systems LLC;  
o CNG; Fuel Station Owner/Operator  
- Trillium USA  
- CNG; Fuel Station Owner/Operator

**Kwik Trip Inc.**  
- CNG Station; Owner/Operator

**Lehigh Gas**  
- CNG Station; Owner/Operator

**Linde**  
- LNG Fuel Provider; Equipment Supplier

**Love's**  
- CNG Station Owner

**Mansfield Gas Equipment System, Inc.**  
- CNG Station; Supplier/Owner/Operator

**Nopetro**  
- CNG and LNG Fueling Systems

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**Encana**  
- CNG & LNG; Station Owner

**Engineered Energy Solutions**  
- Engineering and Design Firm, CNG Station Owner/Operator

**OnCue Express**  
- CNG Network; Owner/Operator

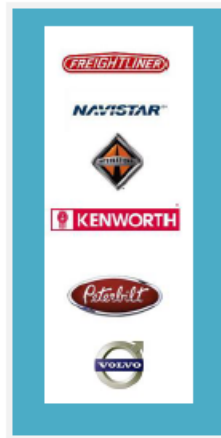
**Peake Fuel Solutions**  
- CNG and LNG Station Equipment Supplier for Stations and Home Refueling

With the realization that it will take billions in investment to transition our country away from conventional fuels, natural gas shows the most promise in weaning ourselves off of foreign oil by the demonstration of strong and growing competition in the natural gas vehicle fueling space.

*D. Every Heavy-Duty Truck Manufacturer is now in the business of NGV Trucks due to Demand*

As one of the leading indicators of success, most if not all engine manufacturers for heavy- to medium-duty trucks are adopting some form of natural gas vehicle option for their customers. This not only presents an opportunity for American businesses, it also presents an opportunity for clean air as natural gas platforms have consistently presented regulatory authorities, such as the AQMD, with opportunities to reduce both criteria and climate change emissions.

- Freightliner
  - Currently offers CWI 8.9 liter and 11.9 liter expected by 2013
- Navistar / International
  - Committed to deploy full natural gas truck product line
  - Currently offering 7.6 liter Navistar and CWI 8.9 liter
  - 13 liter model expected mid-2013
- Kenworth
  - Currently offers CWI 8.9 liter and 15 liter, 11.9 liter expected by 2013
- Peterbilt
  - Currently offers CWI 8.9 liter and 15 liter, 11.9 liter expected by 2013



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- Volvo
  - Currently offers CWI 8.9 liter, 13 liter announced for 2014 launch



*E. Natural gas refueling infrastructure is flourishing nationwide.*

There are currently about 500 natural gas stations in California, and recently the heavy-duty sector is taking off with LNG station deployment from distribution fueling leaders such as Clean Energy and Royal Dutch Shell. While the infrastructure of natural gas refueling stations is somewhat established, the current 500 stations in California were not strategically placed to accommodate the trucking routes of the goods movement, nor were the majority of them designed to handle heavy-duty trucks. We can only imagine that the hydrogen and EV infrastructure referenced by the AQMP will befall the same fate, particularly when heavy-duty applications have not been proven for hydrogen fuel cells or EV batteries.

Furthermore, if there is real concern about capturing and cleaning up the 30% of the trucks on California's roads that are from out of state, natural gas provides an option to reduce emissions substantially. Several national networks of LNG and CNG stations have since been proposed directly targeting the goods movement sector. Shell, TravelCenters of America, Integrys, AmericanCNG, and Clean Energy have all announced plans to construct national refueling infrastructure networks. In fact, Clean Energy is on target to build 150 stations from coast to coast and border to border by the end of 2013.



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F. Biomethane production is increasing



Being a California-based company supportive of CARB's Low Carbon Fuel Standard, Clean Energy has embraced the business of producing the lowest carbon fuel identified by the LCFS: biomethane, or RNG. Since then, Clean Energy has founded its subsidiary – Clean Energy Renewable Fuels (CERF) – to finance, build and operate RNG production facilities across the lower 48 states. To date, CERF has been very successful in its efforts to produce RNG from landfill and agricultural-based projects, and it is very interested in participating in sanitation-based projects. CERF's success has come despite the regulated utilities' current ban applied to in-state produced RNG entering the pipeline.

Clearly, it would be beneficial for this 2012 AQMP not only to evaluate the potential of RNG use in transportation fuels, but also to suggest policy actions that can take place to remove existing bans on RNG from entering in-state pipelines as this would directly and efficiently deliver RNG to in-state NGV vehicle fleets.

Why is AQMD Picking Winners?

Throughout the 2012 AQMP, hydrogen fuel cells and battery electric vehicles are highlighted as key clean air strategies that should be used for multiple applications: from light duty passenger cars to heavy duty trucking, even though these technologies are not optimal or cost effective.

While fuel cells and battery electric vehicles (EVs) can help reduce both criteria and climate change emissions from the transportation sector, the infrastructure is not developed enough to reduce emissions a significant amount, and the cost to consumers is far too high. Most importantly, there are large hurdles in technology limitations for these types of fuels that need to be overcome to be practical.

Battery or fuel cell technology does not currently exist to power a vehicle as large as a heavy-duty truck that meets the demands for shippers or carriers. EVs do not have the range that LNG, CNG or RNG have, leaving customers with substantial "range anxiety": the fear of being stranded due to lack of power. Furthermore, while electric vehicles do not have tail-pipe emissions, it is important to consider how their electricity is generated. Electric vehicles receive their power from the common electricity grid, which in California is derived from 52.7% natural gas, 28.9% renewables, 15.8% nuclear 1% coal and 0.5% petroleum (U.S. Energy Information Administration. (2012). *State Electricity Profiles 2010*. Washington, DC: U.S. Energy Information Administration.). Thus, the largest portion of the power comes from natural gas, so it would be more energy efficient to directly fuel cars with natural gas and cut out the dirty fuels like coal and petroleum.

As for fuel cells, their energy comes from natural gas, hydrogen and alcohols. Currently, the largest source of hydrogen for fuel cells is natural gas. Again, if fuel cells initially derive their

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energy from natural gas, wouldn't it make more sense to fuel cars with natural gas and further develop natural gas technology using advanced NGVs?

The results of the 2012 AQMP need to be compared to the results of a recent (Aug 1, 2012) National Petroleum Council (NPC) report on all alternative fuels and the role they will play in the marketplace by 2050. In that study, all alternative fuels are "on the table," and the study evaluated the economics of the fuels, vehicles, infrastructure, and fuel production. The results are very different from the 2012 AQMP document. In the NPC study, all alternative fuels made significant inroads against petroleum – but electric and hydrogen technologies were not dominant in the market. The NPC study evaluated greenhouse gas reductions at the end once economic-based market penetrations were determined for each fuel. Results indicated that alternative fuels, based upon economics, would achieve a national reduction of greenhouse gases of about 50% from 2005 levels.

Whether or not the intention of 2012 AQMP was to pick winners, optically the report gives the impression that hydrogen fuel cell and batter technologies are the answer for fueling all applications in the future. Because of this we are worried that decision makers, who are not as versed in air quality and fuels as CARB, SCAQMD, and SJVAPCD, will look at the report and make regulations and legislation based on this assumption. As a natural gas vehicle fueling company, we are worried that because the benefits of natural gas were scarcely mentioned in the report that decision makers will leave natural gas out of the mix in future plans.

In addition, if alternative fuel companies believe that regulatory bodies are favoring certain alternative fuels over others, it will cause arguments and battles to erupt that greatly delay forward progress. Instead of working against each other, different alternative fuels should work together to bring the best technologies to market. In order to achieve this, the 2012 AQMP should identify the various hurdles that each fuel-type faces instead of assuming all hurdles will be overcome and hydrogen fuel cell and battery technologies will dominate the market. Once the report can accomplish this, companies from various alternative fuel companies will be more likely to integrate strategies instead of working against each other.

The definitions of zero and near zero emissions are not clearly defined in the document, and it sounds like fuel cell and battery electric are synonymous with these classifications. Instead of stating the specific technologies, it would be more beneficial to the alternative fuel industry if "zero" and "near zero" emissions were more clearly defined so that all alternative fuels can strive to meet those classifications. It does not make sense to use electricity or fuel cells in a hybrid system with another fuel if the fuel can meet zero or near zero emissions on its own.

**NGVs Deserve Equal Consideration under the 2012 AQMP**

We are asking that the natural gas industry receive equal, not special, treatment under SCAQMD's incentives and implementation plans. Natural gas vehicles provide comparable,

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if not better, environmental and energy security benefits in relation to other alternative fuels, and they deserve similar support. Instead of advocating for future technologies like hydrogen fuel cell and electric vehicles, rules and incentives should set attainable goals for all fuel types to strive for to develop clean vehicle options for consumers and businesses. By being fuel neutral, SCAQMD can lead the Air Basin's transportation sector into reduced emissions and cleaner air by supporting alternative fuel infrastructure, alternative vehicles, lowering costs to consumers, and pushing alternative fuel providers to improve engine technology. We ask for the same treatment for the natural gas industry. Because there is a great deal of uncertainty regarding which individual fuel-vehicle systems will overcome technology hurdles to become economically and environmentally attractive by 2050, regulations, policies and funding should be technology neutral while market dynamics drive commercialization.

In regards to natural gas incentives, the station fueling infrastructure for natural gas is well established and has more than 40 competitors in the industry, and the fuel makes economic sense, so policies and incentives should be directed toward natural gas vehicles (NGVs). This will help the consumer either cover the initial premium cost NGVs have over conventionally-fueled vehicles or justify paying the premium in their minds.

