February 2002

Air Quality Standard Permit for Temporary Rock Crushers

Air Permits Division
Texas Natural Resource Conservation Commission

Table of Contents

TEMPORARY ROCK CRUSHER
AIR QUALITY STANDARD PERMIT
SUMMARY DOCUMENT

I. EXECUTIVE SUMMARY

The Texas Natural Resource Conservation Commission (TNRCC or commission) is issuing an air quality standard permit for rock crushers (RCs). This standard permit is applicable to all temporary RCs that process nonmetallic minerals or a combination of nonmetallic minerals and have a feed hopper throughput that is equal to or less than 250 tons per hour (tph).

II. EXPLANATION AND BACKGROUND OF AIR QUALITY STANDARD PERMIT

This standard permit for temporary RCs is being developed because the transient nature of these types of operations has made it apparent that the TNRCC should provide an authorization process that will allow RCs to operate temporarily at a location (or to operate on a limited, noncontinuous time frame), process material in a timely manner, and be in compliance with all TNRCC regulations. Although in many cases RCs are operating at quarries and mines, RCs are also required to process material at locations that are not permanent material handling sites. Examples of these types of sites are estate subdivision developments, strip-mall construction sites, building demolition projects, public road and highway projects, and sanitary landfills for size reduction of disposed material. This standard permit provides a streamlined preconstruction authorization process that may be used by any RC complying with the standard permit requirements and which is not prohibited by some other state or federal permitting statute or regulation.

III. OVERVIEW OF AIR QUALITY STANDARD PERMIT

Based on the results of a protectiveness review, the commission is issuing a standard permit for RCs under Title 30 Texas Administrative Code Chapter 116, Subchapter F (30 TAC Chapter 116, Subchapter F), Standard Permits. The commission currently authorizes RCs under the conditions of 30 TAC Chapter 106, Permits by Rule (PBR), or under 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification. The development of this standard permit is consistent with the desire of the commission to simplify its regulatory structure and provide standard permits as an alternative authorization to authorization by existing PBRs. The general public often expresses concern with RC registration applications. These objections often include traffic safety, noise, appearance, and property values. These concerns are beyond the commission's jurisdiction to address. The general public also expresses concerns over nuisance dust, ambient air quality, and potential negative health impacts and these issues are the focus of the RC protectiveness review and the proposed conditions of the standard permit.

The commission is including requirements to minimize dust emissions, property line distance limitations, opacity and visible emission limitations based on computer dispersion modeling, impacts analysis, and plant observations performed to verify the protectiveness of the standard

permit. The commission has concluded research which shows that the standard permit for RCs is protective of the public health and welfare and that facilities which operate under the conditions specified will comply with TNRCC regulations.

The standard permit is designed to authorize RCs that are portable and, based on business needs, move to various sites. However, it is not intended to provide an authorization mechanism for all possible unit configurations or for unusual operating scenarios. Those facilities which cannot meet the standard permit conditions may apply for an air quality permit under 30 TAC § 116.111, General Application or a PBR under 30 TAC § 106.142.

IV. PERMIT CONDITION ANALYSIS AND JUSTIFICATION

The new standard permit for RCs creates a new authorization mechanism for rock crushing facilities. Any rock crushing facility may continue to apply for an air quality permit under 30 TAC § 116.111 or a PBR 30 TAC § 106.142. This standard permit requires RCs to comply with certain administrative requirements, including regional notification (Tier 1), regional notification and written regional approval (Tier 2), as well as general provisions and specific requirements for controlling emissions from equipment and activities at a site.

Applicability and General Conditions

The general conditions for standard permits, located in 30 TAC Chapter 116, Subchapter F, apply to all RCs seeking authorization under this standard permit. All RCs are required to meet 30 TAC Chapter 116, Subchapter F rule requirements as well as the specific conditions of this standard permit listed in paragraph (1). Tier I RCs must also comply with paragraph (2) and Tier II must comply with paragraph (3). The proposed standard permit also specifies that any changes that are made to this standard permit by the commission shall apply to all existing and future facilities that are authorized by this standard permit. The standard permit registration is location specific and relocation to a new site requires the owner or operator to reapply for a new authorization under the standard permit.

