The Texas Natural Resource Conservation Commission (commission) adopts new Subchapter D, concerning Designated Facilities and Pollutants, and new §§113.2060, 113.2061, 113.2067, and 113.2069, concerning Municipal Solid Waste (MSW) Landfills. Sections 113.2061, 113.2067, and 113.2069 are adopted with changes to the proposed text as published in the May 8, 1998, issue of the *Texas Register* (23 TexReg 4523-4526). Section 113.2060 is adopted without changes to the proposed text and will not be republished. The commission also adopts emission standards for non-methane organic compounds (NMOC) and control plan requirements to the Texas Air Control Board Plan for the Control of Sulfuric Acid Mist, Total Reduced Sulfur, and Fluoride Emissions from Existing Facilities. This plan is renamed to the Texas State Plan for the Control of Designated Facilities and Pollutants. The adopted new sections and state plan revisions are based on emission guidelines published by the United States Environmental Protection Agency (EPA) on March 12, 1996, and amended on August 17, 1998, under the authority of §111(d) of the Federal Clean Air Act (FCAA). A copy of the emission guidelines is available either through EPA or through the commission. EPA went through litigation with the National Solid Waste Management Association after adoption of the federal MSW landfill rules. A litigation agreement was reached in November 1997, and signed during the week of March 16, 1998, and the amendment date has been added to the rule language.

Title 40 Code of Federal Regulations (CFR) Part 60, §60.23(a) requires that within nine months after notice of the availability of a final emission guideline document is published for a designated facility, as defined in 40 CFR Part 60, §60.21(b), each state must adopt and submit to EPA a plan for the control of the designated pollutant to which the emission guideline document applies. The executive director requested and received a one-year extension to this requirement, until December 31, 1997, in order to

fully address concerns regarding the regulation by this rule of closed landfills. On December 9, 1997, EPA also extended the deadline for Texas to submit a rule under §111(d) until July 31, 1998.

EXPLANATION OF ADOPTED RULES

New §113.2060, concerning Definitions, defines terms used in the new subchapter that are either previously undefined or are used differently by the federal rule that is the basis for the proposed rule. Definitions for the terms "construction" and "modification" were taken from 40 CFR Part 60, §60.2, concerning Definitions. Definitions for the terms "reconstruction" and "fixed capital cost," were taken from 40 CFR Part 60, §60.15, concerning Reconstruction. The definition for the term "existing municipal solid waste landfill" was taken from 40 CFR Part 60, §60.33(c), concerning Emission Guidelines for Municipal Solid Waste Landfills with additional clarifications. The definitions for "modification," "reconstruction" and "existing municipal solid waste landfill" were augmented with language from 40 CFR Part 60, §60.32(c), concerning Designated Facilities, to make the definitions specific to this rule.

The definition of "existing municipal solid waste landfill" was further modified with regard to the closed landfills that will be affected by the rules. EPA defined existing municipal solid waste landfill as any that has accepted waste at any time since November 8, 1987. The commission has determined that MSW landfills which closed prior to October 9, 1993, did so because those facilities were economically unable to comply with 40 CFR Part 258 (popularly known as the "Subtitle D" requirements). Requiring these facilities to comply with new standards more than five years after they closed for economic reasons would be unreasonable. The MSW landfills that were closed prior to October 9,

1993, have been excluded from this rule requirement in accordance with 40 CFR §60.24(f), which allows the state rule to be less stringent for a particular designated class of facilities provided that the state can show that factors exist specific to the class of facilities that make application of a less stringent standard significantly more reasonable.

New §113.2061, concerning Standards for Air Emissions, provides the air quality standards for existing MSW landfills. Section 113.2061(a) requires that owners or operators of an existing MSW landfill comply with the provisions of the New Source Performance Standard for MSW landfills. This is consistent with federal requirements (40 CFR Part 60, §60.24(c)), which specify that the emission standards be no less stringent than the corresponding emission guidelines. The emission guidelines require existing landfills with a design capacity greater than or equal to 2.5 million (M) megagrams (Mg) (approximately 2.75 M tons) and 2.5 M cubic meters to annually calculate estimated NMOC emissions from the landfill. When the estimated annual NMOC emission rate reaches 50 Mg per year, the landfill owner or operator must install a gas collection system and route the gas to a control device for example a flare, an energy recovery device such as a gas turbine or internal combustion engine), or a gas recovery system. Once the gas collection system is operating, the owner or operator must monitor the landfill surface quarterly for methane leaks.