**Concluding Remarks**

Clean Energy would truly like to thank the South Coast AQMD for drafting a framework for air quality and climate planning as well as for giving us the opportunity to comment on this document. While the document provides a basis of methods to meet the Air Basin's PM 2.5 and ozone emissions standards, it is troubling to us that a draft by the AQMD, a rule-making regulatory body, barely touches on the current and potential benefits of natural gas used as a transportation fuel.

The 2012 AQMP seems to be a strong proponent of fuel cell and electric vehicles, which are extremely costly, lack infrastructure, have a low range, have technology limitations, and are not realistic for heavy-duty applications. While these energy sources may be an alternative far down the road, natural gas, which is clean, cheap, domestic and abundant, can help the South Coast Air Basin and California accomplish our emissions goals today and beyond and should be considered by AQMD as such. While the natural gas vehicle fueling industry is well established, it continues to grow at a fast pace and needs the support from regulatory bodies like SCAQMD with fuel neutral policies that promote clean fuels and propulsion strategies. As long as it has state support, natural gas technology will advance to the point of complete zero emissions extremely soon. Clean Energy feels that the 2012 AQMP should be edited to illustrate the benefits of natural gas and should position the report as well as future state regulations/incentives as fuel neutral. If natural gas is pushed aside, the South Coast Air Basin's PM and ozone emissions goals will not be met.

Clean Energy strongly recommends that SCAQMD reviews the entire NPC study noted earlier. The study can be found at: <http://www.npc.org/FTF-80112.html>. The NPC study based on economics comes to an entirely different conclusion than the 2012 AQMP. In the study natural gas plays a significant role in changing the transportation fuel mix in the U.S. through 2050 for heavy-duty vehicles and the light duty consumer market. If the South Coast Air Basin focuses on a technology specific agenda – it may be totally out of step with the rest

FF-8

FF-9

of the U.S. which may cost the Air basin and California the ability to economically compete with the rest of the country.



Thank you,

A handwritten signature in black ink, appearing to read "Todd Campbell".

Todd Campbell  
Vice President, Policy and Regulatory Affairs



FF-9

**Responses to Comment Letter FF**  
**Clean Energy**

**Response to Comment FF-1:**

Staff appreciates the comments relative to the role of clean lower carbon fuels in helping to meet air quality goals in the South Coast Air Basin. While the draft 2012 AQMP covers a broad set of strategies in order for the region to attain future air quality standards, the AQMP refers to discussions such as the AQMD Technology Office Clean Fuels Plan, which provide more specific details in conducting research and demonstration of various vehicle technologies using cleaner carbon fuels. Staff welcomes the commenter's participation in these efforts.

**Response to Comment FF-2:**

Staff believes the commenter is referring to the "Vision for Clean Air" document relative to the greenhouse gas 2050 goal since the draft 2012 AQMP does not contain any emissions inventories beyond 2035. The comments will be considered as the draft "Vision for Clean Air" document is finalized. In addition, see Response to Comment FF-1.

**Response to Comment FF-3:**

As noted in the discussion of setting lower emission standards discussed in the draft Appendix IV-B, staff recognizes the importance for such standards and that alternative fuel engine technologies that include the use of natural gas will play in helping the region achieve future air quality standards.

**Response to Comment FF-4:**

The draft 2012 AQMP provides a set of actions that the region needs to continue to move forward in the near-term to help reach the 2023 ozone air quality standard and does not provide a specific set of strategies that are needed to demonstration attainment of the 2023 ozone air quality standard. As such, more specific analysis including economic analyses will be included in the next AQMP, which will focus on the 2023 and 2032 ozone attainment demonstration strategies.

**Response to Comment FF-5:**

Staff appreciates the comments relative to the development of natural gas engine technologies and the potential greater emissions benefits natural gas engine technologies have to offer. Such benefits will be considered as staff implements the "ADV" measures identified in Appendix IV-B. See also Response to Comments FF-1 and FF-3.

**Response to Comment FF-6:**

See Responses to Comments FF-1, FF-3, and FF-5.

**Response to Comment FF-7:**

Staff believes that as battery-electric and fuel cell technologies are further developed, there will be potential integration with alternative fuel based engine technologies such as natural gas. Staff will continue to work with all technology stakeholders to commercialize the cleanest engine technologies as early as possible.

**Response to Comment FF-8:**

Staff believes that the ADV measures provided in Appendix IV-B does consider all available engine and fuel technologies and does not favor one technology over another. However, some technologies are more mature than others. As such, greater research and development emphasis are placed on those technologies that need to be further developed. While other technologies that are more mature, staff has emphasized the need for incentives to accelerate deployment of such technologies.

**Response to Comment FF-9:**

Staff appreciates the comments relative to the benefits of natural gas engine technologies. Staff is reviewing the NPC study along with other studies as part of the efforts on the "Vision for Clean Air" document. See also Responses to Comments FF-8.

## GG. SoCal Gas / Sempra Utilities, August 31, 2012



A Sempra Energy utility™

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August 31, 2012

Dr. Elaine Chang  
Deputy Executive Officer  
South Coast Air Quality Management District

RE: Draft 2012 Air Quality Management Plan (AQMP)  
Submitted to: 2012aqmpcomments@aqmd.gov

Dear Dr. Chang:

Southern California Gas Company (SoCalGas) appreciates the opportunity to provide comments with respect to the South Coast Air Quality Management District's (SCAQMD) Draft 2012 AQMP. SoCalGas strongly supports the efforts of the SCAQMD to develop an AQMP that will demonstrate attainment of the PM<sub>2.5</sub> 24-hour Clean Air Act standard through cost-effective control measures. The attainment of Clean Air Act standards is important to all communities in which SoCalGas operates and provides natural gas service. We continue to demonstrate our support of SCAQMD through participation in your regulatory processes, operation of our in-basin facilities in compliance with SCAQMD's existing rules, and support to our customers in the clean and energy-efficient operation of their natural gas-fueled equipment.

We first would like to inform you of a new rule just announced by EPA and NHTSA that is a major development for natural gas vehicles. (Go to <http://epa.gov/otaq/climate/regs-light-duty.htm>) EPA and NHTSA will now allow vehicle manufacturers to count NGVs they produce when calculating their Corporate Average Fuel Economy (CAFE) and EPA's Light-Duty Vehicle Greenhouse Gas Emissions Rule, known as the National Program of harmonized greenhouse gas and fuel economy standards. This is an important change, because it removes a regulatory disincentive to vehicle manufacturers who wish to market NGVs. The national natural gas industry worked hard to get this change; SoCalGas participated. Here is the relevant excerpt from the EPA rule discussion in the Federal Register:

In order to provide temporary regulatory incentives to promote advanced vehicle technologies, EPA is finalizing, as proposed, an incentive multiplier for CO<sub>2</sub> emissions compliance purposes for all electric vehicles (EVs), plug-in hybrid electric vehicles (PHEVs), and fuel cell vehicles (FCVs) sold in MYs 2017 through 2021. In addition, in response to public comments explaining how infrastructure and technologies for compressed natural gas (CNG) vehicles could serve as a bridge to use of advanced technologies such as hydrogen fuel cells, EPA is finalizing an incentive multiplier for CNG vehicles sold in MYs 2017 through 2021. This multiplier approach

GG-1

SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

means that each EV/PHEV/FCV/CNG vehicle would count as more than one vehicle in the manufacturer's compliance calculation. EPA is finalizing, as proposed, that EVs and FCVs start with a multiplier value of 2.0 in MY 2017 and phase down to a value of 1.5 in MY 2021, and that PHEVs would start at a multiplier value of 1.6 in MY 2017 and phase down to a value of 1.3 in MY 2021.<sup>86</sup> EPA is finalizing multiplier values for both dedicated and dual fuel CNG vehicles for MYs 2017-2021 that are equivalent to the multipliers for PHEVs. All incentive multipliers in EPA's program expire at the end of MY 2021. See Section III.C.2 for more discussion of these incentive multipliers.

GG-1

As you can see, EPA based its decision upon the idea that compressed natural gas fueling infrastructure could serve as a bridge to hydrogen fueled vehicles. SoCalGas has researched reforming of natural gas into hydrogen, and continues to discuss possibilities with interested parties. However any future plans will likely depend upon the outcome of our compression services tariff request to the CPUC. We will need policy clarification from the CPUC to plan how, and to what extent, SoCalGas can participate in the compressed natural gas fueling infrastructure.

We are also supportive of the direction of the change in the definition of "near-zero emissions:"

GG-2

The term —near-zero emissions refers to emissions approaching zero and will be delineated for individual source categories through the process of developing the Air Quality Management Plan/State Implementation Plan and subsequent control measures. Based on current analyses, on-land transportation sources will need to achieve zero emissions where possible, and otherwise will need to be substantially below adopted emission standards — including standards with future effective dates. Near-zero emissions technologies can help meet this need, particularly if they support a path toward zero emissions (e.g. electric/fossil fuel hybrids with all-electric range). (Please see Chapter 4 - Control Strategy and Implementation page 4-19, of the draft 2012 AQMP.)

This new approach will allow more flexibility, and the opportunity for more cost effective approaches to getting down to these very low emission levels. For example see the discussion of the concept of "Net-Zero" emission locomotive system" on page 20 of this comment letter.

