

STATE IMPLEMENTATION PLAN REVISIONS FOR
THE STAGE II VAPOR RECOVERY PROGRAM

Texas Air Control Board
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1. General

The Federal Clean Air Act (FCAA) Amendments of 1990 authorized the U.S. Environmental Protection Agency (EPA) to designate areas failing to meet the National Ambient Air Quality Standard (NAAQS) for ozone as nonattainment and to classify them according to degree of severity. There are four such areas in Texas, including Houston/Galveston, Beaumont/Port Arthur, El Paso, and Dallas/Fort Worth ozone nonattainment areas. States are required to submit a revision to the State Implementation Plan (SIP) no later than November 15, 1992, which includes a Stage II vapor recovery program to control gasoline vapors from the refueling of motor vehicles.

The control strategy for attainment of the ozone NAAQS focuses on reductions in emissions of volatile organic compounds (VOC) and nitrogen oxides, which react together in the presence of sunlight to form ozone. Gasoline vapors which escape during the refueling process are VOCs, which contribute to the formation of ozone. Although Stage II vapor recovery is a new requirement under the FCAA, it has played a substantial role in VOC emission reduction in

California since the early 1970's. California recently implemented Stage II controls statewide in an effort to curb benzene emissions. Several other states and local government entities have also implemented successful Stage II programs.

In compliance with the FCAA, EPA issued enforcement guidance dated October 1991 and technical guidance dated November 1991. EPA published the following technical guidance documents for states to use in developing their Stage II program:

1. Technical Guidance - Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline Dispensing Facilities, Volume I: Chapters (EPA-450/3-91-022a)

2. Technical Guidance - Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline Dispensing Facilities, Volume II: Appendices (EPA-450/3-91-022b)

These revisions are intended to satisfy the requirements as outlined in these documents.

EPA mandates that Stage II requirements apply to all public and private refueling facilities dispensing 10,000 gallons or more of gasoline per month. In the case of independent small business

marketers of gasoline, the state has the option of raising the throughput to 50,000 gallons per month. The federal throughput constitutes a minimum threshold, but a state may be more stringent in adopting throughput standards.

2. Definitions

Stage II SIP submissions must be consistent with the following definitions:

Independent small business marketer of gasoline - a person engaged in the marketing of gasoline who would be required to pay for the procurement and installation of vapor recovery equipment at a gasoline dispensing facility. A person is NOT an Independent Small Business Marketer, if such person:

(i) is a refiner; or

(ii) controls, or is controlled by, or is under common control with, a refiner; or

(iii) is otherwise directly or indirectly affiliated (as determined under the regulations of EPA) with a refiner or with a person who controls, is controlled by, or is under common

control with a refiner (unless the sole affiliation is by means of a supply contract or an agreement or contract to use a trademark, trade name, service mark, or other identifying symbol or name owned by such refiner or any such person); or

(iv) receives less than 50 percent of their annual income from the refining or marketing of gasoline.

Motor vehicle refueling facility - any site where gasoline is transferred from a stationary storage tank to a motor vehicle fuel tank used to provide fuel to the engine of that motor vehicle.

Vapor recovery systems - systems designed to control the vapors generated during the vehicle refueling process.

3. Determination of Regulated Universe

EPA guidelines require that the determination of the regulated universe be accomplished by calculating the average monthly volume of gasoline dispensed at a facility over the two-year period prior to the state's adoption of Stage II requirements. In the event a facility has been inactive for any period during the proposed calculation period, the state shall extend the period to include

two full years of data.

For improved enforceability, the Texas Air Control Board (TACB) has opted to determine the monthly throughput based upon any calendar month beginning January 1, 1991.

a. The TACB shall accurately determine which facilities must comply with Stage II program requirements. When needed, the TACB will coordinate with other state agencies involved in regulating refueling facilities to ensure an accurate identification of all such facilities.

b. The TACB shall develop and maintain a computerized data base to track facilities in the regulated community.

c. The TACB shall establish a method for ensuring that facilities which were initially exempt from these regulations due to low throughput are in compliance with Stage II requirements at such time that their gasoline throughput exceeds the exemption level specified in §115.247, based upon either facility inspections or emissions inventory data.

4. Certification of Approved Vapor Recovery Systems

The EPA requires that all Stage II vapor recovery systems be capable of achieving at least 95 percent vapor control efficiency. As an alternative to testing each station for 95 percent control, states can require that installed systems either be certified by the California Air Resources Board (CARB), certified using CARB test procedures and methods, or by equivalent test procedures and methods developed by the state and submitted as a SIP revision. In addition, the state must ensure that each system is tested for proper installation.

a. The state shall approve only those vapor recovery systems certified by CARB for installation in Texas.

b. The TACB will not approve vapor recovery systems which include remote vapor check valves.

c. Only coaxial hose vapor recovery systems will be approved for use in Texas.

d. The TACB will only approve original manufacturer rebuilt nozzles, and all existing dispenser pumps shall be retrofit with original equipment manufacturer (OEM) parts or CARB-certified non-OEM aftermarket parts.

5. Training

The EPA guidelines require the state to provide training for Stage II inspectors and at least one owner/operator from each facility.

a. All inspector training must be effective in presenting all Stage II requirements and procedures. Literature and equipment necessary to facilitate training will be provided by the TACB or an approved training provider. As needed, periodic updates to the training will be provided in order to reflect all technological and program changes.

b. The TACB shall develop and implement an effective training program for inspectors consisting of classroom and practical training to include:

- 1) the purpose and effects of Stage II;
- 2) types of Stage II systems, components, operations, and functions;
- 3) visual and functional testing methods;

4) identifying system configurations and how to identify failures;

5) inspection requirements, including record review and recording procedures and all applicable enforcement procedures; and

6) a written and practical test to verify proficiency will be required for inspectors. Each inspector must meet a minimum standard of proficiency on each test in order to successfully complete the training course.

c. Owner/operator training must provide instruction on the proper operation and maintenance of Stage II equipment. As needed, periodic updates to the training will be provided in order to reflect all technological and program changes. The training will be structured such that each owner/operator receives more detailed instruction in the particular system that will be utilized at their facility. At least one owner/operator from each regulated facility shall be required to successfully complete a training course.

