



August 2004

**Air Quality
Standard Permit
for Concrete Batch Plants
With Enhanced Controls**



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CONCRETE BATCH PLANT WITH ENHANCED CONTROLS AIR QUALITY STANDARD PERMIT SUMMARY DOCUMENT

I. EXECUTIVE SUMMARY

The Texas Commission on Environmental Quality (TCEQ or commission) is issuing a new air quality standard permit for concrete batch plants with enhanced controls (CBPECs). This new standard permit will not replace the current standard permit for concrete batch plants, but will provide an additional authorization mechanism for those facilities. The new standard permit will be effective August 16, 2004 and is applicable to permanent CBPECs. The standard permit is based on statutory requirements of the Texas Health and Safety Code (THSC) Chapter 382 and a comprehensive evaluation of air quality emissions and potential impacts. This standard permit will also implement portions of Senate Bill (SB) 1272 from the 78th Session of the Texas Legislature, 2003.

II. EXPLANATION AND BACKGROUND OF AIR QUALITY STANDARD PERMIT

SB 1272 amended THSC Chapter 382 by adding § 382.05198 and § 382.05199. THSC § 382.05198 specifies the design and operating requirements of a standard permit for a concrete batch plant with control equipment that is more effective than that required by the current air quality standard permit for concrete batch plants. This section also has distance requirements that are more stringent than those in the current air quality standard permit for concrete batch plants. THSC § 382.05199 specifies the requirements for public notice and public hearing necessary for authorization under the standard permit prescribed by THSC § 382.05198. These requirements include a notice and comment hearing that is not subject to THSC § 382.056 and is not an evidentiary proceeding. Additionally, this section requires the executive director to approve or deny the application to operate based on whether the application meets the requirements of THSC § 382.05198.

III. OVERVIEW OF AIR QUALITY STANDARD PERMIT

The commission is issuing a standard permit for CBPECs under THSC § 382.05198 and 30 Texas Administrative Code (TAC) Chapter 116, Control of Air Pollution by Permits for New Construction or

Modification; Subchapter F, Standard Permits. This standard permit would provide a streamlined public notice procedure for those facilities meeting the more stringent control device requirements and distance requirements specified by the conditions of the standard permit. This public notice procedure differs from that used by the existing concrete batch plant standard permit in that no sign posting is required. Also the public hearing required is for notice and comment and is not an evidentiary proceeding. The general public often expresses concern with concrete batch plant registration applications. These objections often include traffic safety, noise, appearance, and property values. These concerns are beyond the commission's jurisdiction to address and will be outside the scope of the hearing. The general public also expresses concerns over nuisance dust, ambient air quality, and potential negative health impacts and are the focus of the conditions of the standard permit. In accordance with THSC § 382.05199, no later than 35 days after the public hearing, the executive director must approve or deny an application based on whether it meets the conditions of this standard permit.

This standard permit includes requirements to control dust that exceed current best available control technology (BACT) and distance limitations or setbacks that equal or exceed the distances necessary to verify the protectiveness of the standard permit. The commission has concluded research which shows that the standard permit for CBPECs is protective of the public health and welfare and that facilities which operate under the conditions specified will comply with TCEQ rules and regulations.

This standard permit is designed to allow for registration of a typical concrete batch plant. However, it is not intended to provide an authorization mechanism for all possible plant configurations and production rates. Those facilities which cannot meet the standard permit conditions may apply for a standard permit under 30 TAC § 116.601(a)(2) or case-by-case review air quality permit under 30 TAC § 116.111.

IV. PERMIT CONDITION ANALYSIS AND JUSTIFICATION

The new standard permit for CBPECs creates a new authorization mechanism for permanent concrete mixing facilities which meet the requirements for enhanced controls and more stringent distance requirements. This standard permit requires concrete plants to comply with certain administrative requirements, including registration, executive director approval, and public notice, as well as specific requirements for controlling emissions from equipment and activities at a site. This standard permit authorizes only those facilities used in the production of concrete. The transfer and storage of aggregate

at the site for any other purpose requires a separate authorization under 30 TAC Chapter 116, 30 TAC Chapter 106, or other appropriate authorization. All background materials to this document are available upon request from the Air Permits Division.

