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January 8, 2009

Mr. Alan Clark
Transportation Department
Air Quality Section
Houston-Galveston Area Council
P.O. Box 22777
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Dear Alan,

Enclosed are the comments of the Houston Regional Group and Lone Star Chapter of the Sierra Club (Sierra Club) regarding input for the draft Evaluation of Mobile Source Control Strategies for the Houston-Galveston-Brazoria (HGB) State Implementation Plan (SIP), With Detailed Strategies by prepared by Environ for the Houston-Galveston Area Council (HGAC), December 5, 2008.

1) **Page 1-1**, in the first paragraph of "**1. Background and Purpose of Study**", the document states "... in an attempt to determine a set of strategies to achieve emission reductions of volatile organic compounds and nitrogen oxides in the HGB non-attainment area" but in the first paragraph of "**Purpose of Study**" the document states "The primary objective of the study was to identify and evaluate feasible control measures to reduce NOx (nitrogen oxide) emissions". Which statement is correct? The document should be modified to ensure that it clearly states to the public what its purpose is.

2) **Page 2-1, Refining Initial Master List**, the document states "... many measures that would alone have minimal effect on emissions were easily recognized as being naturally a part of larger measures". The Sierra Club appreciates this recognition. The Sierra Club requests that HGAC clearly show for any control measure (CM) that it recommends for adoption where specifically the CM has "minimal effects on emissions" but is "naturally a part of larger measures" is incorporated into other larger CMs so that the public can review, comment on, and understand the full implications and complexity of CMs that are recommended by HGAC for adoption.

3) **Page 2-1, Evaluating Feasibility and Potential for Emission Reductions**, the document says "... it was not feasible to model each of the individual control measures". Why would modeling be used in the first place? It would seem that the most likely need is to know the approximate population of a certain type of on-road or off-road vehicle or equipment and then the control efficiency of a CM

"When we try to pick out anything by itself, we find it hitched to everything else in the universe." *John Muir*

(percent reduction) so that a calculation can be made to see how many tons/day or year are gained by a CM. Then estimate the cost per ton of air pollution reduced and list, by cost and or emissions reduced, the different CMs. Modeling has already been done by HGAC to determine what the on-road and off-road budgets are for volatile organic compounds (VOC) and NOx for the SIP.

4) **Page 3-1, Qualitative Review of Master List**, the document lists four criteria which were used as the primary qualifiers for the SIP CM. These include permanent, quantifiable, surplus, and enforceable. However, these criteria are not defined so the public and decision-makers can review, comment on, and understand the proposal. These criteria should be defined.

In addition, the document states that "ENVIRON team made a judgment as to whether a program could be defined to satisfy these criteria". This is confusing. ENVIRON talks about a CM in one sentence and then a program in another sentence. A program is not necessarily a CM or vice versa. Also ENVIRON does not state what process was used to make a judgment. The public and decision-makers need to know this information so they can review, comment on, and understand the proposal. The process used to "make a judgment" should be stated clearly in this document.

Finally, the document states that voluntary commitments "may not strictly meet all of the criteria listed above" and may be considered for inclusion in a SIP "if defined and funded properly". What are these exceptions, how were they judged, which CMs had to use this exception, and why? The public and decision-makers need to know this information so they can review, comment on, and understand the proposal.

5) **Page 4-1, 4. Summary of Measures**, the document states "Our initial list therefore marks those measures that qualify as emission reduction programs under a likely EPA review with "+" to denote which pollutant would be affected by the measure". As stated in 4) above, the actual process with definitions is not provided so the public and decision-makers can review, comment on, and understand the proposal. Was "best professional judgment" used and if so how was this type of evaluation used and what criteria were used for its implementation?

6) **Pages 4-2 through 4-22, Table 4-1, On-road vehicle emission reduction measures**, the following CMs are ones the Sierra Club prefers or has questions about:

1. **#1 Bicycle and pedestrian action groups.** The Sierra Club supports this CM.
2. **#2 Clean Technical Coalition.** The Sierra Club supports this CM.

3. **#3 Private sector clean fuel fleets.** There needs to be adequate record-keeping and on-site monitoring to ensure that commitments are kept. This is one problem with voluntary programs. Somehow the Texas Commission on Environmental Quality (TCEQ) has to make sure that the commitments are kept over the long-term and not discarded or undone. Presently HGAC has a person who is monitoring onsite but if we are to get sufficient participation from all voluntary CMs then a greater monitoring effort will be required.

4. **#6 Public agency clean fleet program.** The Sierra Club prefers that public agencies/private companies commit to buy the lowest emission vehicles that are available in California (internal combustion or other technologies) so that a significant emission reduction over usual vehicle attrition occurs.