The TACB will include the following elements in all training programs offered to facility owners/operators:

1) purpose and effect of Stage II vapor recovery systems, including health effects;

2) proper operation and function of Stage II systems;

3) maintenance schedules and requirements;

4) how to perform a visual inspection, including instruction on filling out the proper maintenance records;

5) equipment warranties;

6) equipment manufacturer contacts for parts and service; and

7) recordkeeping requirements.

6. Public Information

The TACB shall develop and provide information to regulated facilities stating the general purpose and benefit of the Stage II vapor recovery program; specific program requirements; enforcement conse-

quences of noncompliance; and information about the TACB, such as office address (regional and headquarters) and phone numbers.

The TACB shall establish public awareness information for general distribution to the public stating the purposes and benefits of the Stage II program, including those benefits to human health, the environment, and safety. The information shall include a basic description of how the vapor recovery system functions, operational procedures for refueling, and information about the TACB, such as office address (regional and headquarters), phone numbers, and any other information that will facilitate the public's comments, questions, or complaints about the program or a particular facility.

7. Facility Recordkeeping

The TACB shall provide guidance to facilities regarding all record-keeping requirements. All facilities will be required to maintain a Stage II vapor recovery program file for the purpose of verifying compliance. The TACB will review each facility's records to ensure that all installation and testing results of equipment, maintenance records, inspection records, compliance records, and certification of training are all properly documented and available to the inspector. The TACB will develop and provide all of the necessary

forms each facility will need to comply with all recordkeeping requirements.

8. TACB Recordkeeping

The TACB shall maintain a general station file ("compliance file") denoting the facility name, address, phone number, owner/operator names, a TACB assigned reference number, date of initial compliance with these regulations, and any other relevant information, such as the number of pumps at the site and monthly gasoline throughput. The TACB shall maintain a file on all station inspections by assigned reference number. In compliance with EPA guidelines, the reports will be filed in each facility's compliance file in chronological order and will include the date of inspection; the inspector's name, identification number, and signature; findings at inspection; follow-up action to be performed; and a notation of violations. Documentation of all enforcement action taken against each facility will be maintained in the TACB compliance file for each facility. All station records maintained by the TACB shall be made available to the public upon request.

9. Requirements for Equipment Installation and Testing

Each facility must install underground equipment that meets all Stage II and other related regulations. The TACB shall verify that each facility complies with these regulations:

a. Functional testing shall be performed by a contractor or other qualified person at the facility's expense. The facility shall be required to notify the agency at least ten days prior to such test.

b. The TACB shall require that each facility test the function of Stage II underground equipment at least every five years and/or upon major system replacement or modification.

c. All above-ground system equipment shall be tested by the TACB to verify proper installation and operation of the facility.

d. The TACB shall recommend that all facilities conducting major system modification or replacement of above-ground equipment upgrade their equipment to the latest certified equipment available.

e. The TACB shall allow only OEM parts or CARB-certified non-OEM aftermarket parts to be used as replacement parts.

10. Annual In-Use Above-Ground Inspections

The TACB shall perform at least one in-use inspection per facility per year. At such time, the TACB shall verify that all equipment meets configuration requirements and that all equipment is properly labeled with instructions for operation. If a nonclerical violation is detected at any facility, the TACB shall conduct a mandatory follow-up inspection. During the annual in-use inspection, the TACB inspector, at a minimum, shall:

a. verify compliance with all Stage I equipment requirements regarding control of vapors from the filling of underground storage tanks at refueling facilities;

b. observe the use of the equipment by both the facility operator and the general public;

c. inspect facility files to verify that they comply with all recordkeeping requirements; and

d. conduct a dynamic backpressure test in accordance with the procedure specified in Appendix J of the EPA guidance document Technical Guidance - Stage II Vapor Recovery Systems for

Control of Vehicle Refueling Emissions at Gasoline Dispensing Facilities (EPA-450/3-91-022b).

11. Program Penalties

The TACB shall establish a penalty schedule designed to deter noncompliance as required by EPA. Violations of these regulations may result in administrative penalties of up to \$10,000 per day per violation and civil penalties of up to \$25,000 per day per violation. The TACB shall:

a. issue a notice of violation to the owner/operator of a refueling facility upon confirmation of a violation of any rule related to Stage II vapor recovery. A follow-up inspection shall be required;

b. prohibit the continued dispensing of fuel, if the violation is equipment related, until such time any violation is corrected;

c. not consider any equipment clearly tagged by the owner/operator as out-of-service as a violation; and

d. have the authority to label any noncompliant equipment as "out of compliance" until necessary repairs are made.

12. Resources

The TACB staff will prepare a detailed estimate of the resources necessary to implement the Stage II vapor recovery program. This estimate will be presented to the Legislature with the Fiscal Year 1994 budget request.

13. Benefits

The proper installation of Stage II vapor recovery has demonstrated an in-use efficiency of roughly 86 percent when annual inspections are performed and a 92 percent in-use efficiency with semiannual inspections. Therefore, these controls are expected to result in significant reductions in VOC emissions from gasoline refueling facilities, as well as reduced public exposure to known human carcinogens such as benzene and other toxic emissions. Estimates of actual emission reductions will be included in SIP revisions submitted to EPA by November 1993.