Administrative and General Requirements

Paragraph (1) of the proposed standard permit outlines the administrative requirements that all RCs must meet in order to be eligible to use this standard permit. Subsection (A) is the definition of a plant site and should be used when determining the meaning of "site" that is used throughout this standard permit. Subsection (B) satisfies House Bill 2912, § 5.07 which amended Texas Health and Safety Code (THSC), § 382.065, to require all RCs that are crushing concrete to be located at least 440 yards (1320 ft.) from any structure used as a single family or multifamily residence, school, or place of worship. Subsection (C) requires all screen sides to be enclosed and conveyors to be covered with a half-moon enclosure or equivalent.

Subsections (D) & (E) address performance demonstrations for the facility. All RCs authorized under this standard permit will be limited to no visible emissions exceeding 30 seconds over a six-minute period as determined by the U.S. Environmental Protection Agency (EPA) Test Method (TM) 22

from the crusher, screens, transfer points on conveyors, material storage or feed bins, in-plant roads, and work areas that are directly associated with the facility and stockpiles. Additionally, opacity of emissions from any transfer point on belt conveyors or any screen shall not exceed 10 percent and from any crusher shall not exceed 15 percent, averaged over a six-minute period, and according to EPA TM 9. The performance expectations are listed for compliance demonstrations with the conditions of the standard permit and prevention of nuisance conditions. Visible emission limitations and opacity requirements ensure that both the operators and TNRCC field investigators can clearly understand how to demonstrate compliance with the rule and regulations of the commission.

Subsection (F) requires all RCs to have properly mounted spray bar equipment on the inlet and outlet of all crushers, all shaker screens, and at all material transfer points. These devices are to be used as necessary to maintain compliance with all TNRCC regulations. Water sprays are an effective control method to minimize dust emissions from these emission points. Subsection (G) requires that dust emissions from road and traffic areas directly associated with the operation of the RC be minimized by covering or treating them with dust-suppressant materials, chemicals, watering, or paving. Similarly, subsection (H) requires that dust from stockpiles be controlled by watering, dust-suppressant chemicals, or covered as necessary to minimize emission from these sources. Subsection (I) limits raw material and product stockpiles to a maximum height of 45 ft. To show compliance with the time limitations listed in this standard permit, subsection (J) requires all RCs to be equipped with a run time meter. Subsection (K) requires production records to be kept at the plant site in accordance with 30 TAC § 116.615(8), General Conditions. Hourly throughput, plant operation, dates, and times at specific plant sites must be recorded and maintained to demonstrate compliance with the maximum production rate and time limits listed in the standard permit. Because these plants are portable, these records are required to accompany the plant to any site and shall be maintained for a rolling 24-month period. As described in subsection (L), the commission has also clarified that 30 TAC § 116.610(a)(1), Applicability, does not apply to RCs under this standard permit as the protectiveness review addressed emission rates and distance limitations for these facilities.

Subsection (M) requires compliance with all applicable conditions of Title 40 Code of Federal Regulation Part 60, Subpart OOO (40 CFR Part 60, Subpart OOO), Standards of Performance for Nonmetallic Mineral Processing Plants. As described in subsection (N), any RC authorized under this standard permit is also limited to crushing only those nonmetallic materials or a combination greater than 50% of those materials that are listed in 40 CFR Part 60, Subpart OOO (excluding kaolin, mica, and talc). This limitation applies to all RCs, regardless of whether the proposed RC is subject to the terms and conditions listed in 40 CFR Part 60, Subpart OOO. Kaolin, mica, and talc have been excluded because of toxicity concerns greater than those from materials such as limestone. This requirement is applied to RCs that will be authorized under this standard permit.

Subsection (O) ensures the rock crushing operations at a site are limited, and that particulate matter (PM) standards are not exceeded. The protectiveness review showed that PM concentrations predicted to result from emissions from the rock crushing scenarios authorized by this standard permit approach the 30 TAC Chapter 111 (Control of Air Pollution from Visible Emissions and Particulate Matter) standards under worst case scenarios. 30 TAC § 116.614 requires a fee of $450 for any standard permit unless otherwise specified in a particular standard permit. This standard permit

[subsection 1(P)] has been clarified to exempt these facilities from this fee. Due to the portable nature of these types of facilities subsection Q has been added to exempt these facilities from the registration procedure listed in 30 TAC § 116.611. Specific notification procedures are listed in the individual tiers of this standard permit

Specific Requirements for Tier I Rock Crushers

Paragraph (2) requirements are applicable to portable RCs with a throughput of 125 tph or less that propose to be located temporarily at a site. Paragraph 2 also requires compliance with all applicable regulations, ensures the temporary nature of the site at which the RC will be located, and includes regional office notification procedures.