The Sierra Club expresses its disappointment that more law enforcement is not adequately stressed in the CMs (**#63-66**). Existing, against-traffic or close to free-flow conditions on Houston freeways or other roads, result in actual operating speeds that are 10-20 mph faster than posted speeds. For instance, on Interstate 610 South Loop, going against traffic, cars frequently travel 70-80 mph versus the 60 mph speed limit.

Traveling at these speeds increases NOx emissions significantly. The TCEQ has indicated that NOx reductions are more sought after than VOC reductions. This increase in NOx emissions is not modeled by MOBILE because the model cannot model NOx emissions at higher speeds. More police on existing freeways and roads (including feeder streets) or more time allocated for existing police to enforce speed laws makes a lot of sense and will result in less property damage, injury, and death.

The Sierra Club is disappointed that this document does not discuss the need to monitor air emissions inside vehicles during travel and the need to monitor tailpipe emissions when vehicles are actually being driven. While the Sierra Club realizes these techniques may more appropriately come under the heading of research or emissions inventory they are key for educating the public why air emissions from vehicles need to be reduced since they indicate much greater air emission generation and greater potential for health effects due to greater exposure. The Sierra Club urges HGAC and TCEQ to support and seek funding for research in these two key areas.

5. **#7 Electric Vehicles.** The Sierra Club prefers that public agencies/private companies commit to buy electric vehicles that are available in California so that a significant emission reduction over usual vehicle attrition occurs.

6. **#11 Cleaner diesel fuel.** The concern the Sierra Club has with this proposal is how to get many fueling stations to sell cleaner diesel fuel which will cost more.

7. **#12 Air quality information with driver training.** This CM should be implemented as a matter of course so people will get the connections between air pollution health costs and their personal use of motor vehicles.

8. **#13 Divert trucks from non-attainment areas.** The Sierra Club **does not favor** this CM. We are concerned that the CM of **dedicated truck lanes** is not included or discussed. By congregating trucks together the flow of traffic for other vehicles should be improved and therefore a reduction in fuel use and air pollution gained.

9. **#15 Permit HOV lane use by qualifying low emission vehicles (LEV); #17 Single Occupant Vehicles (SOV) access to HOV and transit stations; #18 Managed lanes to accommodate some single occupant vehicles in HOV lanes; #39 Preferential parking for HOV lane users and ride sharers; Fee spaces, reserved spaces; #40 Preferential parking for HOV lane users and ride sharers; Rate reduction; #41 Preferential parking for HOV lane users and ride sharers; Metered spaces; #42 Free parking at park-and-ride facilities for HOV lane and transit users.** The Sierra Club **does not support** these CMs. These CMs dilute the impacts that High Occupant Vehicle (HOV) lanes have, both in terms of emissions and in terms of public acceptance of using a travel mode other than one person/one vehicle travel.

Metro has already proposed turning most HOV lanes into High Occupant Toll (HOT) lanes during certain hours of the day. The Sierra Club believes this is an erosion of the purpose of HOV lanes which is to have other than one person/one vehicle travel mode accommodated. If lanes remain HOV then CMs 39-42 would be appropriate but Metro appears certain to turn HOV lanes into HOT lanes which rewards SOVs in HOV lanes and does not make public policy sense.

10. **#19 Focus on finding and penalizing extreme high emitters and #139, Enhanced enforcement for Smoking Vehicles Program – vehicle impounding for violators (like Dallas Emissions enforcement Pilot Program).** These two CMs appear to contradict each other. #19 states “Questionable regarding excess modeled reductions (I/M modeled at 96% compliance) but could produce real reductions”.

#139 states “May reduce number of vehicles avoiding I/M test. Real versus modeled reductions issue. NCTCOG estimates I/M compliance at around 80% not 96% as modeled”. This gives credence to implementing CM #19. In addition, even with a 4% non-compliance rate this is a lot of vehicles. For instance, if we assume conservatively that the HGAC area has 5 million people, and has one vehicle/two people, or 2.5 million vehicles, then 4% of 2.5 million is 100,000 vehicles. Twenty percent of 2.5 million vehicles is 500,000 vehicles. These two figures are very large and document that better I/M enforcement is necessary and should be a CM that is proposed and implemented.

11. **#20 Rewards for reporting smoking or high emitting vehicles.** This CM states "see measure 163" but there is no CM 163. There is an old CM 163 but there is no new CM 163. The Sierra Club supports this CM

12. **#21 Scrappage/buy-back plan.** The Sierra Club supports increasing the number of people that can use this CM.

13. **#22 Dedicate funding for school bus replacement.** The Sierra Club supports this CM since it reduces children's air pollution exposure.