Administrative Requirements

Section (1) of the standard permit outlines the administrative requirements all facilities must meet.

Subsection (1)(A) requires registration of the facilities in accordance with the regulatory requirements of 30 TAC § 116.611 along with a Table 20 “Concrete Batch Plants”. The standard permit also specifies that 30 TAC § 116.610(a)(1) does not apply to CBPECs under this standard permit as the extensive protectiveness review conducted for the original concrete batch plant standard permit addressed emission rates and distance limitations for these facilities.

Subsection (1)(B) requires compliance with 30 TAC § 116.614, Standard Permit Fees which requires a fee of \$900 for any standard permit registration unless otherwise specified in a particular standard permit. Subsection (1)(C) states that the facility cannot be constructed until the executive director sends written approval of the registration. Although 30 TAC § 116.611(b) states that all standard permit reviews must be completed within 45 days unless otherwise specified, this review period is not appropriate for facilities that register under this standard permit due to the extended amount of time necessary to complete the required public notice. The standard permit conditions, as specified by TSHC § 382.05199, establish the time period for review of applications in Section (2), Public Notice. In addition, this subsection requires that facilities which register under this standard permit must commence construction no later than 18 months from permit acceptance. This limitation is consistent with the requirements for a permit under 30 TAC § 116.120 and, due to the potential controversial nature of these facilities, is an appropriate limitation.

Subsection (1)(D) eliminates any requirement for applicants to submit modeling and impacts analysis for the review of a standard permit application. Subsection (1)(E) requires production records to be kept at the plant site for compliance demonstrations with the conditions of the standard permit in accordance with 30 TAC § 116.615(8) and THSC § 382.05198(1). Hourly records must be maintained to demonstrate compliance with the maximum production rate limits. Production records are required to be maintained at the plant for a rolling 24-month period. Subsection (1)(E) also requires that records of emission events be

kept in accordance with 30 TAC §101.201, Emissions Event Reporting and Recordkeeping Requirements, and §101.211, Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements.

Subsection (1)(F) is the definition of a plant site and should be used when determining the meaning of the term “site” that is used throughout this standard permit.

Public Notification Requirements

Section (2) of this standard permit requires that concrete plants authorized by this standard permit provide public notice and a hearing. The standard permit public notice and hearing requirements are as specified by THSC § 382.05199. Any hearing will be limited to whether or not a plant meets the conditions of the standard permit. Issues such as noise, traffic, aesthetics, and property values will be outside the scope of the hearing.

Subsection (2)(A) states that facilities authorized by this standard permit are not subject to the public notice requirements in 30 TAC Chapter 39 Subchapter H, Applicability and General Provisions, and Subchapter K, Public Notice of Air Quality Applications. Facilities authorized by this standard permit are subject to the public notice requirements in THSC § 382.05199 as summarized in section (2) of this standard permit.

Subsection (2)(B) requires the applicant to publish notice of intent to construct a concrete batch plant no later than 30th day after the application is declared administratively complete or the 75th day after the executive director receives the application, whichever comes first. The applicant must publish notice at least once in a newspaper of general circulation in the municipality in which the plant is proposed to be located or in the municipality nearest to the proposed location of the plant, as required by subsection (2)(C). If the elementary or middle school nearest to the proposed plant provides a bilingual education program as required by Subchapter B, Chapter 29, Texas Education Code, the applicant must also publish the notice at least once in an additional publication of general circulation in the municipality or county in which the plant is proposed to be located that is published in the language taught in the bilingual education program. This requirement is waived if such a publication does not exist or if the publisher refuses to publish the notice. Subsection (2)(D) requires that the notice include: 1) a brief description of the proposed location and nature of the proposed plant; 2) a description, including a telephone number, of the manner in which the executive director may be contacted for further information; 3) a description,

including a telephone number, of the manner in which the applicant may be contacted for further information; 4) the location and hours of operation of the commission's regional office at which a copy of the application is available for review and copying; and 5) a brief description of the public comment process, including the time and location of the public hearing, and the mailing address and deadline for filing written comments.