New §113.2061(b) provides that gas collection and control systems that were approved by the commission for installation at a landfill in compliance with 30 TAC §§115.152-115.159, concerning Municipal Solid Waste Landfills, are in compliance with the design standards with no further review.

This provision is included to prevent landfill owners/operators in the Dallas/Fort Worth and El Paso ozone nonattainment areas from being subjected to the requirements of two different state rules.

New §113.2067, concerning Exemptions, provides the criteria by which operators of an MSW landfill or class of landfills may apply for an exemption to the proposed rule on a case-by-case basis. These criteria are consistent with the federal regulations (40 CFR Part 60, §60.24(f)), which list the criteria under which exemptions will be considered by EPA.

New §113.2069, concerning Compliance Schedule, provides the schedule for the initial reports that are required by the rule. Owners and operators of all affected landfills must file an initial design capacity report within 90 days of the date that the commission publishes notification in the *Texas Register* that EPA has approved this rule. By the same date, owners and operators of those affected landfills with a design capacity greater than or equal to 2.5 M Mg and 2.5 M cubic meters must file an initial NMOC emission rate report. All other compliance times are specified in the referenced federal rule relative to the filing deadline for these two reports.

FINAL REGULATORY IMPACT ANALYSIS

The commission has reviewed these sections as required by regulatory analysis provisions of Texas Government Code (the Code), §2001.0225, and has determined that the rulemaking is not subject to §2001.0225. While this action is a major environmental rule which will cause estimated expenditures of up to $12,000 per acre for affected landfills it does not meet any of the applicability requirements of §2001.0225(a).

This adoption does not exceed a standard of federal law and is specifically required by federal law. 40 CFR Part 60, §60.23(a) requires that states adopt plans for the control of emissions for which EPA has published emission guidelines. There is no delegation agreement between the state and a federal agency concerning this adoption. These rules are adopted under the specific rulemaking authority of §382.011 and §382.012 of the Texas Clean Air Act (TCAA), Texas Health and Safety Code.

TAKINGS IMPACT ASSESSMENT

The commission has prepared a Takings Impact Assessment for these rules pursuant to Texas Government Code Annotated, §2007.043. The following is a summary of that assessment. The specific purpose of the rules is to control air contaminants from MSW landfills. The new §113.2061, concerning Standards for Air Emissions, provides the air quality standards with which existing MSW landfills must comply. The new §113.2061(a) requires that owners or operators of an existing MSW landfill comply with the provisions of the New Source Performance Standard for MSW landfills. This is consistent with federal requirements (40 CFR Part 60, §60.24(c)), which specify that the emission standards be no less stringent than the corresponding emission guidelines. The emission guidelines require existing landfills with a design capacity greater than or equal to 2.5 million (M) megagrams (Mg) (approximately 2.75 M tons) and 2.5 M cubic meters to annually calculate estimated NMOC emissions from the landfill. When the estimated annual NMOC emission rate reaches 50 Mg per year, the landfill owner or operator must install a gas collection system and route the gas to a control device (e.g., a flare), an energy recovery device (e.g., a gas turbine or internal combustion engine), or a gas recovery system. Once the gas collection system is operating, the owner or operator must monitor the landfill surface quarterly for organic compound leaks. The commission estimates the cost of

compliance with the new rule as $12,000 per acre, and this could place a burden on private, real property.

Pursuant to §2007.003(b)(4) and (b)(13), Texas Government Code (the Code), Chapter 2007 does not apply to this action. Under §2007.003(b)(4), Chapter 2007 does not apply to an action of a political subdivision that is reasonably taken to fulfill an obligation mandated by federal law. Section 2007.003(b)(13) states that Chapter 2007 does not apply to an action that: (1) is taken in response to a real and substantial threat to public health and safety; (2) is designed to significantly advance the health and safety purpose; and (3) does not impose a greater burden than is necessary to achieve the health and safety purpose.

40 CFR Part 60, §60.23(a), requires states to adopt emission guidelines for MSW landfills. Therefore, Chapter 2007, Texas Government Code does not apply to the commission adoption of the emission guidelines because this action: (1) is in response to the federal mandate in § 60.23; (2) is in response to a real and substantial threat to public health and safety:(3) advances the public health and safety purpose by reducing emissions of NMOC and sulfur compounds which are sources of harmful emissions, odor nuisances, and fire or explosion hazards; and (4) does not impose a greater burden than is necessary to achieve the health and safety purpose..

The commission concludes that this action does not require a full takings analysis under §2007.043, Chapter 2007 of the Code since Chapter 2007 does not apply to those actions listed in §2007.003(b)(4) or §2007(b)(13) of the Code.