As set forth in greater detail in our comments, SoCalGas would like to underscore the following points with respect to SCAQMD AQMPs in general:

GG-3

- 1) The draft 2012 AQMP should focus on attainment of the 2006 24-hour PM<sub>2.5</sub> standard, and SCAQMD should not make legally binding commitments beyond attainment of this standard, until they are necessary.
- 2) SCAQMD should continue to address the "black-box" commitments in the 2007 AQMP with cost-effective measures, but should not submit the Section 185(e)(5) control

SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

measures for inclusion in the CA SIP at this time. SoCalGas remains committed to working with the SCAQMD and all stakeholders to overcoming the challenge of the black box, and has put forward studies of how to do this and new technologies that make the use of natural gas even cleaner; and

- 3) All SCAQMD planning efforts, analyses and control measures should remain fuel neutral.

GG-3

The comments are organized and presented in the following attachments by control measure. To facilitate further discussion and mutually beneficial coordination, we have included a contact person's name and contact information for each of the control measure comments. The most effective way to contact SoCalGas staff is through email, but please do not hesitate to contact me directly (213-244-8851).

Comments are provided on the following control measures:

Attachment	Control Measure	SoCalGas Contact
Attachment 1	CMB-01: Further NO <sub>x</sub> Reductions from RECLAIM	Charles Humphrey chumphrey@semprautilities.com
Attachment 2	CMB-03: Reductions from Commercial Space Heating	Steve Simons SSimons@semprautilities.com
Attachment 3	BCM-03: Further PM Reductions from Under-Fired Charbroilers	Steve Simons SSimons@semprautilities.com
Attachment 4	EDU-01: Further Criteria Pollutant Reductions from Education, Outreach, and Incentives	Lance DeLaura LDelaura@semprautilities.com
Attachment 5	INC-01: Economic Incentive programs to Adopted or Near-Zero Technologies	Lance DeLaura LDelaura@semprautilities.com
Attachment 6	Federal CAA Section 182(e)(5) Implementation Measures for Ozone - Mobile Sources	Cherif Youssef CYoussef@semprautilities.com

SoCalGas has not been able to independently verify the modeling for demonstration of attainment of the PM<sub>2.5</sub> standard. And, therefore, expresses no independent opinion on the need for any of the specific control measures to be used to meet the 2006 PM<sub>2.5</sub> standard by 2014.

Sincerely,

*Lee Wallace*

Lee Wallace  
Environmental Affairs Manager

SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

Acronyms used in this Document

AT-PZEV	Advanced Technology - Partial Zero-Emission Vehicle
AQMP	Air Quality Management Plan
ARPA-E	Advanced Research Projects Agency – Energy
BARCT	Best Available Retrofit Control Technology
BEV	Battery-Electric vehicles
bhp-hr	Brake Horsepower-Hour
Biogas	Renewable Natural Gas
Btu/hr	British Thermal Units per Hour
CAA	Clean Air Act
CARB	California Air Resources Board
CAFE	Corporate Average Fuel Economy
CLEEN	Federal Aviation Administration’s Continuous Lower Energy, Emissions and Noise Program
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
CVRP	Clean Vehicle Rebate Pilot
ECI	Energy Conversions, Inc.
EFMP	AB 118 Enhanced Fleet Modernization Program
EGR	Engine Gas Recirculation
EIA	Energy Information Administration
EMD	Electro-Motive Diesel, Inc.
FCV	Fuel Cell Vehicles
GHG	Green-House Gases
GTI	Gas Technology Institute
HRA	Home Refueling Appliance
LNG	Liquefied natural gas
µg/m <sup>3</sup>	Microgram per Cubic Meter
MPPC	Micro Pilot Pre-Chambers
MSRC	Mobile Source Air Pollution Reduction Review Committee
NGV	Natural Gas Vehicles
NO <sub>x</sub>	Oxides of Nitrogen
OEM	Original Equipment Manufacturer
PHL	Pacific Harbor Line, Inc.
PM	Particulate Matter
PM <sub>2.5</sub>	Particulate Matter that is 2.5 micrometers in diameter and smaller
PM <sub>2.5</sub>	Also known as fine particulate
PPM	Parts Per Million
PZEV	Partial Zero-Emission Vehicle
RTC	RECLAIM Trading Credit or facility emission cap
SCAG	Southern California Association of Governments
SCR	Selective Catalytic Reduction
SCRRA	Southern California Regional Rail Authority, aka Metrolink
SIP	State Implementation Plan



SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

SoCalGas	Southern California Gas Company
SwRI	Southwest Research Institute
TPD	Tons Per Day
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds
WBCT	West Basin Container Terminal

SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

Attachment 1

SoCalGas has not been able to independently verify the modeling for demonstration of attainment of the PM<sub>2.5</sub> standard. And, therefore, expresses no independent opinion on the need for these Control Measures to be used to meet the PM<sub>2.5</sub> requirement by 2014.

Short-Term PM<sub>2.5</sub> Control Measure

CMB-01: Further NO<sub>x</sub> Reductions from RECLAIM (Phase I and Phase II) [NO<sub>x</sub>]

Summary Description of Control Measures

*Phase I is classified as a short-term PM<sub>2.5</sub> control measure and seeks further reductions of 2 TPD of NO<sub>x</sub> by 2014 by reducing (shaving) the equivalent number of RTCs in the RECLAIM market.*

*Phase II of this control measure is classified in the draft 2012 AQMP as a federal CAA Section 182(e)(5) implementation measure. Section 182(e)(5) allows extreme ozone nonattainment areas to include measures that rely on the development of new technology or advancement of existing technology. Such measures are known as "black box" measures. In the draft 2012 AQMP, the Section 182(e)(5) implementation measures such as Phase II, are designed to implement some of the "black box" measures from the 2007 AQMP. Phase II seeks NO<sub>x</sub> reductions of an additional 1 TPD over that of Phase I.*

Proposed Method of Control and Emissions Reduction

*Phase I: The proposed measure states that the annual RECLAIM audits from 2008 to 2010 showed approximately 22–30% programmatic excess in RTC holdings (6.5 TPD – 8.0 TPD) over the three years. Thus, the measure proposes to reduce the total program's RTC allocations by 2–3 TPD by 2014. Staff would seek, with stakeholder input, to identify appropriate approaches during rulemaking to evaluate various shaving methodologies; e.g., a sector-specific or across-the-board reduction. Rulemaking to begin Phase I is expected to begin in 2013 for implementation in 2014.*

*Phase II: The proposed measure states that the RECLAIM program is subject to the California Health and Safety code, which requires evaluation of the advancement in Best Available Control Retrofit Technology (BARCT). Thus, the measure proposes a periodic facility reassessment and if BARCT changes, the facility's NO<sub>x</sub> RTC holdings would be reduced by an equivalent amount as if the facility's equipment was subject to applicable command-and-control BARCT levels. The draft 2012 AQMP states that the January 2005 amendment to the RECLAIM rules "reflected" such a BARCT reassessment resulting in NO<sub>x</sub> RTC reductions of approximately 22.5%. Staff may incorporate concepts of facility modernization, and other feasible control measures such as increased energy efficiency and zero and near-zero emission technologies during the rulemaking process that is scheduled to be complete in 2015 with implementation in 2020.*

Comments

*Phase I: As a point of clarification, there are various references to the amount of reductions sought from Phase I alternatively indicate either as 2 TPD NO<sub>x</sub> (Chapter 4, page 4-9) or 2-3 TPD*

} GG-4

SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

NO<sub>x</sub> (Chapter 4, Table 4-2 and Appendix IVA). Phase II, a Section 182(e)(5) implementation measure, proposes an additional 1-2 TPD of NO<sub>x</sub> reduction. In Appendix IVA, the table at the top of page IV-A-57 (CMB-01, Phase II) lists the combined NO<sub>x</sub> reductions from Phase I and Phase II as a minimum of 3 TPD to a maximum of 5 TPD. A footnote on the table notes that the lower ends of the range (2 and 1 TPD, respectively) will be the SIP commitment for the control measures. Finally, the parenthetical in the first sentence at the top of page IV-A-59 states “from overall 3-5 tpd NO<sub>x</sub> RTC reductions discussed in the first phase.” These references are confusing, appear inconsistent and could be construed as misleading with respect to the proposed Phase I RECLAIM NO<sub>x</sub> reductions.

GG-4

For consistency and to avoid confusion as this control measure undergoes rulemaking, SoCalGas strongly urges that all text references and tables in the draft 2012 AQMP should only list the SIP commitment of 2 TPD.

Phase II: We question the need for two RECLAIM “shaves” so close together in the draft 2012 AQMP. We note that the difference in emission reductions between the adopted SIP and those achieved from the Phase I rulemaking could be significant as evidenced by the 2007 AQMP and subsequent RECLAIM rulemaking. This is borne out in the Annual RECLAIM Audit Report for 2009 Compliance Year, Chapter 3 - Emissions Reductions Achieved in which it is stated that cumulative changes will result in 22.5% reductions when fully implemented. Given the estimated 2010 excess in RTC holdings of 8 TPD (page IV-A-15), it is reasonable to expect that the Phase I rulemaking will propose more reductions than the 2 TPD SIP commitment for Phase I. As such, a periodic technology assessment only need be performed when the BARCT “true-up” is actually expected to result in emission reductions. The draft 2012 AQMP does not provide information on the impacts of such a BARCT evaluation prior to implementation of the proposed Phase II RTC shave. An evaluation of the potential impacts is necessary to ensure the proposed cost-effective threshold of \$22,500/ton is realistic, especially in light of new technologies being developed resulting in near-zero or zero emissions. The BARCT true-up must not underestimate future energy utilization, which is significantly lower due to continued economic doldrums, but energy use might return to historic levels as long as the cost of additional, incremental regulatory control does not affect manufacturers’ competitiveness.