As stated in subsection (2)(E), the public comment period begins on the first date notice is published under subsection (2)(B) and extends to the close of the public hearing. Subsection (2)(F) requires that the public hearing be held not less than 30 days and not more than 45 days after the first date notice is published under subsection (2)(B). The public hearing must be held in the county in which the plant is proposed to be located. Subsection (2)(G) specifies that a public hearing held under this standard permit is not an evidentiary proceeding. Any person may submit an oral or written statement concerning the application at the public hearing.

As required by subsection (2)(H), the executive director will approve or deny the application for authorization to use the standard permit not later than the 35th day after the date the public hearing is held. The executive director will base the decision on whether the application meets the requirements of this standard permit. The executive director will consider all comments received during the public comment period and at the public hearing in determining whether to approve the application. If the executive director denies the application, the executive director will state the reasons for the denial and any modifications to the application necessary for the proposed plant to qualify for the authorization. Subsection (2)(I) specifies that the executive director will issue a written response to any public comments received related to the issuance of an authorization to use the standard permit at the same time as or as soon as practicable after the executive director grants or denies the application. Issuance of the response after the granting or denial of the application does not affect the validity of the executive director's decision to grant or deny the application. The executive director will mail the response to each person who filed a comment and make the response available to the public.

Design and Operating Requirements

The technical specifications and conditions for CBPECs are in Section (3), which outlines the general pollution control requirements for all CBPEC facilities wishing to obtain authorization under this standard permit. Except as noted, these requirements are as specified by THSC § 382.05198.

Subsection (3)(A) requires that all cement and flyash storage silos and weigh hoppers be controlled by fabric or cartridge filter systems. Subsection (3)(B) lists both design and performance criteria for the main dust abatement systems at a concrete batch plant. Each fabric filter or cartridge filter, and its associated collection system, and any suction shroud must be maintained and operated properly with no tears or leaks. Also, excluding the suction shroud filter system, each filter system must be designed to meet an outlet grain-loading standard of at least 0.01 grains/dry standard cubic foot. The exhausts of all filter systems are limited to no visible emissions exceeding 30 seconds over a five-minute period as determined by the U.S. Environmental Protection Agency (EPA) Test Method (TM) 22. If a cement or fly ash silo is filled during non-daylight hours, the silo filter system exhaust must be sufficiently illuminated to enable a determination of compliance with the performance standard by EPA TM 22.

Subsection (3)(C) requires facilities to convey cement and flyash within enclosed conveying systems, that are properly maintained, and operate with no visible emissions exceeding 30 seconds over a five-minute period following EPA TM 22, except during supply truck connect and disconnect. Subsection (3)(D) requires that each bulk storage silo must be equipped with a warning device to alert operators before the silo is full to ensure that these facilities are not overloaded and the abatement systems can control emissions during filling. The specific requirements detail both preventive measures and compliance documentation for emission events.

To reduce the potential for dust emissions subsection (3)(E) stipulates that each road, parking lot, or other area used by vehicles be paved, properly maintained, cleaned, and watered. Subsection (3)(F) requires that dust from stockpiles be controlled by watering, applying dust-suppressant chemicals, or covering. Subsection (3)(G) requires that spills of batching materials (cement, flyash, sand, aggregate, or additives) must be cleaned up and contained or dampened to minimize dust.

