

APPENDIX D

**FINAL DRAFT SHORT LIST OF POTENTIAL MOBILE SOURCE CONTROL
MEASURES
(DRAFTED BY ENVIRON AND THE HOUSTON-GALVESTON AREA COUNCIL)**

STATE IMPLEMENTATION PLAN MOBILE SOURCE CONTROL STRATEGIES

The Houston-Galveston-Brazoria area is in nonattainment for the federal ground-level ozone standard. The Texas Commission on Environmental Quality (TCEQ) has been working with H-GAC and other regional stakeholders to compile potential control measures for reducing on-road and non-road mobile sources emissions. The measures may ultimately be included in a new State Implementation Plan (SIP) that must be submitted in late 2007.

The final draft “short lists” of potential mobile source control measures has been endorsed by the regional Air Quality Leadership Task Force Group of local elected officials, business and environmental leaders and the Houston-Galveston Area Council Board of Directors. The lists are included with this item. At meetings, the following additional comments were made as the short lists were finalized:

- Given current high prices for gasoline, the leadership group recommended removing measures, such as fuel taxes, that could damage the economy. The leadership group is interested in evaluating whether current higher gasoline prices affect vehicle miles traveled, and therefore vehicle emissions.
- The leadership group voted to drop reduced speed limits as a measure, but did vote to include enhanced enforcement of current speed limits.
- Several on-road measures, such as enhanced telecommuting and compressed work weeks, would be implemented as voluntary programs. H-GAC recommends that all voluntary programs be grouped into one SIP measure, and a more conservative estimate of benefit be developed based on prior experience.
- There is interest in exploring adoption of California low emission vehicle standards.
- There is strong support for appropriating all TERP revenues and for appropriating all low income vehicle assistance repair and replacement (LIRAP) revenues and permitting their use for purposes authorized in HB 1611.
- Several non-road measures, particularly marine emissions, should be considered as voluntary measures.
- Most local stakeholders believe that additional refinement of non-road inventories is needed, particularly for locomotive emissions, but also marine and aircraft emissions.

The leadership group supported including these measures in a draft SIP for further evaluation and additional public comment only. This step does not constitute endorsing measures at this time for inclusion in a final state plan, since additional analysis and public review is needed.

Resolution from H-GAC Board of Directors

AUTHORIZING SUPPORT TO THE AMENDED DRAFT “SHORT LIST” OF POTENTIAL MOBILE SOURCE CONTROL MEASURES for on-road and non-road sources in the 8-hour ozone State Implementation Plan Recommended by the Air Quality Leadership Task Force Group.

WHEREAS the Air Quality Leadership Task Force Group is a group of local elected officials, business and environmental leaders;

WHEREAS the final draft “short list” of potential mobile source control measures for on-road and non-road sources in the 8-hour ozone State Implementation Plan is a list of potential measures, both voluntary and mandated, to help decrease ozone emissions in the Houston-Galveston-Brazoria non-attainment area; and

WHEREAS the Air Quality Leadership Task Force Group has recommended the following amendments to the draft mobile source control measures for on-road and non-road sources from the 8-hour ozone State Implementation Plan:

- Remove fuel tax measures.
- Remove vehicle miles traveled based taxes
- Remove congestion pricing for major activity centers
- Remove measures that reduce speed limits.
- Implement enhanced telecommuting and compressed work week measures on a voluntary basis and group all voluntary measures into one SIP measure.
- Implement measures that involve voluntary reduction of marine emissions.

NOW, THEREFORE, the Houston-Galveston Area Council Board of Directors hereby adopts this resolution as evidence of its support for including the final draft “short list” of mobile source control measures for on-road and non-road sources in the State Implementation Plan with the amendments suggested by the Air Quality Leadership Task Force Group for modeling purposes and for additional public comment. Additional analysis and review is needed, and the leadership group’s action does not constitute endorsement of the measures for inclusion as rules in a final SIP.

PASSED AND APPROVED at a regular duly called meeting of the Houston-Galveston Area Council Board of Directors, this 20th day of June 2006.

On-road control measures “short list”. Emission reductions expressed as tons per day.