Subsection (2)(A) limits the use of this proposed standard permit to locations that are not quarries and or mines. Subsections (2)(B) and (C) limit the feed hopper throughput of the RC to a maximum of 125 tph and require a minimum distance of 200 ft. from any property line. Subsection (2)(D) limits the number of pieces of equipment at a proposed location to one primary crusher, two conveyors and two screens. Additionally, subsection (2)(E) prohibits RCs authorized under this standard permit from locating at sites where an existing concrete batch plant or asphalt plant is currently operating. These subsections are required to ensure compliance with all applicable TNRCC regulations. This tier of the standard permit is intended for those types of locations (e.g., construction sites, subdivision developments, roads and highways) that are not permanent aggregate handling operations and for those locations where there is little possibility of multiple operations occurring at the same time. These requirements are designed to ensure the protection of public health. Given the conservative assumptions and the extremely low number of modeled exceedances of 30 TAC Chapter 111 (Control of Air Pollution from Visible Emissions and Particulate Matter) standards, it is not expected that any individual facility, which meet these limits will exceed the standards of 30 TAC Chapter 111 (one hour and three hour) or the 24-hour or annual National Ambient Air Quality Standards (NAAQS).

Subsection (2)(F) limits RCs to 360 operational hours or 45 calendar days at a site. Once either of these two limitations is met, the owner/operator is required to stop operation and leave the site. In order to allow the owner/operator time to remove the RC and associated equipment from the site, the standard permit will allow for an additional 24 hours to remove the RC and associated equipment. However, the additional 24 hours may not be used as additional operational time. Because there are no emissions associated with the relocation of equipment, this additional time is given to provide some flexibility for the applicant to remove equipment and not be in violation of the standard permit time requirements. Subsection (2)(G) states that the operational time limitations listed in Subsection (2)(F) are not consecutive. An applicant may move to another site and return, provided that the 360 hour time limit or the 45 calendar day limit has not been exceeded. Once either limitation has been exhausted, the owner or operator shall not use a standard permit to locate a RC at this site for a period of 365 consecutive calendar days. If the RC and associated facilities are moved from the site, the owner/operator must renotify the regional office prior to moving back to the site (see description of notification process below). The proposed standard permit is not intended to create a location where an RC would be permanently located. These additional requirements are needed to make clear the

commission's intention to allow certain types of facilities the flexibility to temporarily locate at a given site, process material and then leave the site and not return for a specific period of time.

Finally, Subsection (2)(H) describes that the applicant must notify the appropriate regional office at least 10 days prior to locating at a site. Due to the short time frames allowed under this portion of the standard permit, no written approval from the regional office is required. The notification shall provide information to the region of the temporary location and the time frame the RC is proposed to be at the site. This information is intended to assist the regional office in answering any questions that may arise as to why the RC is at the location or how it may be authorized.

Specific Requirements for a Tier II Rock Crushers

Paragraph (3) covers those requirements that are applicable to portable RCs with a throughput of 250 tph or less that propose to be located at any temporary plant site. Paragraph (3) requires compliance with all applicable regulations, ensures the temporary nature of the site at which the proposed facility will be located, and includes notification requirements.

Subsections (3)(A) and (3)(B) limit the feed hopper throughput of the RC to a maximum of 250 tph and require a minimum distance of 300 ft. from any property line. Subsection (3)(C) also establishes a 550-ft. "separation" distance between any RC authorized under this standard permit and either an operating concrete batch plant (CBP) or asphalt concrete batch plant (ACP). If this distance cannot be met, then the RC authorized under this standard permit shall not operate at the same time as the CBP or ACP. Subsection (3)(D) limits the number of pieces of equipment at a proposed location to one primary crusher, one secondary crusher, two screens, and any associated conveyors. As stated for a Tier I RC, the requirements in these subsections are to ensure compliance with all applicable TNRCC regulations. This tier of the standard permit is intended for all types of locations at which RCs may be needed to process material. Although it is still not intended to authorize a permanent crushing operation, it is intended to allow equipment at plant sites that handle aggregate materials (e.g., quarries and mines) or large scale projects that may require higher production rates to accomplish the required tasks. Given the intent of this type of operation, this portion of the standard permit does consider the possibility of multiple facilities (CBPs and ACPs) operating at the same time. Given the conservative assumptions and the low number of modeled exceedances of 30 TAC Chapter 111 standards, it is not expected that any individual facility which meets these limits will exceed the standards of 30 TAC Chapter 111 (one hour and three hour) or the 24-hour or annual NAAQS.