COASTAL MANAGEMENT PROGRAM CONSISTENCY REVIEW

The commission has determined that this rulemaking relates to an action or actions subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act of 1991, as amended (Texas Natural Resources Code §33.201 et. seq.), and the commission's rules at 30 TAC Chapter 281, Subchapter B, Consistency with the Texas Coastal Management Program. As required by 31 TAC §505.11(b)(2) and 30 TAC §281.45(a)(3) relating to actions and rules subject to the CMP, commission rules governing air pollutant emissions must be consistent with the applicable goals and policies of the CMP. The commission has reviewed this action for consistency with the CMP goals and policies in accordance with the regulations of the Coastal Coordination Council. For the action in 30 TAC §§113.2060, 113.2061, 113.2067, and 113.2069, the commission has determined that the rules are consistent with the applicable CMP goal expressed in 31 TAC §501.12(1) by protecting and preserving the quality and values of coastal natural resource areas and the policy in 31 TAC §501.14(q) which requires the commission protect air quality in coastal areas. The purpose of 30 TAC §§113.2060, 113.2061, 113.2067, and 113.2069 is to control air contaminants from MSW landfills. The sections are in compliance with the regulations adopted under 40 CFR adopted under the FCAA, 42 United States Code Annotated, §7401, et. seq. to protect and enhance air quality in the coastal area so as to protect coastal natural resource areas (CNRAs) and promote the public health, safety and welfare.

HEARINGS AND COMMENTERS

Public hearings on the proposal were held in Irving, Texas on May 29, 1998, in Austin, Texas on June 1, 1998, and in Houston, Texas on June 4, 1998. Only one commenter, EPA, presented oral comments

at the hearings. Written comments were received from Browning-Ferris Industries (BFI), EPA, SCS Engineers (SCS), and the Texas Chapter of the Solid Waste Association of North America (TxSWANA). The public comment period closed on June 8, 1998.

EPA commented that 40 CFR Part 60.24(f) allows for less stringent emission limits or longer compliance schedules, but it does not allow the exemption of an entire class of facilities. EPA also stated that the use of surrogate NMOC values conflicts with the NMOC estimation methods in 40 CFR 60.34(c).

The commission believes that it has applied a less stringent standard to landfills that closed prior to October 9, 1993 in accordance with 40 CFR §60.24(f). The commission bases the application of a less stringent standard for landfills that closed prior to October 9, 1993, on §60.24(f)(1) for "unreasonable cost of control resulting from plant age" and on §60.24(f)(3) for "other factors specific to the facility (or class of facilities) that make application of a less stringent standard or final compliance time significantly more reasonable." The technical justification from Appendix A of the State Plan serves to support this assertion by demonstrating that under the Emission Guideline standards, the landfills that closed prior to October 9, 1993, would very likely not be required to install controls. The application of a less stringent standard would ensure that these landfills would not be required to install controls, thus effectively exempting these landfills from the Emission Guidelines rule. Using NMOC values that reflect actual Tier II testing at existing landfills is justified for this analysis because the commission did not intend to duplicate the steps

that a landfill would have to follow in complying with the Emission Guidelines, but rather is predicting the most probable final result.

The commission performed an inventory of landfills that closed between November 8, 1987, and October 9, 1993, to determine which landfills contained sufficient material to require emission testing. The commission did not have reported design capacities for these landfills as this reporting was not a regulatory requirement prior to October 9, 1993. The commission estimated capacity using the following two methods.

First, assuming an average landfill life of 30 years, the commission determined that a facility would have to accept over 251 tons per day of refuse to exceed the testing threshold of 2.5 million megagrams (2.5 M Mg) of placed material. This is approximately 2.75 million tons of material. Second, assuming an average depth of 30 feet and an assumed density of compacted waste, the commission estimated a landfill would have to exceed 67.6 acres to potentially have a capacity greater than 2.5 M Mg.

Using these estimates, there are seven closed landfills that have the potential to exceed the 2.5 M Mg threshold. Two of these are Type IV landfills, which are not authorized to accept household waste and are not subject to the emission guidelines. Of the remaining five, the landfills operated by the City of Killeen and the City of El Paso were expected to exceed the emission threshold of 50 Mg per year on NMOC. A closer analysis of the permit file showed that the El Paso facility closed prior to November 8, 1987.

