

STATE IMPLEMENTATION PLAN REVISIONS FOR
THE STAGE II VAPOR RECOVERY PROGRAM

Texas Natural Resource Conservation Commission
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1. General

The 1990 Amendments to the Federal Clean Air Act (FCAA) 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 were 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 (VOCs) 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 reductions

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:

a. 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).

b. 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 SIP revisions are intended to satisfy the requirements as outlined in these documents. In addition, this November 10, 1993 version of the revisions is intended to facilitate implementation of the Stage II program in Texas and improve rule-effectiveness by clarifying specific aspects of the SIP, particularly in the areas of agency-conducted annual investigations and Stage II

system test requirements.

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:

- a. is a refiner;
- b. controls, or is controlled by, or is under common

control with, a refiner;

c. 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

d. 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 Natural Resource Conservation Commission (TNRCC) has opted to determine the monthly throughput based upon the maximum monthly gasoline throughput for any calendar month after January 1, 1991.

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

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

c. The TNRCC 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 for installation, in Texas only, those vapor recovery systems certified by CARB.

b. The TNRCC will not approve vapor recovery systems which include remote vapor check valves in balance systems.

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

d. The TNRCC will only approve original equipment manufac-

turer (OEM) rebuilt nozzles, and all existing dispenser pumps shall be retrofit with OEM parts or CARB-certified non-OEM aftermarket parts.

5. Training

The EPA guidelines require the state to provide or approve 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 TNRCC 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 TNRCC 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. At least one owner/operator from each regulated facility shall be required to successfully complete a training course.

The TNRCC will include the following elements in all training

programs offered to facility owners/operators:

1) federal and state Stage I and Stage II statutes, regulations (including enforcement consequences of noncompliance), and vapor recovery health effects and benefits;

2) equipment operation and function of each type of vapor recovery system;

3) general overview of maintenance schedules and requirements for Stage II vapor recovery equipment;

4) general overview of structure and content of CARB Executive Orders; and

5) recordkeeping and inspection requirements for Stage I and Stage II vapor recovery systems.

6. Public Information

The TNRCC 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 consequences of noncompliance; and information about

the TNRCC, such as office address (regional and headquarters) and phone numbers.

The TNRCC 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 TNRCC, 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 TNRCC shall provide guidance to facilities regarding all recordkeeping requirements. All facilities will be required to maintain a Stage II vapor recovery program file for the purpose of verifying compliance. The TNRCC 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 TNRCC will develop

examples of the necessary forms each facility owner or operator will need in order to comply with all recordkeeping requirements.

8. TNRCC Recordkeeping

The TNRCC shall maintain a general station file "compliance file" denoting the facility name, address, phone number, owner/operator names, a TNRCC assigned reference number, date of initial compliance with these regulations, and other relevant information, such as the number of nozzles at the site. In the case of facilities which are exempt or have a compliance date extension based on monthly throughput, monthly gasoline throughput records shall also be kept. The TNRCC 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 TNRCC compliance file for each facility. The compliance file for each facility may be kept electronically. All station records maintained by the TNRCC shall be made available to the public upon request.

9. Requirements for Equipment Installation and Testing

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

a. Functional testing shall be performed by a TNRCC registered contractor at the facility's expense. The facility shall be required to notify the agency in writing at least 10 working days prior to such test.

b. The TNRCC shall require that each facility test the function of Stage II underground equipment annually by conducting the appropriate pressure decay test on the system. The owner or operator shall conduct all tests required to determine compliance upon initial system startup, major system replacement or modification, and every five years after initial system startup. All tests shall be conducted according to the applicable portions of the TNRCC Stage II Test Procedure Handbook. For those systems with specific test procedures outlined in the Executive Order certifying the system, the Executive Order specific test procedures shall be followed. Any new, alternative, or equivalent testing methods and procedures, not approved by CARB, which are developed or approved by the TNRCC shall be submitted to EPA for approval in the SIP or other EPA concurrence procedure.

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

d. The owner or operator required to conduct test(s) on the system or system components shall notify the TNRCC in writing at least 10 working days in advance of the test of when, where, by whom, and which tests will be conducted. The owner or operator shall submit the results of the test(s) to the TNRCC within 10 working days of completion of the tests.

e. The TNRCC 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 TNRCC shall perform at least one in-use inspection per facility per year. At such time, the TNRCC 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 TNRCC shall conduct a mandatory follow-up investigation. During the annual in-use inspection, the TNRCC inspector, at a minimum, shall:

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

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

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

d. review the required annual pressure decay test results conducted on the facility equipment.

11. Program Penalties

The TNRCC 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 TNRCC 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 investigation

shall be required;

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

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

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

12. Resources

The TNRCC 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

When unannounced annual inspections are performed, the proper installation of Stage II vapor recovery has demonstrated an in-use efficiency of approximately 81 percent. (This takes into

consideration the exemption levels included in the TNRCC's Stage II rules.) 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 are included in the Rate-of-Progress SIP submitted to EPA by November 15, 1993.