SCAQMD must also consider that most of the stationary sources in RECLAIM are also regulated under California’s AB32 Cap and Trade regulations. As a result, these sources will likely have reductions in both criteria pollutants and GHGs. Impacts to businesses as a result of the Cap and Trade regulation could be significant, including relocation and shut down, or reduced production at existing operating facilities. The draft 2012 AQMP should provide an analysis of the potential likelihood and magnitude of emissions co-benefits due to other drivers as well as impacts of other regulations prior to initiating Phase II. We believe additional NO<sub>x</sub> reductions should not be committed under Phase II, and that such commitment should be incorporated into the 2015 8-hour ozone AQMP.

GG-5

Finally, we anticipate that widespread industry involvement in Cap and Trade programs will have an impact on overall energy use as companies endeavor to streamline operations and began to operate more efficiently. The incentive to increase operational efficiency will lead companies to ultimately reduce fuel use thus reducing combustion emissions from daily operations. Though

SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

changes in energy demand cannot be readily quantified at this time, stationary sources, fleets and other mobile sources will all be affected to the extent that the Cap and Trade Program will be a strong ally of the AQMP’s NO<sub>x</sub> reduction efforts.

SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

Attachment 2

Short-Term PM<sub>2.5</sub> Control Measure  
CMB-03: Reductions from Commercial Space Heating [NO<sub>x</sub>]

Summary Description of Control Measure

*This proposed control measure proposes NO<sub>x</sub> emission reductions from commercial fan-type central furnaces used for space heating and rated from > 175,000 Btu/hr to < 2,000,000 Btu/hr and will apply to manufacturers, distributors, sellers, installers and purchasers of this type of equipment.*

Proposed Method of Control and Emission Reductions

*This measure proposes to establish a NO<sub>x</sub> emission limit for new space heaters for commercial applications, which can be achieved through the use of low NO<sub>x</sub> burners.*

**Comments**

SoCalGas wants to ensure that the technological, economic, and operational impacts of this control measure on commercial businesses is minimized and ameliorated. The proposed control measure will require the development of advanced furnace products, which do not exist today and yet must meet existing safety and efficiency standards, and be reliable, durable and affordable. Our specific comments follow.

1. **Proposed Timing:** This measure will be implemented in two phases. Beginning in Phase I with a technical assessment to be completed by 2014, and completing Phase II rule development by 2016. SoCalGas supports this proposed two phase approach for this control measure. However, we do have concerns regarding the proposed time allowed for manufacturers to develop and commercialize these new low-emission products. Manufacturers are already being pushed to meet the 2014 deadline required for condensing residential furnaces and the 2015 deadline for non-condensing residential furnaces (SCAQMD Rule 1111). Based on the current research projects that are jointly co-funded by SoCalGas and SCAQMD, manufacturers may be hard-pressed to complete initial furnace designs and to have prototype residential units adequately field tested and safety certified in to order to meet commercialization timing targets in 2014 and 2015. Potential delay with the Rule 1111 residential products could impact the timing for development and commercialization of commercial units as proposed in this control measure. The Phase I technical assessment should consider the number of models of residential and commercial furnaces that have to be developed, field tested and safety certified before public sale by a manufacturer and the cumulative time needed to meet the emissions standard and accomplish these challenging tasks. The Phase I assessment should consider the technological, economic, and operational impacts upon specific customer categories. These customer categories cannot be treated as if they will react in the same way to the additional costs and maintenance requirements.
2. **SIP Commitment:** SoCalGas has concern regarding the SIP commitment of 0.18 TPD NO<sub>x</sub> by 2023 and 0.6 TPD NO<sub>x</sub> total proposed for this control measure. Our concern is

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GG-7

SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

based on what SCAQMD admits is a poorly defined equipment inventory. Because the SIP commitment is legally enforceable under the Federal Clean Air Act, we believe a more prudent approach would be to submit this control measure without a specified emissions reduction target. This approach is consistent with other control measures where equipment and emission inventories are not well defined.

SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

Attachment 3

Short-Term PM<sub>2.5</sub> Control Measure

BCM-03: Further PM Reductions from Under-Fired Charbroilers [PM<sub>2.5</sub>]

Summary Description of Control Measure

*This proposed control measure would reduce PM<sub>2.5</sub> emissions directly emitted from restaurant operations that use under-fired charbroilers by applying unspecified emission control technologies.*

Proposed Method of Control and Emissions Reduction

*The proposed control measure would be implemented in two phases. Phase I involves the assessment of several candidate emission control technologies/equipment at the University of California at Riverside's Center for Environmental Research & Technology's (CE-CERT) test kitchen. Phase II includes technical and economic feasibility analysis and evaluation of rule development (or amendment of existing Rule 1138 - Control of Emissions from Restaurant Operations) to implement feasible controls for under-fired charbroilers.*

**Comments**

SoCalGas wants to ensure that the impacts of this proposed control measure on the restaurant industry are minimized and ameliorated. The SCAQMD must ensure that any hood capture-systems or other control technologies developed to control PM<sub>2.5</sub> emissions from under-fired charbroilers meet existing safety standards, and are reliable and affordable. Additionally, the cost effectiveness analysis must demonstrate that the cost of control is reasonable. Our specific comments follow.

1. Phase 1 Feasibility Study: SoCalGas supports the proposed plan to conduct an initial Feasibility Study to identify cost-effective particulate controls for use with under-fired charbroilers. It is important that this study thoroughly investigates capital, operating and routine and periodic maintenance costs of the system and equipment. The cost assessment for maintenance should include labor and non-labor costs such as energy expenses, costs for cleaning agents such as soap and solvents, replacement filters and all other materials used in day-to-day operations.

If testing at CE-CERT identifies a good candidate control technology, then SoCalGas would be interested in cosponsoring (with SCAQMD and the California Restaurant Association) a follow-on field demonstration at an area restaurant to further validate operating costs and emission reductions of the equipment.

2. Technology issues: Other unique technical challenges include the need for direct access to the front of the under-fired charbroiler to manage the cooking process and the need for the cooked meats to maintain a charbroiled taste and appearance. Many restaurants base their culinary reputations on charbroiled foods. The Feasibility Study needs to consider all these technical issues, in addition to emission reduction capabilities.

GG-8

GG-9

SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

In summary, the SCAQMD should take the time necessary to understand fully the technology and product issues, related costs, and assess the impacts on various food service operations. As part of this assessment, SCAQMD should provide complete data for the incremental cost effectiveness and estimated emission reduction calculations. Finally, SoCalGas would consider co-funding a field demonstration of equipment that is shown to be good candidate technology in the Phase 1 laboratory evaluations conducted by CE-CERT.

SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

Attachment 4

Federal CAA Section 182(e)(5) Implementation Measures for Ozone  
EDU-01: Further Criteria Pollutant Reductions from Education, Outreach, and Incentives  
[All Pollutants]

Summary Description of Control Measure

*This proposed control measure seeks to provide educational outreach and incentives for consumers to contribute to clean air efforts. In addition, this proposed measure intends to increase the effectiveness of energy conservation programs through public education and awareness as to the environmental effects and benefits from conservation. Educational and incentive tools to be used include comparison of energy usage and efficiency, social media, and public/private partnerships.*

Proposed Method of Control and Emissions Reduction

*Emissions reductions have not yet been quantified but examples of emissions reduction methods include the usage of energy efficient products, new lighting technology, "super compliant coatings," tree planting, and the use of lighter colored roofing and paving materials to reduce energy usage by lowering ambient temperature.*

**Comments**

Assuming SCAQMD has the funding and resources, SoCalGas supports the adoption of this measure and programs to help promote clean air purchases, efficiency projects, and conservation techniques that provide criteria pollutant emissions benefits. We believe that creating awareness of the benefits of choosing efficient equipment, making energy upgrades, and using cleaner energy sources are critical to reaching the state's public health, air, and greenhouse gas goals. SoCalGas offers a number of rebates, incentives, and other programs to help transform the market towards more energy efficient products. We believe there are opportunities to work closely with SCAQMD to help craft effective programs and partner on these types of efforts.

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SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

Attachment 5

Federal CAA Section 182(e)(5) Implementation Measures for Ozone  
INC-01: Economic Incentive programs to Adopted or Near- Zero Technologies [NO<sub>x</sub>]

Summary Description of Control Measure

*The primary objective of this measure is to develop programs that promote and encourage adoption and installation of cleaner, more efficient combustion equipment with a focus on zero and near-zero technologies, such as boilers, water heaters, and commercial space heating, through economic incentive programs, subject to the availability of public funding.*

Proposed Method of Control

*Avail economic incentive programs from public funding including grants and loans for new purchase of equipment where long term cost savings from increased efficiency are achieved.*

Comments

Assuming SCAQMD has the funding and resources, SoCalGas supports the adoption of this measure and programs that promote and encourage the adoption and installation of cleaner, more efficient stationary combustion equipment. We believe that providing incentives and loans to replace combustion equipment will accelerate their replacement and help reduce the public's exposure to air pollutants and greenhouse gas emissions. Providing incentives to help mitigate the costs associated with new purchases and other energy saving upgrades can significantly impact whether or not customers participate in these types of activities. SoCalGas offers a number of rebates, incentives, and other programs to help transform the market towards more energy efficient products. We believe there are opportunities to work closely with SCAQMD to help craft effective programs and partner on these types of efforts.

