

MEMORANDUM OF AGREEMENT
HOUSTON/GALVESTON OZONE NONATTAINMENT AREA
Emission Reductions from TxDOT Ferries

I. Participants

1. The Texas Department of Transportation (TxDOT) within the boundaries of the Houston/Galveston Ozone Nonattainment Area ("Houston-Galveston Area"), the United States Environmental Protection Agency ("EPA"), the Texas Natural Resource Conservation Commission ("TNRCC") and the Houston-Galveston Area Council ("HGAC") [Collectively referred to as "the signatories" or "the parties"] recognize the need to balance preservation of the environment.
2. TxDOT voluntarily joins the TNRCC, EPA and HGAC in a cooperative effort to improve air quality in the Houston-Galveston Area. This Memorandum of Agreement ("MOA") describes the joint understanding of the signatories and the future activities that are intended to be undertaken by the parties.

II. Background

3. The Texas Department of Transportation (TxDOT) was established by the Texas Legislature as the Texas Highway Department in 1917 to administer federal funds for highway construction and maintenance. The Maintenance Division provides general oversight for the ferry operations.

The ferry operation at Galveston-Port Bolivar consists of five boats, each of which can carry approximately 70 vehicles, 500 passengers and six crewmembers. Usage of the five ferries on an annual basis for 1999 - 6,648,007 passengers and 2,105,953 vehicles, for the year 2000 - 6,643,669 passengers and 2,138,715 total vehicles. Each ferry is capable of carrying eight 18-wheeler trucks weighing 80,000 pounds each. All of the boats are double-ended with a pilothouse on each end, and the Captain changes from one pilothouse to the other to go in the opposite direction.

The Galveston-Port Bolivar ferry is the bridge between two segments of State Highway 87. South of IH-10, State Highway 87 is the only highway around Galveston Bay. The free ferry service provided by TxDOT is the only way motorists can cross the waterway between Bolivar Peninsula and Galveston Island.

4. EPA promulgated emission standards for new commercial marine vessel and new marine engines used in commercial marine vessels on December 29, 1999 pursuant to Sections 213(a)(3) of the Clean Air Act ("CAA" or "the Act") [See 64 Fed. Reg. 73300 (Dec. 29, 1999)]. The EPA estimates that in 2030, when the affected fleet of vessels is expected to fully employ complying engines, emissions from commercial marine diesel engines will be reduced nationally by 24 percent reduction for emissions of oxides of nitrogen and a

12 percent reduction in particulate matter emissions. The requirements for compliance with these emission standards are described in 40 CFR Parts 89, 92 and 94.

5. TxDOT, TNRCC and HGAC acknowledge that EPA's new emissions standards will achieve the greatest degree of emissions reductions available through the use of technology for new marine engines and new marine vessels. This MOA outlines further efforts that TxDOT will voluntarily make in the Houston-Galveston Area to achieve an additional reduction of emissions that will be granted as a SIP credit under the Voluntary Mobile Source Emission Reduction Program ("VMEP").
6. The Houston-Galveston Area has exceptional and unique emissions reductions needs. The area's level of ozone pollution is the result of emissions generated in the Houston-Galveston Area combined with the area's unique meteorology. The Houston-Galveston Area is classified under the CAA as "Severe-II" nonattainment area for ozone. Solutions to the Houston-Galveston Area's air pollution problems requires creative and exceptional efforts.
7. The TNRCC's State Implementation Plan ("SIP") for the Houston-Galveston Area anticipates that the state can satisfy up to three percent of the required reductions by the VMEP portion of the plan. The SIP for the Houston-Galveston Area includes as part of the VMEP portion of the SIP, up to 3% of the required reductions. As part of the VMEP portion of the SIP approximately 0.8 tons per day in NOx reductions from retrofitting 5 ferries are expected from this MOA. This reduction is from the SIP inventory baseline level in emissions of NOx in the Houston-Galveston Area for 2007 and are in addition to the NOx reductions expected to result from EPA's emissions standards and other reductions which have been relied upon in the SIP.

III. TNRCC, HGAC and TxDOT Actions

8. Because of the exceptional and unique air quality problems in the 8-county area, TxDOT has volunteered to implement measures to achieve the additional reductions mentioned in the previous paragraph. Examples of measures under consideration include but are not limited to: a) Operating practices and measures, including application of methods to reduce vessel main engine and barge pump engine idling time, b) Modifications to the vessel engines and support equipment, including adjustments to engine timing, early integration of new marine diesel engines or the retrofit of existing marine diesel engines, d) Early use of regulated fuels as they are made available, and/or e) Other maintenance measures consistent with the ferry support operations.
9. The parties understand and acknowledge that because of increased cost, the parties agree that TxDOT has the flexibility to utilize new technology or other methods not included in the previous paragraph to achieve the targeted emission reductions consistent with applicable federal and State laws and

regulations. Additional, the parties agree that TxDOT will initially retrofit one ferry in order to assess viability, completing the program when a successful assessment is complete.

10. TxDOT, HGAC, TNRCC, and EPA intend to consult and reasonably share information concerning implementation of this portion of the VMEP, concerning the status of the emissions reduction measures.

IV. EPA Action

11. The parties expect that the means necessary to achieve the targeted reductions are or will become available. The parties fully expect that TxDOT will achieve the emissions reductions as expeditiously as practicable but not later than 2007. However, EPA, TNRCC and HGAC also believe that to fully satisfy their respective obligations pursuant to EPA's approval of the attainment demonstration for the Houston-Galveston Area, the reductions identified must be submitted by the State as part of the VMEP program and approved by EPA.

V. Additional Provisions

12. The parties understand and acknowledge that the joint understandings and future actions described in this MOA will contribute to efforts in the Houston-Galveston Area attain the national ambient air quality standard for ozone.
13. TxDOT, EPA, TNRCC, and the HGAC are committed to working together to ensure that the emission reduction measures described in this document are implemented.
14. TxDOT may terminate the voluntary commitments under this MOA upon thirty days written notice in the event the TNRCC or the EPA (a) proposes or adopts diesel emulsion rules or NOx reduction system rules which would apply to the TxDOT ferries or (b) proposes or adopts rules imposing requirements on the TxDOT ferries that are inconsistent with, or which specifically require the voluntary measures adopted by TxDOT in accordance with this MOA or which are in addition to or inconsistent with the current SIP (c) or no measurable reductions can be determined.
15. The parties agree to reasonably coordinate with one another concerning any communication or publicity regarding the contents of this MOA.

IN WITNESS WHEREOF, the parties have executed this Memorandum of Agreement as of _____ day of May, 2002.

**UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY,
an agency of the United States of America**

Gregg A. Cooke
Regional Administrator, Region 6

**THE TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION,
an agency of the State of Texas**

Robert J. Huston
Chairman

**HOUSTON-GALVESTON AREA
COUNCIL,
a political subdivision of the State of Texas**

Jack Steele
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**TEXAS DEPARTMENT OF
TRANSPORTATION,
an agency of the State of Texas**

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