Number	Strategy	Added Description	VOC Low	VOC High	NOx Low	NOx High
54, 59	Public and private sector clean fuel fleets (Clean Cities/Clean Vehicles)	This measure is the currently operating (Low) H-GAC Clean Cities/Clean Vehicles Program and continuing high levels of program funding and improved efficiency (High).	0.1	0.5	0	9
115	Cleaner diesel fuel	Cetane additives at 10% penetration rate (Low) or 100% penetration ultra reformulated diesel fuels (High) for emission reductions beyond TxLED.	0	0	0.1	10
277	Pay-As-You-Drive Insurance (per-mile)	Insurance prices vary by the driving amount. This provides a financial incentive to reduce driving.	4	4	4.4	4.4
144	Divert trucks from nonattainment areas	Encourage through-traffic trucks to travel around rather than through nonattainment areas.	0	0.2	0.6	4
300, 304, 312	Reduced average speed	Lower average vehicle speeds for trucks-only (Low) and all (high) vehicles by added enforcement of current limits. This could also be seen as a safety measure, which reduces incident-related congestion and emissions.	0	0	0.3	0.8
551	California LEV	Introduction of California Low Emitting Vehicle Program in Texas.	0.2	5.8	0.1	2.4
459, 435	Compressed work week	Reduction in vehicle commutes.	2.4	2.4	2.3	2.3
553	Adopt California standards for vehicle emission rates	Public and publicly-contracted fleet rules adopted by California for certain air quality management districts.	0	0	0	1.5
487	Telecommuting incentives or mandates, additional video conferencing between worksites	Currently part of the Commute Solution program. Assume a percentage of area employees to telecommute once per week.	1.4 ¹	1.4 ¹	1.4 ¹	1.4 ¹
576	Limitations on idling of heavy-duty vehicles.	Add alternate power sources at truck stops or other sites or other implementation strategies to eliminate extended idle. May require additional power sources for local major events.	0	0	0	1.0

Number	Strategy	Added Description	VOC Low	VOC High	NOx Low	NOx High
601, 604	Expanded vehicle-inspection maintenance program.	Modeled as an expanded Inspection and Maintenance (I/M) program to Chambers, Liberty, and Waller counties where I/M does not currently occur.	0.72	0.72	0.81	0.81
499, 500, 501	Pooled ownership of hybrid and non-hybrid vehicles	Shared vehicles among a group of owners	0.55	0.55	0.53	0.53
51	Clean Freight (EPA Smartway Program)	This measure will be analyzed as part of the EPA's Smartway program for improving energy and emission performance of freight movement.	0	0	0.4	0.4
462, 463, 496	Mandate or encourage vanpooling, purchase vans for vanpooling	Already encouraged with possible expansion of the program.	0.2	0.41 ¹	0.2	0.39 ¹
172	Scrappage/buy-back plan	Expanding the Low Income Repair Assistance Program (LIRAP). Heavy-duty vehicle scrappage addressed under Measure 54.	0	0.04 ²	0	0.38 ²
461, 503, 504	Internet ridematching services, incentives, rewards for ridesharing	Real-time ridematching offered via a Website, by an employer, or by a third party (sponsored by city or transportation authority). NuRide has been running just such a pilot program with H-GAC.	0.28	0.28	0.27	0.27
376, 403, 407, 484	Personalized rapid transit, subscription bus service, Business First enhanced buses, personalized transit planning	Targeted transit services to appeal to potential users who need convenience-based incentives to use transit. Providing internet and personalized planning so users know better what connectors there are between Metro and vanpools, subscription buses, etc.	0.37	0.37	0.21	0.21
150, 157, 161	Single Occupant Vehicles (SOV) peak pricing to managed lanes and transit stations.	Additions to Commute Solutions – existing programs will be evaluated as part of the rationale for assuming increased effectiveness of the Commute Solutions program. Increase occupancy to three or more per vehicle to HOV and transit stations.	0.14	0.14	0.14	0.14
71	Electric Vehicles	Voluntary introduction of zero emitting vehicles.	0.24	0.24	0.13	0.13

Number	Strategy	Added Description	VOC Low	VOC High	NOx Low	NOx High
227, 229, 241	Preferential parking for High Occupancy Vehicle (HOV) lane users and ride sharers; Free spaces, reserved spaces, Commuter parking pricing, Create retail parking spaces for especially for hybrid/alternative fuel vehicles	Extend programs to hybrids and other clean vehicles.	0.11	0.11	0.11	0.11
371	Increase transit ridership	Increased transit service to promote greater ridership	0.09	0.09	0.08	0.08
248, 249, 470	Eliminate employee parking subsidies. Include employee parking cash-out programs, subsidies for not driving to work	Employer pays a monthly stipend to employees who do not drive; employees who drive receive no corresponding benefit.	0.04	0.04	0.04	0.04
17	Bicycle and pedestrian action groups	A specified percentage of employees can request facilities as a group and pledge to commute by bicycle. This measure would likely only affect a small proportion of employees living relatively close to where they work (such as 5 miles).	<0.01	<0.01	<0.01	<0.01
99, 100, 101	Area-wide "Steer It/Clear It" program, augment with more enforced mandatory quick removal of disabled vehicles during peak periods with an expanded Safe Clear area and additional freeway patrol	Program for immediate removal of disabled vehicles from the roadway in event of a stall or non-serious accident. Lack of data on incident-related congestion and emissions may necessitate a qualitative evaluation although it is clear that it is resulting in congestion reductions. Operation of additional lane miles to clear incidents and reduce delay on freeways during peak periods.	<0.01	<0.01	<0.01	<0.01
295	Increase tolls during peak traffic periods	Congestion tolls are coming on-line but this measure is difficult to quantify.	<0.01	<0.01	<0.01	<0.01