14. **#23 Non-profit organization assistance program.** The Sierra Club is confused about this program. The "Description" states "to ensure high-emitting donation vehicles are not returned to the road and reused in an "as is" condition". The Sierra Club was under the impression that vehicles that are in such programs are not returned to the road and reused in an "as is" condition. Any program that allows high emitting vehicles to be resold in "as is" condition should be changed or shutdown. Programs with this type of loophole do not contribute to air emission reductions.

15. **#24 Enforce smoking vehicle reports and require repairs.** The Sierra Club supports this CM.

16. **#26 Ban sale of high-emitting vehicles.** The Sierra Club supports this CM.

17. **#39-62** the Sierra Club urges HGAC to list employer trip reduction programs (ETRPs) for large employers, both public and private, as a CM. The Clean Air Act at one time mandated implementation of ETRPs but unfortunately poor public and private leadership led to the removal of this requirement. Now, instead of having a reduced level of traffic congestion and air emissions and increased understanding by the public, we have greater problems. TCEQ, HGAC, and political bodies in the Houston area need to get a commitment from public and private sectors to implement a voluntary ETRP so we can get better acceptance of other than the one person/one vehicle travel mode.

18. **#46 Provide parking at all major transit stations.** The Sierra Club is concerned about the level of parking fees currently charge by Metro for its rail. In the past year parking costs have gone from \$1.00 to \$2.50. At some point this increase in parking, without an increase in benefits, will result in less use of rail. This would cause an increase in air pollution.

The problem of increased parking fees or fees for rider-ship should be included in any analysis regarding CMs that are dependent on parking for their implementation. This may be what happens when privatization of parking occurs for public transit facilities.

19. **#73 Daycare and other services.** This CM states "Many employers already provide". This statement appears to serve an effort to discourage the consideration of this CM. Most employers do not provide daycare. What does many mean? Define it in percentage. The Sierra Club believes the percentage is low.

20. **#78 Emphasis on major route traffic signalization; through route traffic platooning.** What does "through route traffic platooning" mean? The public and decision-makers need this information so they can review, comment on, and understand the proposal.

21. **#80 Adaptive traffic signals and signal timing.** What does this mean? The public and decision-makers need this information so they can review, comment on, and understand the proposal.

22. **#89 Guaranteed ride home.** The Sierra Club supports this CM.

23. **#92 Electrify bus routes.** The Sierra Club supports this CM.

24. **#99 Accelerate rail expansion.** The Sierra Club supports this CM. People need viable alternatives to the one person/one vehicle travel mode.

25. **#100 Commuter Rail.** The Sierra Club supports this CM. People need viable alternatives to the one person/one vehicle travel mode.

26. **#101 High-speed Rail.** The Sierra Club supports this CM. People need viable alternatives to the one person/one vehicle travel mode.

27. **#102 Free Circulator service to major generators.** The Sierra Club supports this CM. People need viable alternatives to the one person/one vehicle travel mode.

28. **#106 Mandatory or voluntary compressed work week.** The Sierra Club supports this CM.

29. **#109 Purchase vans for vanpools.** The Sierra Club supports this CM. People need viable alternatives to the one person/one vehicle travel mode.

30. **#110 Mandate or encourage vanpooling and carpooling.** The Sierra Club supports this CM. People need viable alternatives to the one person/one vehicle travel mode.

31. **#121 Car Sharing Programs (Flexcar).** Rice University has a car sharing program that HGAC should look at as a possible model for Houston.

32. **#124 If the California Low Emitting Vehicle Program is adopted and only LEV certified, gasoline vehicles are for sale in Texas, then mandated fleets should have to purchase the ULEV alternative fuel version of the same vehicle rather than the gasoline version.** The Sierra Club supports this CM.

33. **#125 Adopt California standards for vehicle emission rates.** The Sierra Club supports this CM.

34. **#126 Limitation on idling of heavy-duty vehicles.** The Sierra Club supports this CM.

35. **#130 Addition of HDGV28 weight class vehicles to inspection and maintenance program.** The Sierra Club supports this CM.

36. **#137 Encourage/Mandate Livable Centers.** The Sierra Club supports this CM.

37. **#139 Enhanced enforcement for Smoking Vehicles Program – vehicle impounding for violators (like Dallas Emissions Enforcement Pilot Program).** The Sierra Club supports this CM.

38. **#145 Increased use of hybrid buses.** The Sierra Club supports this CM. People need viable alternatives to the one person/one vehicle travel mode.

39. **#150 Accelerate development and construction of mass transit projects.** The Sierra Club supports this CM. People need viable alternatives to the one person/one vehicle travel mode.