Subsection (3)(H) limits total maximum site production for to 300 cubic yards per hour (yd³/hr). THSC §382.05198 specifies that, “production of concrete at the plant must not exceed 300 cubic yards per hour.” Since the protectiveness review for the current concrete batch plant standard permit, on which protectiveness review of this standard permit is based, indicated a maximum production rate of 300 yd³/hr per site, this requirement is based on production at the site, regardless of the number of facilities located on that site. Subsection (3)(I) requires a suction shroud at the batch drop point with a minimum draw of

5,000 actual cubic feet per minute of air. Subsection (3)(J) requires that the capture and filter system be properly designed to accommodate the flow rate required by (3)(I) of this standard permit and to achieve a control efficiency of at least 99.5%.

Subsection (3)(K) requires a facility to maintain more than 100 feet from the central baghouse exhaust to the nearest property line. If the plant is located in an area that is not subject to municipal zoning regulation, this subsection requires that the central baghouse must be located at least 440 yards from any building used as a single or multifamily residence, school, or place of worship at the time the standard permit registration is filed with the commission. Additionally, (3)(K) requires that stationary equipment, stockpiles, and vehicles used at the plant, except for incidental traffic and vehicles as they enter and exit the site, must be located or operated more than 100 feet from any property line. However, if this distance can't be met for roads or stockpiles, subsection (3)(L) allows for alternate control requirements. In lieu of the distance requirement, a road, parking lot, and other traffic area may be bordered by dust-suppressing fencing or another barrier at least 12 feet high and a stockpile may be contained within a three-walled bunker that extends at least two feet above the top of the stockpile.

V. PROTECTIVENESS REVIEW

The comprehensive air dispersion modeling completed previously for the Air Quality Standard Permit for Concrete Batch Plants protectiveness review will be used to demonstrate that state and federal standards are not exceeded. The previous modeling applied conservative assumptions, such as; all emission sources operating continuously and simultaneously at maximum emission rates, and achieving and sustaining maximum production rates at the site. The CBPEC Standard Permit will be protective, when the operator is in compliance with the permit, because the distance requirements of this standard permit are more stringent than those of the Air Quality Standard Permit for Concrete Batch Plants and the use suction shroud flow rate is higher.

VI. PUBLIC NOTICE AND COMMENT PERIOD

In accordance with 30 TAC § 116.603, the TCEQ published notice of this standard permit in the *Texas Register* and newspapers of the largest general circulation in the following metropolitan areas: Amarillo;

Austin; Corpus Christi; Dallas; El Paso; Houston; Lower Rio Grande Valley; Lubbock; Permian Basin; San Antonio; and Tyler. The date for these publications was February 6, 2004. The public comment period was from the date of publication until 5:00 PM on March 8, 2004.

VII. PUBLIC MEETINGS

A public meeting on the proposal was offered on the following date at the stated time and location March 8 at 1:30 PM., Texas Commission on Environmental Quality, Building F Room 2210, 12100 Park 35 Circle, Austin, Texas. There was one attendee who did not wish to give oral comments and the meeting was canceled.

VIII. ANALYSIS OF COMMENTS

No comments were received on this standard permit.

IX. STATUTORY AUTHORITY

The commission's statutory authority to issue standard permits derives from Texas Health and Safety Code § 382.05195. Specific statutory authorization for this standard permit derives from Senate Bill 1272, §3, 78th Legislature, 2003, which amended the Texas Health and Safety Code by adding § 382.05198 and § 382.05199. Section 382.05198 requires the commission to issue a standard permit for concrete batch plants that meet the requirements of that section. Section 382.05199 requires the commission and the applicant for a standard permit to follow certain procedures regarding public participation in the permit application process.

Air Quality Standard Permit for Concrete Batch Plants with Enhanced Controls

Effective Date August 16, 2004

This air quality standard permit authorizes concrete batch plant facilities which meet all of the conditions listed in sections (1) through (3).