The commission then performed an estimate of emissions from these landfills using NMOC emission rates obtained from tests conducted at existing and closed facilities in accordance with the methods in 40 CFR §60.754. 40 CFR §60.24(f)(3) allows the use of less stringent emission standards provided there are other factors specific to a class of facilities that make the standard significantly more reasonable. In this case, the commission has sample emission rates from landfills across the state that indicate that an NMOC emission rate of 439 parts per million (ppm) is more reasonable and representative than the EPA default rate of 4,000 ppm. The commission staff and EPA have extensively discussed this issue, and EPA agrees that the use of a rate below the default rate and more representative of monitored landfill emissions within Texas is appropriate for this specific analysis of closed landfills. The commission staff used an arithmetic mean of monitored emission levels which is the origin of the 439 ppm figure. EPA prefers the use of a figure that is one standard deviation above the mean or approximately 706 ppm. Using this higher figure, the commission calculated an estimated emission rate of 56 Mg per year for Killeen by June of 2001, the earliest date by which controls could be installed. This rate would fall below the emission control threshold of 50 Mg per year by 2004. This emission rate drops even lower if the high and low NMOC monitored values are omitted from the calculations and the commission uses a rate one standard deviation above the arithmetic mean.

In summary, the emission rate for Killeen is borderline and will go slightly above to slightly below the control threshold depending on the method of statistical analysis. Using the higher EPA emission rate results in an emission level that drops below the predicted emission threshold within three years of installing controls. The commission has estimated that the cost of control for

affected landfills will be $10,000-$12,000 per acre. The Killeen facility is 174 acres which results in a control cost in excess of $1.74 million. The commission believes this to be an excessive and unreasonable cost based on Killeen's location outside ozone non attainment areas and the commission's analysis demonstrating that the facility would drop below the yearly emission threshold within three years of control installation. Therefore the commission will retain the proposed definition of "existing municipal solid waste landfill" that will exclude the Killeen facility from retrofitting controls.

40 CFR §60.34(c) requires that the state plan contain provisions for use of an approved test method for measuring NMOC. This requirement is in the Texas state plan.

Prior to October 9, 1993, there was no regulatory requirements to report design capacity to the commission. In the absence of these records, the commission believes that its estimation of capacities and consequent definition of existing landfill is reasonable and appropriate. Further refinement of the estimation would require a site-by-site analysis.

EPA commented that application for a less stringent emission standard or compliance schedule is subject to the Regional Administrator's approval, and the rule should include the appropriate language.

The commission does not object to including the EPA Regional Administrator's approval of less stringent emission standards or longer compliance schedules and has made the appropriate change to the rule language.

EPA also suggested that the state plan establish increments of progress for any compliance schedule longer than 12 months though federal law does allow increments to be submitted at a later date for individual facilities.

The proposed rule referred to 40 CFR Part 60 §§60.751-60.759 which contain the requirement for affected landfills to install controls within 30 months of determined application of the emission guidelines. The commission believes that this is a sufficient compliance schedule and wishes to leave the details of contract management to the operators of the affected facilities for greater flexibility. Additionally, the state plan for Oregon, which used an identical compliance schedule as the Texas plan, was approved by EPA. The commission has elected to retain the proposed language and will not include detailed increments of progress requirements.

BFI commented that the commission should incorporate by reference revisions to the federal emission guidelines expected as a result of a settlement between National Solid Waste Management Association (NSWMA) and EPA. They also stated that it would be appropriate to address in the preamble to the final rule the extent to which rate of progress requirements for the Dallas/Fort Worth area would be affected by the promulgated rule and suggested that the commission provide for the repeal of 30 TAC §§115.152-115.159 upon EPA approval of the Texas state plan under FCAA §111(d). TxSWANA also supported this repeal.

The commission has included in the adopted rules, state plan, and preamble, references to the amendment date of the federal rules. This amendment resulted from the settlement between

NSWMA and EPA. The commission has also included language in the rules that states that compliance with §§115.152-115.159, Municipal Solid Waste Landfills, will be considered compliance with the adopted emission guidelines. Operators of landfills currently regulated under Chapter 115 may use actual NMOC measurement to determine if a particular landfill exceeds the 150 Mg control threshold in §115.152. The commission believes it is necessary to leave the Chapter 115 requirements in place because 30-34 months will be required for controls specified under these adopted emission guidelines to be implemented. As the adopted emission guidelines become effective the commission will examine the Chapter 115 requirements and make any necessary amendments.

TxSWANA and SCS supported the exclusion of landfills closed prior to October 9, 1993, from the state plan. TxSWANA also commented that §113.2069(b) of the proposal be modified to reference landfills of a design capacity "equal to or greater than 2.5 million megagrams and 2.5 million cubic meters" consistent with the NSWMA and EPA settlement.