Subsection (3)(E) limits a RC to 1080 operational hours or 180 calendar days at a plant site. Once either of these two limitations is reached, the owner/operator is required to stop operation and leave the site. The 1080 operational hours are considered to be the maximum total operational time allowed under this standard permit. An operator may operate any combination of the primary and secondary crusher (and associated equipment) that is authorized under this standard permit. However, no single or combined use of the equipment shall exceed 1080 hours or 180 days of operation. In order to allow the owner/operator time to remove the proposed facility from the site, the standard permit does allow for an additional 24 hours to remove RCs and associated equipment. However, the additional 24 hours may not be used as additional operational time. Because there are no emissions associated with the

relocation of equipment, this additional time is given to provide some flexibility for the applicant to remove equipment and not be in violation of the time requirements of this standard permit. Subsection (3)(F) states that the operational time limitations listed in Subsection (3)(E) are not consecutive. An applicant may move to another site and return, provided that the 1080 hour time limit or the 180 calendar day limit has not been met. Once either limitation has been exhausted, the owner/operator shall not use a standard permit to locate a RC at that site for a period of 365 consecutive calendar days. If the RC and associated facilities are moved from the site, the owner/operator must obtain written approval from the regional office prior to relocating back to the site. This standard permit is not intended to create a location where an RC would be permanently located. This portion of the proposed standard permit is to allow certain types of facilities the flexibility to temporarily locate to a given site, process material and then leave the site and not return for a given period. However, this tier of the standard permit expands the types of plant sites at which relocation may occur.

Subsection (3)(G), due to the larger operations and longer time frames allowed under Tier II, requires that the applicant obtain written approval from the appropriate regional office prior to locating any equipment at a site. The request to locate an RC is required to be submitted to the regional office at least 30 days in advance of locating to a proposed plant site. Under this tier, a site review by the regional office is required to ensure that all applicable portions of the standard permit are being met by the applicant. If the applicant meets all applicable requirements of the standard permit, the regional office will provide the owner/operator with written approval.

V. PROTECTIVENESS REVIEW

Dispersion Modeling and Distance Limits

The RC standard permit team developed representative worst-case operating scenarios to be evaluated by dispersion modeling. Pollutants evaluated were PM and particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}). Impacts were obtained using the EPA Industrial Source Complex (ISC) model. The model's output was used as the basis to develop the distance limits for the standard permit.

The operating scenarios consisted of generic configurations of two sizes of rock crushing equipment and associated stockpiles. All rock crushing equipment emissions, including drop points, screens, crushers, and conveyers, were characterized as a single elevated area source with initial vertical dispersion. In addition, because the configuration was generic, the area source was modeled separately in both an east-west and north-south orientation to determine worst-case impacts. Stockpiles associated with the operation of the rock crushing equipment were represented as volume sources. The locations of the stockpiles were selected to determine the worst-case configuration based on the orientation of one area source with one volume source and the prevailing wind directions in the meteorological data set.

The emissions of the sources were based on the maximum capacity of the rock crushing equipment, a process rate of 125 tph for Tier 1 and 250 tph for Tier 2. The emissions for both tiers reflect emission reductions for the use of water sprays, enclosed screens, and watering stockpiles. Because the sources are all low-level fugitives, the emissions modeled were reduced by 40 percent to account for increased dispersion due to plume meander and spreading which is not accounted for in the ISC model.

Because there is no set "property line" for this standard permit, the receptor grid started as close to the edge of the long axis of the area source for each model run as practical to accommodate the size and location of the facilities and stockpiles and extended approximately 1300 ft. in all directions from the center of the sources. To be conservative, the receptors were spaced 25 ft. apart.