(1) Administrative Requirements

- (A) Any concrete batch plant authorized under this standard permit must be registered in accordance with 30 TAC § 116.611, Registration to Use a Standard Permit. Owners or operators must submit a completed current PI-1S-CBP, Table 20 and a Concrete Batch Plant with Enhanced Controls Standard Permit checklist and a scaled plot plan of the plant site. Facilities which meet the conditions of this standard permit do not have to meet the emissions and distance limitations listed in 30 TAC § 116.610(a)(1), Applicability.
- (B) Registration applications must comply with 30 TAC § 116.614 “Standard Permit Fees.”
- (C) No owner or operator of a concrete batch plant is permitted to begin construction and/or operation without obtaining written approval from the executive director. The time period in 30 TAC § 116.611(b) (45 days) does not apply to facilities registering under this permit. Start of construction of any facility registered under this standard permit must comply with 30 TAC § 116.120 and commence construction within 18 months of written approval from the TCEQ.
- (D) Applicants are not required to submit air dispersion modeling as a part of any concrete batch plant standard permit application.
- (E) The following production records must be maintained on site for a rolling 24-month period while the plant is in operation:
 - (i) production rates for each hour of operation demonstrating compliance with (3)(H); and
 - (ii) other records as required by 30 TAC 101.201 and § 101.211.
- (F) For the purposes of this standard permit, a “site” is defined as one or more contiguous or adjacent properties which are under common control of the same person (or persons under common control).

(2) Public Notice

- (A) An application for authorization to construct and operate a concrete batch plant under this standard permit is not subject to the public notice requirements in 30 TAC Chapter 39 Subchapters H & K.
- (B) For authorization to use this standard permit, an applicant must publish notice under this section not later than the earlier of:
 - (i) the 30th day after the date the applicant receives written notice from the executive director that the application is technically complete; or
 - (ii) the 75th day after the date the executive director receives the application.
- (C) The applicant must publish notice at least once in a newspaper of general circulation in the municipality in which the plant is proposed to be located or in the municipality nearest to the proposed location of the plant. If the elementary or middle school nearest to the proposed plant provides a bilingual education program as required by Subchapter B, Chapter 29, Education Code, the applicant must also publish the notice at least once in an additional publication of general circulation in the municipality or county in which the plant is proposed to be located that is published in the language taught in the bilingual education program. This requirement is waived if such a publication does not exist or if the publisher refuses to publish the notice.
- (D) The notice must include:
 - (i) a brief description of the proposed location and nature of the proposed plant;
 - (ii) a description, including a telephone number, of the manner in which the executive director may be contacted for further information;
 - (iii) a description, including a telephone number, of the manner in which the applicant may be contacted for further information;
 - (iv) the location and hours of operation of the commission's regional office at which a copy of the application is available for review and copying; and
 - (v) a brief description of the public comment process, including the time and location of the public hearing, and the mailing address and deadline for filing written comments.
- (E) The public comment period begins on the first date notice is published under Subsection (2)(B) and extends to the close of the public hearing.
- (F) A public hearing must be held not less than 30 days and not more than 45 days after the

first date notice is published under Subsection (2)(B). The public hearing must be held in the county in which the plant is proposed to be located.

- (G) A public hearing held under this standard permit is not an evidentiary proceeding. Any person may submit an oral or written statement concerning the application at the public hearing.
- (H) Not later than the 35th day after the date the public hearing is held, the executive director will approve or deny the application for authorization to use the standard permit. The executive director must base the decision on whether the application meets the requirements of this standard permit. The executive director must consider all comments received during the public comment period and at the public hearing in determining whether to approve the application. If the executive director denies the application, the executive director must state the reasons for the denial and any modifications to the application necessary for the proposed plant to qualify for the authorization.
- (I) The executive director will issue a written response to any public comments received related to the issuance of an authorization to use the standard permit at the same time as or as soon as practicable after the executive director grants or denies the application. Issuance of the response after the granting or denial of the application does not affect the validity of the executive director's decision to grant or deny the application. The executive director will:
 - (i) mail the response to each person who filed a comment; and
 - (ii) make the response available to the public.