The commission has made the appropriate change in the rule language and state plan.

STATUTORY AUTHORITY

The new subchapter and sections are adopted under the TCAA, Texas Health and Safety Code, §382.011, which provides the commission authority to control the quality of the state's air; §382.012, which gives the commission authority to develop a comprehensive plan for control of the state's air; and

§382.017, which provides the commission with the authority to adopt rules consistent with the policy and purposes of the TCAA and to specify control methods when required by federal law.

SUBCHAPTER D : DESIGNATED FACILITIES AND POLLUTANTS

DIVISION 1 : MUNICIPAL SOLID WASTE LANDFILLS

§113.2060. Definitions.

Unless specifically defined in the Texas Clean Air Act (TCAA) or in the rules of the Texas Natural Resource Conservation Commission (commission), the terms used in this division have the meanings commonly ascribed to them in the field of air pollution control. In addition to the terms which are defined in the TCAA, and in §101.1 of this title (relating to Definitions), the following words and terms, when used in this division shall have the following meanings, unless the context clearly indicates otherwise.

(1) **Construction -** Fabrication, erection, or installation of an affected municipal solid waste landfill (MSWLF).

(2) **Existing municipal solid waste landfill -** An MSWLF meeting the following conditions:

(A) The MSWLF has accepted waste on or after October 9, 1993, or has additional design capacity available for future waste deposition, regardless of whether that MSWLF is currently open or closed; and

(B) Construction, reconstruction, or modification of the MSWLF was commenced before May 30, 1991, (i.e., the MSWLF is not subject to the requirements of 40 Code of Federal Regulations (CFR) Part 60, Subpart WWW).

(3) **Fixed capital cost -** The capital needed to provide all the depreciable components.

(4) **Modification -** Any physical change in, or change in the method of operation of, an existing MSWLF which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that MSWLF or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted. For MSWLFs, the only physical or operational change that results in increased landfill emissions is an increase in the landfill design capacity. Design capacity of a landfill is increased only with the addition of new disposal areas. New disposal areas can result by increasing the depth of refuse deposition, or by constructing additional disposal cells. Physical or operational changes made to an existing MSWLF solely to comply with this subchapter are not considered a modification and would not subject an existing MSWLF to the requirements of 40 CFR Part 60, Subpart WWW.

(5) **Reconstruction** - The replacement of components of an existing MSWLF to such an extent that the fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable entirely new MSWLF, and it is technologically and economically feasible to meet the applicable standards set forth in this division. Physical or operational changes made to an existing MSWLF solely to comply with this subchapter are not considered

reconstruction and would not subject an existing MSWLF to the requirements of 40 CFR Part 60, Subpart WWW.

§113.2061. Standards for Air Emissions.

(a) An owner or operator of an existing municipal solid waste landfill (MSWLF) shall comply with all provisions specified in 40 Code of Federal Regulations (CFR) Part 60, §§60.751-60.759 as promulgated on March 12, 1996, and amended on August 17, 1998. For purposes of this rule, the term "Administrator" wherever it appears in 40 CFR Part 60, §§60.751-60.759 shall refer to the commission.

(b) Gas collection and control systems approved by the commission and installed at an MSWLF in compliance with §115.152 of this title (relating to Control Requirements) satisfy the gas collection and control system design requirements of this section.

§113.2067. Exemptions.

A municipal solid waste landfill (MSWLF) may apply for less stringent emission standards or longer compliance schedules than those otherwise required by this division, provided that the owner or operator demonstrates to the executive director and EPA, the following:

(1) unreasonable cost of control resulting from MSWLF age, location, or basic MSWLF design;

(2) physical impossibility of installing necessary control equipment; or

(3) other factors specific to the MSWLF that make application of a less stringent standard or final compliance time significantly more reasonable.

§113.2069. Compliance Schedule.

(a) An owner or operator subject to the requirements of this division shall submit the initial design capacity report in accordance with 40 Code of Federal Regulations (CFR) Part 60, §60.757(a)(2) to the executive director within 90 days from the date the commission publishes notification in the *Texas Register* that the United States Environmental Protection Agency (EPA) has approved this rule.

(b) An owner or operator of a municipal solid waste landfill with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters and subject to the requirements of this division shall also submit the initial non-methane organic compound emission rate report in accordance with 40 CFR §60.757(b)(2) to the executive director within 90 days from the date the commission publishes notification in the *Texas Register* that EPA has approved this rule.