7) **Pages 4-22 through 4-26, Table 4-1, Non-road vehicle emission reduction measures,** the following CMs are ones the Sierra Club prefers or has questions about:

1. **#5a Enhanced Texas Emission Reduction Program (TERP) and #5b Extend TERP to 2018.** The Sierra Club supports this CM. The Sierra Club continues to be concerned because we do not understand, and neither does the public, about the penetration that each Texas Emissions Reduction Program (TERP) CM or CMs that HGAC might be responsible for, has had for the total population of any particular on-road or non-road vehicle or equipment and the commensurate NOx and or VOC air pollution reductions that have been made.

This information is simple and basic but we have never seen it presented to the public at a mobile source CM public meeting or hearing. Without knowing what has already occurred and how much is left to be controlled it is difficult to know what one supports. The public and decision-makers need this information so they can review, comment on, and understand the proposal.

2. **#10 Limitations on idling of heavy-duty construction equipment.** The Sierra Club supports this CM.

3. **#11 Water injection for diesel engines; #12 Alternative-fueled equipment for all equipment types; #13 Alternative fuel heavy-duty equipment; #14 Lean NOx catalyst; #15 Early introduction of low-NOx engines; and Selective catalytic reduction (SCR).** The Sierra Club supports these CMs.

4. **#21 Lawnmower exchange; Trade in old gas powered equipment for discounts on zero emission models.** The Sierra Club supports this CM.

5. **#31 Accelerated purchase of Tier 2, 3, and 4 locomotive engines or remanufactured existing locomotives.** The Sierra Club supports this CM.

6. **#33 Efficiency improvements on In-Use Class 1 Rail Equipment (R11).** The Sierra Club supports this CM.

7. **#35 Portable engine fleet turnover.** The Sierra Club supports this CM.

8. **#36A Low Sulfur Fuel for Marine Vessel Main and Auxiliary engine.** The Sierra Club supports this CM.

9. **#36B Harbor Craft Fleet Management.** The Sierra Club supports this CM.

10. **#37 Cargo Handling Equipment Fleet Management.** The Sierra Club supports this CM.

11. **#39 Provide full funding for the National Retrofit Program.** The Sierra Club supports this CM.

12. **#44 Provide cooperative grant assistance to encourage small companies (less than 20 employees) who do not have the resources to manage grants alone to apply for TERP.** The Sierra Club supports this CM.

13. **#45 Development of a Port of Houston Clean Air Action Plan that seeks to minimize emissions from ships, cargo handling equipment, on-road drayage trucks, and port-related rail.** The Sierra Club supports this CM.

8) **5. Quantified Evaluation of Measures, Tables 5-1 and 5-2,** the Sierra Club is disappointed that all CMs were not quantified. By not quantifying all CMs HGAC withholds important information from the public and decision-makers. Without emission reduction potential and cost effectiveness information the public and decision-makers cannot review, comment on, and understand the proposal.

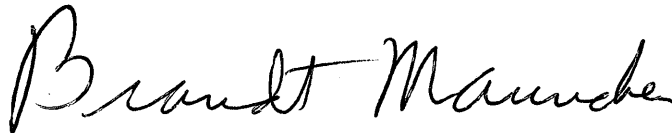
The Sierra Club is disappointed that more CMs did not make it onto Tables 5-1 and 5-2. In particular, the Sierra Club does not understand how **#124 If the California Low Emitting Vehicle Program is adopted and only LEV certified, gasoline vehicles are for sale in Texas, then mandated fleets should have to purchase the ULEV alternative fuel version of the same vehicle rather than the gasoline version** was not included. This CM would reduce air emissions tremendously from vehicles more quickly than almost any other CM. The comments in this Sierra Club letter list additional CMs that should be on these tables and their emission reduction potential and cost effectiveness should be calculated and provided for public review, comment, and understanding.

9) **5. Quantified Evaluation of Measures, Table 5-1, #39 Preferential parking for HOV lane users and ride sharers; Free spaces, reserved spaces, Metro** has proposed turning all HOV lanes to HOT lanes. This program could reward those who pay a toll and still drive their SOV. This would defeat the purpose of the CM. The Sierra Club does not favor this CM.

10) **5. Quantified Evaluation of Measures, Table 5-1, #57 Congestion pricing for major activity centers, #58 Pay-As-You-Drive Insurance (per-mile), #59 Local or regional fuel taxes, and #60 Vehicle miles traveled – based taxes,** the Sierra Club has several questions about these CMs. How will those who are in lower socioeconomic areas afford to pay? Will miles driven outside the non-attainment area count? Will it matter if most of the driving occurs on the weekend? The Sierra Club is concerned that these CMs are not the best to implement.

The Sierra Club appreciates this opportunity to comment. Thank you.

Sincerely,



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