Five years of meteorological data for a single location were used in lieu of evaluating multiple regional meteorological data sets. The rationale for this decision considered that the source releases are low-level fugitives and that the sources would be evaluated in multiple orientations; therefore, five years of data would provide representative worst-case meteorological parameters for fugitive impacts (low wind speed and stable atmospheric conditions). The meteorological data for this analysis consisted of surface data from Austin and upper-air data from Victoria for the years 1983, 1984, 1986, 1987, and 1988.

Because all the emission sources were characterized as low-level fugitives, the emissions would be terrain following, therefore, only flat terrain was considered. Rural dispersion coefficients were used because RCs would be located primarily in areas that are considered rural. Downwash was not considered for this analysis because there are no typical downwash structures involved.

To demonstrate compliance, the modeling team tabulated the total number of modeled exceedances of the 30 TAC Chapter 111 one-hour and three-hour standards over a five-year period that occurred over each tier's receptor grid. The compliance prediction was based on an evaluation of the total hours of modeled exceedances divided by the total hours in the applicable review period (43,824 hours for the one-hour standard and 14,608 hours for the three-hour standard) and, the conservativeness of assumptions made in the review. For each source configuration, the maximum distance to obtain 99.9 percent predicted compliance was used as the basis for the distance limitation for each tier. Given the conservative nature of the modeling and limited hours of operation, the team expects a predicted compliance of 99.9 percent to be 100 percent compliance in practice. In addition, the NAAQS for PM_{10} should not be exceeded based on the results of the one-hour and three-hour analyses, limited hours of operation, and lower emission rates for each tier.

The state property line standards for PM are the controlling standards for the distance limitations. The distance limit for the crusher and all associated facilities is 200 ft. from the property line for Tier I and 300 ft. from the property line for Tier II. In addition, for Tier II, a distance limit of at least 550 ft. from any CBP or ACP was determined by adding the greater of the distance from the ACP protectiveness review (250 ft.) or the distance from the CBP standard permit (100 ft.) to the
Tier II distance limit of 300 ft. This is a conservative distance based on the assumptions of

worst-case orientation of RC sources and possible alignment of the same short-term meteorological wind and stability conditions with concrete batch plant or asphalt concrete batch plant sources.

VI. PUBLIC NOTICE AND COMMENT PERIOD

In accordance with 30 TAC § 116.603, the TNRCC published notice of the proposed 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 publication in Amarillo; Austin; Corpus Christi; Dallas; El Paso; Houston; Lubbock; Permian Basin; San Antonio; and Tyler was November 30, 2001 and the date for publication in the Lower Rio Grande Valley was December 4, 2001.The comment period closed on January 3, 2002.

VII. COMMENTS REQUESTED

In addition to general comments concerning the standard permit for temporary RCs with a throughput of less than 250 tph, the commission solicited, in particular, comments regarding the concept of a standard permit for permanent RCs.

VIII. PUBLIC MEETINGS

Public meetings on the proposal were held on the following dates at the stated times and locations: January 3, 2002 at 7:00 p.m.,Texas Natural Resource Conservation Commission Building C, Room 131E, 12100 Park 35 Circle, Austin, Texas; January 3, 2002 at 7:00 p.m., City of Arlington Council Chambers Municipal Building, 101 West Abram Street, Arlington, Texas; January 3, 2002 at 7:00 p.m., City of Houston Pollution Control Auditorium, 7411 Park Place Boulevard Houston, Texas. Oral comments were provided by the following: Representative Al Edwards, Representative Ron Wilson, a representative for Representative Bill Callegari, Texas Pipe and Supply (TPS), Trinity Materials/Transit Mix (TM), Big City Crushed Concrete (BCCC), Recycled Materials (RM), representatives of the Southeast Coalition of Civic Clubs (SCCC), representatives of the Sunnyside Civic Club (SCC), representatives of Residents for a Better Community (RBC), a representative of the National Association for the Advancement of Colored People (NAACP) and three private citizens not affiliated with any of the above mentioned organizations.

Written comments were submitted by the following: Representative Bill Callegari, Associated General Contractors of Texas (AGC), Bland/Shroeder/Archer, LP (BSA), CSA Materials, Inc. (CSA), Jenkins and Gilchrist on behalf of TXI (TXI), Recycled Materials (RM), S.H. Tolliver Company (SHTC), Texas Aggregates and Concrete Association (TACA), Westward Environmental, Inc (WE), Frederick-Law (FL), representatives of the Southeast Coalition of Civic Clubs (SCCC) and four private citizens not affiliated with any of the above mentioned organizations.