(3) Design and Operating Requirements

- (A) Each cement/flyash storage silo and weigh hopper must be equipped with a fabric or cartridge filter or vented to a fabric or cartridge filter system.
- (B) Fabric or cartridge filters and collection systems must meet all of the following:
 - (i) each fabric filter or cartridge filter, and its associated collection system, and any suction shroud must be maintained and operated properly with no tears or leaks;
 - (ii) excluding the suction shroud filter system, each filter system must be designed to meet an outlet grain-loading standard of at least 0.01 grains/dry standard cubic foot;
 - (iii) each filter system and each mixer-loading and batch truck-loading emissions control device must meet a performance standard of no visible emissions exceeding 30

seconds in a five-minute period as determined using United States Environmental Protection Agency Test Method 22 as that method existed on September 1, 2003;

- (iv) if a cement or fly ash silo is filled during non-daylight hours, the silo filter system exhaust must be sufficiently illuminated to enable a determination of compliance with the performance standard described by (3)(B)(iii) of this permit;
- (C) Conveying systems for the transfer of cement or fly ash must meet all of the following:
- (i) the conveying system for the transfer of cement or fly ash to and from each storage silo must be totally enclosed, operated properly, and maintained without any tears or leaks; and
 - (ii) except during cement or fly ash tanker connection or disconnection, each conveying system for the transfer of cement or fly ash must meet the performance standard described in paragraph (3)(B)(iii) of this permit.
- (D) A warning device must be installed on each bulk storage silo.
- (i) The warning device must be designed to alert the operator in sufficient time for the operator to stop loading operations before the silo is filled to a level that may adversely affect the pollution abatement equipment; and
 - (ii) if filling a silo results in failure of the pollution abatement system or failure to meet the performance standard described by paragraph (3)(B)(iii) of this standard permit, the failure must be documented and reported to the commission following the requirements of 30 TAC § 101.201 or § 101.211, as appropriate.
- (E) Each road, parking lot, or other area at the plant site that is used by vehicles must be paved with a cohesive hard surface that is properly maintained, cleaned, and watered so as to minimize dust emissions.
- (F) Each stockpile must be sprinkled with water or dust-suppressant chemicals or covered so as to minimize dust emissions.
- (G) Material used in the batch that is spilled must be immediately cleaned up and contained or dampened so as to minimize dust emissions.
- (H) The production of concrete at the site must not exceed 300 cubic yards per hour.
- (I) A suction shroud or other pickup device must be installed at the batch drop point or, in the case of a central mix plant, at the drum feed, and vented to a fabric or cartridge filter system with a minimum capacity of 5,000 cubic feet per minute of air.
- (J) The bag filter and capture system must be properly designed to accommodate the increased

flow from the suction shroud and achieve a control efficiency of at least 99.5 percent.

- (K) The following distance limitations must be met:
- (i) the suction shroud baghouse exhaust must be more than 100 feet from any property line;
 - (ii) stationary equipment, stockpiles, and vehicles used at the plant, except for incidental traffic and vehicles as they enter and exit the site, must be located or operated more than 100 feet from any property line; and
 - (iii) if the plant is located in an area that is not subject to municipal zoning regulation, the central baghouse must be located at least 440 yards from any building used as a single or multifamily residence, school, or place of worship at the time the standard permit registration is filed with the commission.
- (L) In lieu of meeting the distance requirements for roads and stockpiles of (3)(K)(ii), the following must be followed:
- (i) each road, parking lot, and other traffic area is bordered by dust-suppressing fencing or another barrier at least 12 feet high; and
 - (ii) each stockpile located within the applicable distance of a property line is contained within a three-walled bunker that extends at least two feet above the top of the stockpile.