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SoCalGas - Comments on the SCAQMD Draft 2012 AQMP

Attachment 6

Federal CAA Section 182(e)(5) Implementation Measures for Ozone - Mobile Sources

General Comments

The draft 2012 AQMP demonstrates attainment of the federal 2006 24-hour PM<sub>2.5</sub> standard of 35 µg/m<sup>3</sup> by 2014. It also updates the approved 8-hour ozone AQMP with new commitments for short-term NO<sub>x</sub> and VOC reductions and updated emissions inventories and projections to make major progress toward achieving the 1997 8-hour ozone standard of 0.08 parts per million (ppm) by 2023 and the 2008 standard of 0.075 ppm by 2032. As stated previously, SoCalGas does not believe SCAQMD should submit control measures for inclusion in the SIP if they are not needed to show attainment with the 2006 PM<sub>2.5</sub> 24-hour standard, but we do in general support the concepts in the Section 185(e)(5) mobile-source control measures.

GG-12

As a matter of policy, SoCalGas supports a technology agnostic approach to meeting emission reduction goals. Within that perspective, SoCalGas believes that the draft 2012 AQMP incorporates too little natural gas technology. This is not based on SoCalGas' role as a distributor of natural gas but rather on the demonstrated performance and predictable advances in natural gas technologies, while achieving emission reductions in both criteria pollutants and green-house gases (GHG). Natural gas technologies offer one of, if not the, lowest cost alternatives for reduction of criteria and GHG emissions, and vehicles running on renewable natural gas (biogas) have been certified by CARB as the lowest GHG-emitting vehicles. CARB analysis shows that natural gas vehicles (NGVs) employing biogas fuel are lower GHG emitters than both battery-electric vehicles (BEVs), and fuel-cell vehicles (FCVs). Additionally tailpipe criteria emissions can be mitigated to very near-zero levels.

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The focus of the mobile source measures in the draft 2012 AQMP includes accelerated retrofits or replacement of existing vehicles or equipment, acceleration of vehicle turnover through voluntary vehicle retirement programs, and greater use of cleaner fuels in the near-term. The draft 2012 AQMP envisions that, in the longer-term, in order to attain the federal 8-hour ozone standard, there is a need to increase the penetration and deployment of near-zero and zero-emission vehicles such as plug-in hybrids, BEVs, and FCVs, increased use of cleaner fuels (either alternative fuels or new formulations of gasoline and diesel fuels), and additional emission reductions from locomotive and aircraft engines. The proposed technology solutions all have merit but in general are currently very expensive, may require expensive infrastructure improvements, and major technology development to meet the stated goals cost effectively. Natural gas technology, on the other hand, is cost effective now and relatively mature. Even if viewed as a bridge fuel, good public policy would support aggressive adoption of compressed natural gas (CNG) and liquefied natural gas (LNG) now, and let technology advances determine the role of natural gas fuel beyond 2025.

Natural gas, a domestically produced fuel, is expected to continue to offer cost advantages over diesel and gasoline (mostly refined from imported crude oil) for a long time. Natural gas also offers more reductions in NO<sub>x</sub>, CO, CO<sub>2</sub> and PM<sub>2.5</sub> than liquid fuels.



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SoCalGas believes the incorporation of near-zero emissions technology along with flexibility to define that term both in terms of current emissions and progress toward zero-emission pathways is a positive step toward the type of performance-based, technology-agnostic and pragmatic approaches that SoCalGas advocates. SoCalGas looks forward to working with the SCAQMD on supportive paths to zero emissions such as hydrogen-CNG blends, biogas, advanced after-treatment and reformation of natural gas to produce hydrogen fuel.

SoCalGas can support all the Advanced Control Technologies measures that accelerate the penetration of lower emissions (On-Road & Off-Road) vehicles, marine vessels and locomotives, if they are not submitted as control measure in the PM<sub>2.5</sub> SIP, include the potential for NGVs as near-zero emission technologies, and the use of NGVs and infrastructure as a path to zero-emission technologies. Natural gas technologies that are currently available or being developed can provide cost effective alternative solutions in addition to the other fuels being considered.

Our specific comments are divided into five categories as follows:

**Category 1:** Control measures related to partial-zero and zero-emission vehicles and light-, medium- and heavy-duty vehicles.

**ONRD-01: Accelerated Penetration of Partial-Zero Emission and Zero-Emission Vehicles**  
Summary Description of Control Measure

*This measure proposes to continue incentives for the purchase of zero-emission vehicles and hybrid vehicles that have a portion of their operation in an all electric range mode. The state Clean Vehicle Rebate Pilot (CVRP) program is proposed to continue from 2015 to 2023 with a proposed funding for up to \$5,000 per vehicle. The proposed measure seeks to provide funding assistance for up to 1,000 zero-emissions or partial-zero emission vehicles per year.*

**ONRD-02: Accelerated Retirement of Older Light- and Medium-Duty Vehicles**  
Summary Description of Control Measure

*This proposed measure calls for promoting the permanent retirement of older eligible vehicles through financial incentives currently offered through local funding incentive programs and the AB 118 Enhanced Fleet Modernization Program (EFMP). The proposed measure seeks to retire up to 2,000 older light- and medium-duty vehicles (up to 8,500 lbs gross vehicle weight) per year. Funding incentives of up to \$2,500 per vehicle are proposed for the scrapping of the vehicle, which may include a replacement voucher for a newer or new vehicle.*

Light-Duty Vehicles: ONRD-01 and ONRD-02

**Category 1, Light-Duty Vehicles Comments**

SoCalGas requests inclusion of light-duty PZEV NGVs in the draft 2012 AQMP as qualifying partial-zero emission vehicles. Although the Honda GX (dedicated CNG) is the only certified Partial-Zero Emission Light-Duty vehicle, other OEM's have indicated interest in developing vehicles. The development of a cost effective Home Refueling Appliances (HRA) can provide a large boost for light-duty market potential and other technology advances such as CNG/Electric hybrid, engine efficiency advances and numerous other technology advances can reduce

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emission further. SoCalGas would welcome the opportunity to consider joint technology programs with SCAQMD to advance these technologies and other zero-emission pathway approaches such as hydrogen-CNG blends.  
Medium-Duty Vehicles: ONRD-03

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**ONRD-03: Accelerated Penetration of Partial-Zero Emission and Zero-Emission Light Heavy and Medium Heavy-Duty Vehicles**  
Summary Description of Control Measure

*The objective of the proposed action is to accelerate the introduction of advanced hybrid and zero-emission technologies for Class 4 through 6 heavy-duty vehicles. The state is currently implementing a Hybrid Vehicle Incentives Project (HVIP) program to promote zero-emission and hybrid heavy-duty vehicles. The proposed measure seeks to continue the program from 2015 to 2023 to deploy up to 1,000 zero- and partial-zero emission vehicles per year with up to \$25,000 funding assistance per vehicle. Zero-emission vehicles and hybrid vehicles with a portion of their operation in an all electric range mode would be given the highest priority.*

**Category 1, Medium-Duty Vehicles Comments**

SoCalGas requests inclusion of medium-duty PZEV NGVs as qualifying partial-zero emission medium-duty vehicles. At this time the Ford 150, Chrysler Ram and Chevy Silverado are the only CNG bi-fuel trucks and they do not qualify as partial-zero emission vehicles. Landi Renzo, USA announced that USEPA certified a CNG-fueled 2012 Ford 6.8L V10 engine (Ford F-450/550/650 Chassis Cab and F53/F59 Step Van Chassis). Other OEMs and third party up-fitters have expressed interest in the development of other medium-duty vehicles that have the potential of achieving partial-zero emissions. SoCalGas proposes to jointly co-fund, with the SCAQMD, the demonstration of newly developed lower emissions trucks and vans.

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Heavy-Duty Vehicles: ONRD 04, ONRD 05, ADV-01 and ADV-03

**ONRD-04: Accelerated Retirement of Older On-Road Heavy-Duty Vehicles**  
Summary Description of Control Measure

*This proposed measure seeks to replace up to 1,000 heavy-duty vehicles per year with newer or new vehicles that at a minimum, meet the 2010 on-road heavy-duty NO<sub>x</sub> exhaust emissions standard of 0.2 g/bhp-hr. Given that exceedances of the 24-hour PM<sub>2.5</sub> air quality standard occur in the Mira Loma region, priority will be placed on replacing older diesel trucks that operate primarily at the warehouse and distribution centers located in the Mira Loma area. Funding assistance of up to \$35,000 per vehicle is proposed and the level of funding will depend upon the NO<sub>x</sub> emissions certification level of the replacement vehicle. In addition, a provision similar to the Surplus Off-Road Option for NO<sub>x</sub> (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation will be sought to ensure that additional NO<sub>x</sub> emission reduction benefits are achieved.*

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ONRD-05: Further Emission Reductions from Heavy-Duty Vehicles Serving Near-Dock Railyards

Summary Description of Control Measure

*This proposed control measure calls for a requirement that any cargo container moved between the Ports of Los Angeles and Long Beach to the nearby railyards (the Intermodal Container Transfer Facility and the proposed Southern California International Gateway) be with zero-emission technologies. The measure would be fully implemented by 2020 through the deployment of zero-emission trucks or any alternative zero-emission container movement system such as a fixed guideway system. The measure calls for CARB to either adopt a new regulation or amend an existing regulation to require such deployment by 2020. To the extent the measure can feasibly be extended beyond near-dock railyards, this would be considered for adoption by CARB.*

ADV-01: Actions for the Deployment of Zero- and Near-Zero Emission On-Road Heavy-Duty Vehicles