IX. ANALYSIS OF COMMENTS

General Comments

The commission received both positive and negative comments on the concept of a Tier III or permanent rock crusher standard permit. Comments on the Tier III concept were solicited in order to assist in the possible development of a Tier III standard permit. The commission will continue to consider the option of a Tier III standard permit. As part of determining whether to develop a Tier III standard permit, the commission will seek additional stakeholder input. Until the commission approves a Tier III type of standard permit for rock crushers, the rock crusher permit by rule authorized in 30 TAC § 106.142 will remain in effect.

The commission also received comments which mentioned a Southern Crushed facility. Responses to timely filed comments about that facility were provided in the Executive Director's Responses to Public Comments at the beginning of January 2002. Therefore, comments about Southern Crushed will not be addressed in this response to comments on the proposed RC standard permit.

Representative Bill Callegari, Representative Al Edwards, Representative Ron Wilson, TPS and several private citizens commented that it is important to give public notice to residents of the surrounding area when a RC is located at a specific site.

The development of a standard permit includes a comprehensive evaluation of emission controls and operating conditions for a large group of very similar facilities. Because of the similarity of emissions and operating scenarios of RCs, the commission can develop a set of emission controls and operating conditions that will apply to all individual facilities and meet the intent of the Texas Clean Air Act (TCAA). The emission controls, operating conditions, and worst case impacts are subject to a technology requirements review that will determine whether are not the conditions of the permit are sufficient to protect public health and welfare. For example the RC standard permit review shows that Tier I would have a maximum PM emission rate of 0.048 tons per year (tpy) and that Tier II would have a maximum PM emission rate of 0.672 tpy. In this standard permit the commission has also placed limits on the hours of operation, time allowed on site, amount of ancillary equipment, and types of emission controls that may exceed those in a regular permit.

Texas Health and Safety Code § 382.05195(b) [THSC § 382.05195(b)] requires that the commission publish newspaper notice of a proposed standard permit. Notice of this proposed standard permit was published in 11 newspapers and the Texas Register. Additionally, THSC § 382.05195(c) requires the commission to publish notice of and provide a public meeting to take additional public comment on a proposed standard permit. Three public meetings were held in Houston, Arlington, and Austin to take comments on this standard permit. A protectiveness review was performed and the commission solicited public comment on the conditions for authorization during the review of a standard permit. This standard permit has undergone a detailed protectiveness review and public comments have been considered and responses will be published in the Texas

Register. Only after the public participation period is concluded and any comments have been considered may the commission approve the standard permit.

Representative Al Edwards, SCCC, RBC, TPS, and private citizens commented that there needs to be more monitoring of rock and concrete crushing sites.

The commission does not typically conduct case-by-case monitoring at all specific sites. Modeling is the accepted alternative per guidance and policy of both EPA and TNRCC and can simulate multiple worst case atmospheric conditions that would not be possible with monitoring. Additionally, the models rely on emission factors that are highly conservative (worst case) and is based on actual monitoring data developed by the EPA. In this instance, worst case modeling indicated that these temporary facilities would meet all applicable TNRCC rules. Specifically, these operations were compared to the one-hour and three-hour 30 TAC Chapter 111 PM standard and the NAAQS 24- hour and annual standard for PM10. Additionally, modeling provides a mechanism for predicting any off-property impacts prior to an actual facility being constructed at a given location. Monitoring is typically a post construction tool to assist the agency in determining continued compliance with commission regulations.

A private citizen commented that the air quality in Houston is not good and requested a moratorium on any further permits for RCs.

The Houston Galveston area has been designated nonattainment for the air pollutant ozone. This ozone nonattainment area is classified as Severe-17 under the Federal Clean Air Act (FCAA) Amendments of 1990 and therefore is required to attain the one-hour ozone standard of 0.12 ppm by November 15, 2007. The state has developed a State Implementation Plan which details strategies and mechanisms by which it will reduce air pollution.

This standard permit will authorize sources that emit PM_{10}. These sources do not emit ozone. The standard permit was evaluated against the NAAQS for PM_{10} on 24-hour and annual bases. These PM standards were developed to ensure protection of public health and welfare. The standard permit did not significantly impact either of these federal requirements therefore the commission does not anticipate that the use of this standard permit is likely to adversely impact the air quality in the Houston area or any where in the State of Texas.