Number	Strategy	Added Description	VOC Low	VOC High	NOx Low	NOx High
342, 350, 351, 352, 354, 355, 360	Traffic signalization improvements, intersection improvements, Reversible traffic lanes	This measure is still under review to ensure that credit is not taken for measures in baseline transportation modeling, as traffic flow improvements are a key and ongoing portion of H-GAC activities. However, in the 2005 conformity assessment though there could be emission reductions achieved through these programs.	<0.01	<0.01	<0.01	<0.01
424	Provide an off-peak unlimited-ride daily pass	Increase transit ridership included in other measure evaluations.	<0.01	<0.01	<0.01	<0.01
426, 441	Universal card	Combine TREK and Metro transit services; already implemented.	<0.01	<0.01	<0.01	<0.01
453	Mandated peak spreading	Could evaluate as a mandatory staggered work hour program for area employers. EPA acceptability unclear.	<0.01	<0.01	<0.01	<0.01
471, 470, 249	Employer tax credit or deduction	Institute a tax credit or deduction for employees that regularly use a non-single occupancy vehicle mode for commuting and/or for employers, based on number of employees that commute using non-SOV.	<0.01	<0.01	<0.01	<0.01

¹ – The baseline emission inventory already includes an assumption that 0.3 tpd will be reduced through these measures limiting the additional emission reduction potential.

² – The baseline emission inventory already includes an assumption that 0.1 tpd will be reduced through this measure.

Off-road measures short list. Emission reductions expressed in tons/day.

No.	Control Strategy	Short List Description and Groupings	NOx Low	NOx High
28	Enhanced Texas Emission Reduction Program (TERP)	This measure investigated extending and expanding the TERP beyond the approximately 39 tpd already credited in the baseline emissions inventory.	0	15
88	California Auxiliary Engine Rule	This measure consisted of applying the expected emission reductions from the California rule mandating either low sulfur fuel or shoreside power for auxiliary engines on large ocean-going vessels in HGB.	1.1	14.8
73	Accelerated purchase of Tier II locomotive engines	This measure investigated the potential emission reduction from the exclusive use of Tier II locomotives.	2.9 ^{1,2}	6.3 ^{1,2}
55	Reformulated fuels for off-road vehicles	Existing clean diesel options beyond TxLED.	0.1	8.2
79	Limitations on idling of locomotives	This measure investigated the potential emission reduction from reduced idling of all or part of the locomotive fleets. This measure is included in the current SIP under a voluntary commitment.	0.0 ²	1 ²
3	Aircraft emission standards	This measure reviewed aircraft emission rates to quantify an emission reduction from preferred use of lower emitting aircraft.	1	1.9
72	Use of auxiliary power units (APUs) for locomotives operating; Controls for locomotives are pre-empted by Federal law, but voluntary controls might have some success	Hybrid-electric locomotives using ultraclean engines. The measure is part of many TERP emission reduction projects in HGB and elsewhere in Texas.	0.8 ¹	1.8 ¹
75	Efficiency improvements on In-Use Class 1 Rail Equipment (R11); grade separations, double tracking, other efficiency improvements	This measure investigates the potential improvements in air quality resulting from efficiency improvements from double-tracking, rail straightening, grade separations projects, and other similar improvements in rail operations.	0.5	1.8
90	Expanded use of TxLED	The use of TxLED would be expanded to sources not currently mandated to use TxLED including commercial marine and locomotive sources.	0	1.3
37, 38, 39, and 41	Government construction incentives	This initiative uses the TxDOT incentive program as a basis for estimating the potential emission reduction from extending similar incentives to municipal and other contracting mechanisms.	1	1
42	Limitations on idling of heavy-duty construction equipment	This will investigate the potential emission reduction from reduce idling.	0.4	1
87	California portable engine registration and rulemaking	This measure investigated the potential from adopting the California portable engines rule.	0.7	1
89	California cargo handling equipment rule	This measure investigated the potential emission reductions if California rule mandating cleaner engines used in equipment at intermodal marine and rail facilities was implemented in HGB.	0.4	0.5

¹ – These emission reduction potentials account for the introduction of ultraclean Green Goat engines accounting for about 26% of all switching engines in HGB from the TERP program.

² – These emission reduction potentials account for the idle emission reductions implemented under the VMEP program.