Summary Description of Control Measure

*This measure would continue the efforts underway to develop zero-emission and near-zero emission technologies for on-road heavy-duty vehicle applications. Such technologies include, but not limited to, fuel cell, battery-electric, hybrid-electric with all electric range, and overhead catenary systems. Hybrid-electric systems incorporate an engine powered by conventional fuels or alternative fuels such as natural gas. The actions provided in the proposed measure are based on the SCAG 2012 Regional Transportation Plan.*

ADV-03: Actions for the Deployment of Zero- and Near-Zero Emission Cargo Handling Equipment

Summary Description of Control Measure

*This measure recognizes the actions underway to develop and deploy zero- and near-zero emission technologies for various cargo-handling equipment. The San Pedro Bay Ports are currently demonstrating battery-electric yard tractors. In addition, battery-electric, fuel cell, and hybridized systems could be deployed on smaller cargo handling equipment. In addition, the use of alternative fuels for conventional combustion engines could potentially result in greater emissions benefits.*

Category 1, Heavy-Duty Vehicles Comments

SoCalGas requests changes to these control measures to include and encourage development of natural-gas powered partial-zero emission vehicles. The current Federal and CARB NO<sub>x</sub> emission standard for heavy-duty vehicles is 0.2 g/bhp-hr, while the draft 2012 AQMP proposes a 95% reduction, or 0.01 g/bhp-hr (Appendix IV –B-54). In our research and demonstration projects, SoCalGas is targeting near-term emission reductions of 80%, or 0.05 g/bhp-hr. Several engine manufacturers are developing various sizes of heavy-duty engines to meet less than 0.2 g/bhp-hr. Doosan (a Korean engine manufacturer) is developing an eleven-liter engine that will utilize blended hydrogen fuel and other emissions control techniques to achieve near-zero emissions. Brayton Energy is developing microturbines, and hybrid-CNG heavy-duty engines. US Hybrid is working with Freightliner and GTI in demonstrating a hybrid-CNG engine in a class-eight drayage truck. SoCalGas and several other parties are participating in demonstrating

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catenary CNG-hybrid trucks at the Port of Los Angeles. Also, Ebus is demonstrating a new CNG-Hybrid bus. All of these projects have one common goal, which is to use natural-gas fuel along with innovations to achieve near-zero emissions. As an example, the SCAQMD could encourage future development by setting several qualifying emission-reduction levels over time, such as 50% NO<sub>x</sub> reduction over 2010 emission standards within the next 5 years, 75% NO<sub>x</sub> reduction over 2010 emission standards within the next 10 years and provide higher incentives for higher emission reductions.

Hybrid technology, including CNG-hybrid trucks, would be encouraged by the use of the concept of “zero-emission miles traveled” as another metric to determine whether or not a technology is a near-zero emission technology or even a zero-emission technology. We urge SCAQMD and CARB to consider further discussion of this concept soon, in order for truck manufacturers to understand the concept of zero-emission miles traveled so they may incorporate it into their development plans. As you know, truck manufacturers must have a long lead time to develop and introduce new vehicles. They need to know the new “rules of the game” as soon as possible.

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**Category 2:** Control measures related to Surplus Off-Road Options for NO<sub>x</sub> (SOON)

**OFFRD-01:** Extension of the SOON Provision for Construction/Industrial Equipment  
Summary Description of Control Measure

*This measure seeks to continue the Surplus Off-Road Option for NO<sub>x</sub> (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation beyond 2014 through the 2023 timeframe. In order to implement the SOON program in this timeframe, funding of up to \$30 million per year would be sought to help fund the repower or replacement of older Tier 0 and Tier 1 equipment, with reductions that are considered surplus to the statewide regulation with Tier 4 or cleaner engines.*

**ADV-06:** Actions for the Deployment of Cleaner Off-Road Equipment

Summary Description of Control Measure

*SCAQMD, its Mobile Source Air Pollution Reduction Review Committee (MSRC), and CARB have been conducting an off-road —showcase program for retrofit technologies to further reduce emissions from older off-road equipment. In addition, several major off-road engine manufacturers are investigating the potential use of hybrid systems to further reduce criteria pollutant and greenhouse gas emissions. Potential advanced technologies include hybrid systems that utilize batteries, fuel cells, or plug-in capabilities, which could result in lower emissions compared to Tier 4 emission levels when combined with future Tier 4 compliant engines. The measure is implemented by the District, CARB and U.S. EPA.*

**Category 2 Comments**

SoCalGas requests modifications to both OFFRD-01 and ADV-06 control measures to explicitly allow the use of natural gas equipment for off road applications to achieve partial-zero emissions.

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Category 3: Control measures related to locomotives

OFFRD-02: Further Emission Reductions from Freight Locomotives

Summary Description of Control Measure

*The proposed control measure is to meet the commitment in the 2007 SIP for the accelerated use of Tier 4 locomotives in the South Coast Air Basin. The measure calls for CARB to seek further emission reductions from freight locomotives through enforceable mechanisms within its authority to achieve 95 percent or greater introduction of Tier 4 locomotives by 2023.*

OFFRD-03: Further Emission Reductions from Passenger Locomotives

Summary Description of Control Measure

*This measure recognizes the recent actions by the Southern California Regional Rail Authority (SCRRA or Metrolink) to consider replacement of their existing Tier 0 passenger locomotives with Tier 4 locomotives. The SCRRA adopted a plan that contains a schedule to replace their older existing passenger locomotives with Tier 4 locomotives by 2017. More recently, SCRRA released a Request for Quotes on the cost of new or newly manufactured passenger locomotives with locomotive engines that meet Tier 4 emission levels.*

ADV-02: Actions for the Deployment of zero- and Near-Zero Emission Locomotives

Summary Description of Control Measure

*This measure calls for the development and deployment of zero-emission and near-zero emission technologies for locomotives. Such technologies include overhead catenary systems, hybrid locomotives that have some portion of their operation in an all electric range mode, and alternative forms of external power such as a battery tender car. The actions provided in the proposed measure are based on the SCAG 2012 Regional Transportation Plan.*

**Category 3 Comments**

SoCalGas requests modifications to OFFRD-02, OFFRD-03 and ADV-02 control measures to explicitly allow the use of natural gas-powered partial-zero emission locomotives. SoCalGas is collaborating with Energy Conversions Inc. (ECI) and Ioxus on an ARPA-E project to develop the systems for a Tier 5 CNG-hybrid commuter locomotive. This technology offers a viable near-zero emission transition for passenger rail. The project will develop and demonstrate novel locomotive architecture that integrates several recently proven technologies at locomotive scale. It offers reduced operating costs and emissions with enhanced performance and redundancy. Because of its economic practicality and small infrastructure footprint, it could result in a very practical transition from diesel to natural gas in the publicly visible sector of the United States transportation system. In some instances it will prove to be a practical and economic substitute for rail electrification.

Converting to CNG-hybrids in the existing fleet of F40/59 locomotives will provide cleaner, higher performing locomotives at a similar cost to buying new diesel passenger locomotives. This could lower fuel cost by 80% and yield a yearly savings of approximately \$17.1 million. Emissions are 75% below Tier 4 NO<sub>x</sub> and result in a 40% decrease in GHGs. In terms of performance it could double the acceleration rate, increase average train speed by 10%, and offer a minimal increase in energy expenditure for additional train stops.

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A TIAX report discussing the LNG switcher locomotive demonstration project below is attached (Attachment 6-B) for reference.<sup>1</sup>

In 2009, the ports of Long Beach and Los Angeles, working with Pacific Harbor Line, Inc. (PHL) acquired one switcher locomotive fueled by liquefied natural gas (LNG) to demonstrate the technology's suitability and emissions reduction characteristics at the Port of Los Angeles' West Basin Container Terminal (WBCT). This 1,200 HP LNG locomotive (BNSF 1203) was the primary switcher locomotive used at WBCT during the duration of the demonstration project. The objective of the demonstration was to compare the performance of the system with PHL's older (phased out) 1,200 HP diesel-electric switchers, using recent historical data. This provided an "apples to apples" comparison because the two types of switcher locomotives are similar in size and capabilities. In addition, emissions comparisons were made under the revised plan of the LNG switcher versus both types of diesel-electric locomotives (the older phased out baseline switcher, and the new Tier 2 switcher). Using the modified demonstration test plan as approved by the Ports, the LNG switcher was operated by PHL for a period of 36 weeks.

Based on PHL-provided data and observations from the demonstration, the following conclusion can be made: Overall, the LNG locomotive performed "adequately to well" in railcar switching service. Although there were a few logistics and mechanical issues associated with storing and combusting LNG fuel that negatively impacted the locomotive's reliability and service capability, and despite the apparent higher rate of fuel consumption, the LNG locomotive cost approximately 23% less to fuel on an energy-equivalent basis, due to the lower price paid by PHL per Btu of LNG fuel compared to diesel fuel. LNG is also a viable option for switchers and might provide further fuel cost benefits. Additionally, the LNG switcher locomotive emits an estimated 92% less NO<sub>x</sub> and 76% less PM compared to the baseline (uncontrolled) diesel locomotives. The LNG switcher locomotive emits an estimated 81% less NO<sub>x</sub> and 57% less PM than PHL's new Tier 2 locomotives.

OFFRD-2 seeks to accelerate the locomotive fleet turn over to have 95% of locomotives operating in the South Coast Air Basin at Tier 4 emissions levels. This would require the participating railroads to purchase new locomotives in order to retire reliable and functional locomotives. Not only are these new locomotives a significant and unnecessary capital cost, these newer locomotives will cost more to operate and require more routine maintenance. LNG conversion systems can be a cost effective option for re-powering existing EMD locomotives, despite the possible need after treatment. These systems would not only exceed the reductions required by Tier 4, but cut operating costs in half.