Representative Bill Callegari, Representative Al Edwards, Representative Ron Wilson, NAACP and RBC commented that no specific neighborhood should be targeted because of its economic or racial composition as a viable location for RCs and that RCs should not be concentrated in one general area. In addition Representative Al Edwards, Representative Ron Wilson, NAACP, SCCC, and numerous private citizens commented that there were too many concrete crushers in the Sunnyside area.

The commission does not have statutory authority for restricting the placement of facilities based on land use issues. However, the commission can ensure that these facilities do not contribute to adverse health impacts due to air pollution and believes that the controls, limits,

and restrictions in this standard permit achieve that goal. Additionally, the new THSC § 382.065 prohibits the location of this type of facility within 440 yards of a building used as a single or multifamily residence, school, or place of worship. The TNRCC has no guidance addressing how environmental equity is to be considered in the permitting process. Air quality permits evaluated by the agency are reviewed without any particular knowledge of, or reference to, the socioeconomic or racial status of the surrounding community. Although there are no TNRCC rules addressing environmental equity issues such as the location of permitted facilities in areas with minority and low-income populations, disparate exposures of pollutants to minority and low-income populations, or the disparate economic, environmental, and health effects on minority and low-income populations, the TNRCC has made a strong policy commitment to address environmental equity by creating an environmental equity program within the Office of Public Assistance. This program works to help citizens and neighborhood groups participate in the regulatory process; to ensure that agency programs that substantially affect human health or the environment operate without discrimination; and to make sure that citizens' concerns are considered thoroughly and are handled in a way that is fair to all. The Office of Public Assistance can be reached at 1-800-687-4040 for further information.

A private citizen suggested enclosing the RC and associated equipment in a building and Representative Al Edwards stated that such an enclosure should be seriously considered.

After detailed analysis including refined air dispersion modeling, the commission believes that the controls, such as spray bars, screen enclosures, and conveyor covers, and best management practices, such as watering roads and stockpiles, in this standard permit ensure that emissions meet the property line standards and NAAQS for PM and are thus protective of public health and welfare. Additional controls such as a complete enclosure are not required to reduce emissions below the above stated standards. Additionally, these types of requirements are technically impractical and economically unreasonable given the temporary nature of the types of facilities that are authorized by this standard permit.

RCCC and several private citizens commented that the dust from RCs will cause adverse health effects.

The standard permit underwent a detailed protectiveness review and the permit provisions were developed to prevent any adverse health effects associated with the air emissions from temporary RCs. Assuming the RCs authorized by this standard permit operate according to the provisions of the permit, the commission would not expect adverse health effects to result from exposure to authorized emissions.

Private citizens, SCCC, and SCC commented that they are opposed to the rock crusher standard permit.

The commission acknowledges the opposition to the proposed standard permit but believes the standard permit is protective and is a practical method to authorize operations of this nature.

SCCC, TPS and private citizens commented that the concentration of concrete crushers in the neighborhood lowered property values. A private citizen also stated that the diminished quality of life, due to air pollution, lowered the City of Houston's bond rating.

The commission has no statutory authority for consideration of the effect of this standard permit on property values or other land use issues. Similarly, the commission has no statutory authority to consider a city's bond rating in the process of approving a standard permit or approving individual authorizations. Moreover, THSC § 382.065, as passed by the 77th Texas Legislature as a part of House Bill 2912, prohibits the location or operation of a concrete crushing facility within 440 yards of a building used as a single or multifamily residence, school, or place of worship.

BCCC stated that the concrete crushing industry has developed differently in Dallas because of the more stringent land use regulations and suggested that regional or local entities should have the authority to approve concrete crusher sites.

Land use planning and zoning are handled by local jurisdictions such as cities. TNRCC has no authority to consider land use planning in the development of the standard permit. Nor does TNRCC's authorization of a facility supercede local authority to restrict or limit land use.

BSA suggested that portable RCs with a capacity of 250 tph or less be treated the same as other construction equipment - exempt from permitting but subject to TNRCC dust control regulations.