Regarding OFFRD-3, SCAQMD, SoCalGas and Metrolink participated in a program called GasRailUSA. This program ended abruptly when the participating engine manufacturer stopped supporting it, but in the process it generated test results on several different natural gas locomotive engine technologies. For NO<sub>x</sub> reduction and thermal efficiency, the most promising technology was micro pilot prechambers (MPPC). MPPC uses a micro pilot of diesel fuel in a prechamber to ignite a very lean mixture of premixed natural gas. This technology has recently

<sup>1</sup> Demonstration of a Liquid Natural Gas Fueled Switcher Locomotive at Pacific Harbor Line, Inc.

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been tested and refined in several research programs for smaller engines with even more promising results.

In a collaborative effort ECI, Ioxus, SoCalGas and SwRI submitted a grant proposal to ARPA-E to develop the needed systems to upgrade existing EMD passenger locomotives to CNG-hybrid commuter locomotives. Utilizing the frequent start-stop operation of the commuter-rail duty cycle combined with MPPC, natural gas engines, and ultra capacitive energy storage this system is predicted to have NO<sub>x</sub> emissions below the upcoming Tier 4 emission standard.

It appears that SCAQMD staff is looking for optional NO<sub>x</sub> standards that could be incorporated into the draft 2012 AQMP. The CNG-hybrid system discussed above could facilitate discussion towards a new, optional "Tier 5" emission standard for Commuter Locomotives.

The CNG-hybrid system is more likely to accelerate the transition of the passenger locomotive fleet because it reduces operating costs by 70% and doubles the acceleration performance of the trains. In the long term the performance increase is highly desirable and the fuel cost savings over the life of the system make the CNG-hybrid system less expensive than any diesel fueled Tier 3 or Tier 4 systems.

The "Tier 5" CNG-hybrid commuter locomotive is also a viable and practical step toward a "Net-Zero" emission locomotive system. The natural-gas piston engines could be replaced when they need overhaul with ultra-low NO<sub>x</sub> natural gas turbines. In 8 to 10 years, the Intercooled Recuperated Gas Turbine engines in development with ceramic turbines will have the reliability and efficiency of current diesel locomotive engines with NO<sub>x</sub> outputs below 5 ppm. This future engine-technology upgrade will benefit from current investment in natural-gas storage and hybrid equipment.

SoCalGas believes conversion to natural gas of EMD 2-stroke engines is an early action to meet Tier 4 standards and a viable path to near-zero emissions with future replacement of the piston engine with a gas turbine.

Natural gas conversion is a promising early and rapid Tier 4 adoption for rail because it will also cut fuel operating costs in half. This is in contrast with SCR and high EGR as Tier 4 solutions, which will increase operating costs. Unlike electrification it does not require significant infrastructure change; and, unlike Tier 4 diesel, it cuts operating costs in half.

**Category 4:** Control measures related to Marine Vessels and Harbor Craft

**OFFRD-04: Further Emission Reductions from Ocean-Going Marine Vessels while at Berth**  
**Summary Description of Control Measure**

*This measure seeks additional emission reductions from ocean-going marine vessels while at berth. The actions would affect ocean-going vessels that are not subject to the statewide Shore Power regulation (Title 17 Section 93118.3, Airborne Toxic Control Measure for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At-Berth in a California Port) or vessel calls that are considered surplus to the statewide regulation. The measure seeks at a minimum to have an additional 25 percent of vessel calls beyond the statewide regulation to deploy shore*

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power technologies or alternative forms of emissions reduction as early as possible. Such actions could be implemented through additional incentives programs or through the San Pedro Bay Ports as part of the implementation of the Ports Clean Air Action Plan.

OFFRD-05: Emission Reductions from Ocean-Going Marine Vessels

Summary Description of Control Measure

*This measure recognizes the recent actions at the Ports of Los Angeles and Long Beach to initiate an incentives program for cleaner ocean-going vessels to call at the ports. The program has been initiated as part of the San Pedro Bay Ports Clean Air Action Plan. The program will provide financial incentives for cleaner Tier 2 and Tier 3 ocean-going vessels to call at the ports. This measure also recognizes the need to monitor progress under such programs and augment them as necessary to ensure sufficient results. The program will be monitored on annual basis and, if necessary, any adjustments to the program will be made.*

ADV-04: Actions for the Deployment of Cleaner Emission Commercial Harbor Craft

Summary Description of Control Measure

*Several commercial harbor craft operators have begun deployment of hybrid systems in their harbor craft to further reduce criteria pollutant emissions and improve fuel efficiency. Other cleaner technologies include the use of alternative fuels, retrofit of existing older marine engines with selective catalytic converters, and diesel particulate filters. This measure recognizes several efforts between SCAQMD and the Ports of Los Angeles and Long Beach to further demonstrate control technologies that could be deployed on commercial harbor craft that could go beyond the statewide Harbor Craft regulation (Title 17 Section 93118.5, Airborne Toxic Control Measure for Commercial Harbor Craft and Title 12 Section 2299.5, Low Sulfur Fuel Requirement, Emission Limits and Other Requirements for Commercial Harbor Craft).*

ADV-05: Actions for the Deployment of Cleaner Ocean-Going Marine Vessels

Summary Description of Control Measure

*The Ports of Los Angeles and Long Beach, CARB, and SCAQMD have sponsored research and demonstration of various control technologies to further reduce emissions from ocean-going vessels. In addition, the San Pedro Bay Ports Clean Air Action Plan contains a measure to further demonstrate such technologies on ocean-going vessels. This measure recognizes many of these efforts and the need to further demonstrate retrofit technologies on existing ocean-going vessels.*

Category 4 Comments

SoCalGas supports these control measures with the caveats set out in our general mobile source comments. Both CNG and LNG fuels have the potential to achieve near-zero emissions for marine vessels and harbor craft. Please see the attached detail report by American Clean Skies Foundation (Attachment 6-A) on this topic<sup>2</sup>.

This study offers the first in-depth look at the challenges and prospects of converting U.S. marine vessels to liquefied natural gas, which is more often viewed as a fuel for long haul

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<sup>2</sup> NATURAL GAS FOR MARINE VESSELS - U.S. MARKET OPPORTUNITIES



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trucking. Most marine vessels operate on liquid petroleum fuel—either marine distillate or marine residual oil.

Based on current forecasts, natural gas delivered for production of LNG is now at least 70% less expensive on an energy equivalent basis than marine residual fuel and 85% less expensive than marine distillate fuel. EIA currently projects that this relative price advantage will continue, and even increase, through 2035. In addition, conversion of vessels to LNG operation is expensive, it can cost up to \$7 million to convert a medium-sized tug to operate on natural gas, almost \$11 million to convert a large car and passenger ferry, and up to \$24 million to convert a Great Lakes bulk carrier. Approximately one sixth of this cost relates to conversion of the vessel engines and the rest is for installation of LNG storage tanks and related safety systems and ship modifications.

Another issue which will affect the economics of LNG conversion for some vessels is implementation of federal emissions regulations and fuel sulfur restrictions, which become effective between 2016 and 2020. In particular, significant reductions in allowable fuel sulfur, for vessels operating in federal waters and in the North American and Caribbean Sea Emission Control Areas, will require switching to more expensive distillate fuel, or installation of expensive emission controls for vessels that currently burn residual fuel. For these vessels, the incremental cost of compliance relative to current fuel costs may significantly improve the economics of conversion to naturally low-sulfur LNG.

Below<sup>3</sup> is a link to an article about Fjord Line Ferries that converted to 100% LNG. Bergen Fosen is building two ships with Rolls-Royce BV12PG engines. Two new international cruise ferries by the Egersund, Norway-based Fjord Line will be powered solely by LNG, rather than the originally announced dual fuel system.

**Category 5:** Control measures for aircraft engines

ADV-07 –Actions for the Deployment of Cleaner Aircraft Engines

Summary Description of Control Measure

*Mobile Source Air Pollution Reduction Review Committee (MSRC): This measure recognizes the efforts of the Federal Aviation Administration's Continuous Lower Energy, Emissions and Noise (CLEEN) Program. The goal of the CLEEN Program is the development of new aircraft engines that potentially can be up to 60 percent cleaner in NO<sub>x</sub> emissions than current aircraft engines. The actions under this measure are to continue the development of cleaner aircraft engines and work with the airlines and local airport authorities to develop mechanisms to route the cleanest aircraft to serve the South Coast Air Basin.*

<sup>3</sup> [http://www.fleetandfuel.com/files/eng/2012/07/fjord-line-ferries-100-  
ing.html\\_source=FleetFuel01August2012&utm\\_campaign=August152012&utm\\_medium=email](http://www.fleetandfuel.com/files/eng/2012/07/fjord-line-ferries-100-<br/>ing.html_source=FleetFuel01August2012&utm_campaign=August152012&utm_medium=email)

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Category 5 Comments

SoCalGas has no comments on this control measure except that we advocate that only those control measures required to demonstrate attainment with the 2006 24-hour PM<sub>2.5</sub> standard be submitted for the SIP at this time.

**Responses to Comment Letter GG**  
**SoCal Gas / Sempra**

**Response to Comment GG-1:**

Thank you for your comments regarding the recent EPA and NHTSA rulemaking. We are aware of the proposed credit approach for greenhouse gas purposes and continue to support greater use of alternative fueled vehicles as a vital solution to meeting ambient air quality standards in the South Coast Air Basin.

**Response to Comment GG-2:**

District staff looks forward to the next generation of cleaner alternative fueled combustion engines. District staff believes that the potential to integrate the next generation of cleaner combustion engines with hybrid systems that have the capability of operating in a "zero-emission" mode will be necessary in order for the South Coast Air Basin to achieve air quality standards by their applicable dates. We look forward to working with all stakeholders in the development of the cleanest engine technologies as early as possible.

**Response to Comment GG-3:**

These three main points are addressed in detail in the following responses. The district is committed to fuel neutral policies and actions, provided that the associated emissions are zero or near-zero allowing the Basin to reach its air quality goals.

**Response to Comment GG-4:**

Several improvements have been made to Control Measure CMB-01 to clarify its intent. Most importantly, please note that, as pointed out in response to comment W-3, reductions from Control Measure CMB-01 are no longer needed for demonstrating attainment with the 24-hour PM<sub>2.5</sub> standard. As a result, Control Measure CMB-01 in the revised Draft 2012 AQMP is listed as a contingency measure for PM<sub>2.5</sub> and not as part of the short-term control strategy, although the proposed BARCT adjustment is now listed as an ozone measure.

**Response to Comment GG-5:**

Please see response to comment GG-4. District staff is cognizant that implementation of the AB32 program, in addition to the GHG reductions, in many instances, may result in criteria pollutant reduction co-benefits. Such co-benefits in criteria pollutants would be welcome and could be factored in future program designs to the extent such benefits could be quantified during the program design phase.

**Response to Comment GG-6:**

AQMD staff does not expect the compliance date for a rule based on control measure CMB-03 to be earlier than 2018. The current project to develop prototypes of Rule 1111 compliant residential furnaces is progressing well and is expected to be completed by the summer of 2013. Based on progress to date, AQMD staff does not expect a delay in Rule 1111 implementation. Staff believes that the current schedule in measure CMB-03 provides sufficient time for development of larger products based on residential furnace technology (multiple small burners) or single burner technologies used in other applications. The various types of commercial space heaters will be evaluated as part of the rule development process.

**Response to Comment GG-7:**

The methodology for developing the commercial space heating emissions inventory is well established, has been used in previous AQMPs and incorporates EPA emission factors, local data on gas use by different sectors from local gas utilities and information from the California Energy Commission, CARB and local agencies. The inventory incorporates local growth projections and gas utility provided energy conservation projections. The factor in inventory development that may need further enhancements is the proportion of heating provided by forced air furnaces versus boilers. Given the inventory for this control measure is based on sound data and AQMD staff has used a conservative approach to estimate emission reductions, staff proposes to take credit for this reduction and revise the emission reduction upward during rule development if it is warranted.

**Response to Comment GG-8:**

As outlined, the Phase I of the technical assessment will evaluate all costs associated with the purchase, installation, and operation and maintenance of the charbroiler control device. Consideration will be given to compatibility and local codes (e.g. fire suppression) relative to implementing the technology. The assessment of costs will also include the cleaning and/or replacement of filters. This has been clarified in the control measure.

AQMD staff hopes for and anticipates more than one affordable and feasible technology and appreciates the offer to co-sponsor and co-fund one of technologies in the field. A real-world assessment would be most beneficial to proving the success of the control device. It should be noted that the San Joaquin Valley APCD created a program with \$500,000 to demonstrate technologies at a restaurant and had no takers. So, the Gas Company's assistance in identifying a restaurant would be most helpful and will be discussed as part of the stakeholder process.

**Response to Comment GG-9:**

One of the intents of the testing program at CE-CERT is to demonstrate a technology that any control installations not augment the cooking process; therefore the focus is for in-hood or rooftop/duct work placement of the device so as not to impact the taste or appearance of the charbroiled meat. This has also been clarified in the control measure.

Recognizing that any feasible control device must be affordable to the restaurant operator, one focus of the testing program was to evaluate potential control devices that have a capital and installation cost below \$30,000 and annual operating costs below \$10,000. Evaluation of cost (including incremental cost) impacts associated with purchase, installation, and operation and maintenance (e.g., cleaning and/or replacing filters) of the equipment will also be assessed. This has also been clarified in the control measure. AQMD appreciates the offer to co-fund a demonstration project.

**Response to Comment GG-10:**

We appreciate your support for this control measure and willingness to work with AQMD on implementing this measure.

**Response to Comment GG-11:**

We appreciate your support for this control measure and willingness to work with AQMD on implementing this measure.

**Response to Comment GG-12:**

Consistent with the previous AQMP, the current analysis shows that approximately 65% of additional NOX emissions reductions, beyond already adopted rules and measures, will be needed to meet the existing 1997 8-hour ozone standard of 80 ppb in 2023. The Basin can only demonstrate attainment of the 8-hour standard by using the CAA Section 182(e)(5) provision allowing for long-term measures that anticipate the development of new technologies or improving of existing control technologies. This CAA provision requires that these long-term measures be specifically adopted in regulatory form at least three years prior to the attainment year (2020).

With less than 8 years remaining to identify these so-called “black box” emissions reductions, it is imperative to move forward with the identification and development of all feasible specific measures to achieve these reductions as soon as possible. If progress is delayed, there will be even less time to develop and implement strategies before the looming deadlines, and thus the resulting necessary measures could be more burdensome and disruptive. Delaying progress will also provide less certainty and lead time to the regulated community for planning compliance with potential new regulatory requirements. The considerable time it takes for new technologies to be developed, assessed and implemented widely, especially in the mobile source sector, also

underscores the need to begin immediately. Note that while this Plan commits to the adoption of several ozone measures in the near-term, the implementation date and emissions reduction commitments are at least 2015 and beyond. While the District will need to adopt another ozone plan in 2015 to attain the 75 ppb standard by 2032, we cannot afford to delay implementation of the large “black box” in the existing approved 2007 AQMP (241 fpd NO<sub>x</sub> & 40 tpd VOC).

Recent litigation regarding U.S. EPA approvals of previous SIPs has focused on the reliance on a relatively large “commitments” to demonstrate attainment and the short time frame available to develop and deploy potential new technologies. The District believes it is important to demonstrate progress towards ozone attainment by making commitments for additional emissions reductions that reduce the size of the “black box” commitments. In U.S. EPA’s comment letter on the Draft 2012 AQMP (August 30, 2012), they state that they “fully support the District’s inclusion in the 2012 AQMP of updates on the implementation of control measures and emission reduction commitments relied upon in the South Coast 2007 AQMP to demonstrate expeditious attainment of the 1997 8-hour ozone NAAQS. We urge the District to continue working closely with EPA staff to identify the specific near-term and long-term control measures that will fulfill the NO<sub>x</sub> and VOC emission reduction commitments contained in the SIP-approved South Coast 2007 8-hour ozone plan, and to develop appropriate methodologies for calculating the emission reductions attributed to each such measure.”

Furthermore, U.S. EPA recently proposed to require a new 1-hour ozone SIP for the South Coast Air Basin. In order to demonstrate attainment with this revoked standard by 2022, all feasible measures must be included in the SIP. Making enforceable emissions reductions commitments based on specific measures as they are identified is the best way to demonstrate that the District is dedicated to realizing the emission reductions necessary to achieve the 8-hour and 1-hour ozone standards. Future AQMPs should further identify specific measures and associated emissions reductions that will allow the “black box” commitments to shrink to zero by 2019 for the 1-hour ozone or 2020 for the 8-hour ozone.

### **Response to Comment GG-13:**

As noted in the draft 2012 AQMP, the primary focus is on attainment of the 24-hour PM<sub>2.5</sub> air quality standard. However, actions needed in the near-term to help attain the 2023 ozone air quality standards are identified with no emission commitments. As with previous AQMPs and SIP submittals, emission reduction commitments are designed with the flexibility to substitute specific control measures to achieve the emission reduction commitments. Staff believes that it is important that the early actions identified in the draft AQMP will provide more certainty in the types of research, development and demonstration, and deployment efforts needed for advanced cleaner combustion engines and zero- and near-zero emission technology development.

**Response to Comment GG-14:**

ONRD-1 and ONRD-2 focus on existing incentives programs based on guidelines that focus on partial-zero and zero-emission vehicles developed by the state. The Commenter is urged to provide similar comments as the state continues to enhance its guidelines for future funding programs. The AQMD staff welcomes the opportunities with work stakeholders in the development of natural gas-hybrid vehicle technologies.

**Response to Comment GG-15:**

See Response to Comments GG-14 as it applies to medium-duty vehicles.

**Response to Comment GG-16:**

Staff appreciates the comments regarding cleaner engine emissions levels, and is in discussions with various stakeholders for the development of such technologies.

**Response to Comment GG-17:**

OFFRD-01 is specific to the deployment of commercially available Tier 3 and Tier 4 technologies. There are no restrictions in funding alternative fueled engine technologies as long as such engines are commercially available. Relative to ADV-06, staff welcomes proposals for alternative-fueled engines integrated with hybrid systems in off-road applications. There are no limitations on proposed projects that have the potential for emission reductions beyond Tier 4 off-road engine standards.

**Response to Comment GG-18:**

OFFRD-02, OFFRD-03, and ADV-02 do not limit Tier 4 or cleaner locomotive engine technologies to conventionally fueled technologies. As such, if natural gas locomotive engines that meet Tier 4 or cleaner emission levels are commercialized, such technologies will be welcomed. As discussed in "ADV-02", natural gas locomotive engines have a potential role in meeting cleaner than Tier 4 emission levels. See discussions beginning on Page IV-B-63.

**Response to Comment GG-19:**

Staff appreciates the comments relative to ocean-going vessels and harbor craft and the references to deployment of natural gas engine technologies. Staff will continue to work with stakeholders in the development of such technologies.