Facility is defined as a discrete or identifiable structure, device, item , equipment or enclosure that constitutes or contains a stationary source, including appurtenances other than emission control equipment. THSC § 382.003(6), 30 TAC §116.10(4). 30 TAC § 116.110 states that new facilities or facilities being modified are subject to the requirements of 30 TAC Chapter 116. RCs, even though portable, are considered to be stationary sources because they are fixed (do not move) while operating. A RC, regardless of size, is a facility and is therefore subject to 30 TAC Chapter 116 or 106 authorization requirements. Other types of construction equipment that are considered mobile sources do not fit this definition and are not subject 30 TAC Chapter 116 permitting requirements.

CSA commented that the location, production, emissions, and equipment requirements of the proposed standard permit for RCs are not practical, necessary, or economically feasible for most RCs operating in rural areas. RCs in rural areas are often located miles from the nearest receptor and requirements based on crowded urban areas will adversely affect RCs operating in rural areas of the state and some rock crushers may be forced to shut down. BSA and CSA commented that if aggregate cannot be crushed on site then the aggregate must be hauled to the site with resultant increases in air pollution from trucks and wear on roads and highways.

The standard permit is designed to allow for authorization of RCs that are portable and, based on business needs, move to various sites. However, it is not intended to provide an authorization mechanism for all possible unit configurations or operating scenarios. Those

facilities which cannot meet the standard permit conditions may apply for an air quality permit under 30 TAC § 116.111 or a PBR under 30 TAC § 106.142. The property line limit of the standard permit is used in lieu of off property receptor limitations as required by a case-by-case permit review to ensure that the operating facility is in compliance with all TNRCC rules and regulations.

AGC, CSA, TACA, WE, and TXI objected to or expressed concern about eliminating the PBR for rock crushing (30 TAC § 106.142).

Based upon these comments, the commission amended the proposed standard permit to allow use of the PBR for RCs (30 TAC § 106.142).

TXI and RM requested an extension of the comment period. TXI was also concerned about the lack of stakeholder involvement and AGC requested a formal stakeholder meeting.

The commission provided several opportunities for public comment. The proposed rock crusher standard permit was made available on the commission's public website and was published in the *Texas Register* on November 30, 2001. Comments were accepted during the formal comment period and at three public hearings. The three public hearings were conducted in various areas of the state (Houston, Austin and Arlington) on January 3, 2002. Therefore, the commission is not extending the comment period nor holding an informal stakeholder meeting.

FL requested an explanation of the 40% reduction in modeled impacts to account for meander of the plume. FL stated that because the 5-year meteorological data are already one-hour averages of wind speed and direction aggregated from much more short-term readings, plume meander would have been accounted for in the model data**.**

The meteorological data for input into the ISC model is based on National Weather Service (NWS) observations. These observations take place once per hour and are not one-hour averages. The NWS records wind speeds to the nearest knot and wind direction to the nearest 10 degrees of angle.

The ISC model accounts for variations in the wind speed and direction during a modeled hour by use of dispersion coefficients. These coefficients are partially based on a set of field studies. The dispersion coefficients resulting from the field studies were based on averaging times much less than one-hour, as short as 3 minutes. The ISC model has incorporated these dispersion coefficient values for one-hour periods by use of the assumption that each 3-minute period is the same as the next. This assumption would lead to gross over-estimation of predicted concentrations.

The TNRCC has recognized the disparity in dispersion coefficients for some time, and has decided to mitigate overly conservative model results. To do so, a conversion from 3-minute averages to one-hour averages was performed. The use of this conversion from one averaging time to another results in the 40 percent reduction of one-hour predictions.

The TNRCC modeling staff are applying this factor only to low-level intermittent fugitive sources (sources with little or no vertical momentum or buoyancy) at this time.

FL commented that the 1996 protectiveness review of the rock crusher PBR found that it was not protective of the public without a 1/4-mile buffer from the property lines.

The 1996 protectiveness review determined that a distance of 1/4 mile from the facility rather than the required distance of ½ mile as listed in the current 30 TAC § 106.142 would be acceptable to meet 30 TAC § 111.155 standards. Though the 1996 protectiveness review scenario had a smaller hourly maximum production/process rate, this scenario represented more equipment (screens) and load out points on the crusher, larger stockpiles, larger plant footprint, and no emission controls on the crusher screens or conveyers other than water. In addition, the staff did not use any mitigating factors for the 1996 review to account for the overly conservative assumptions used in the modeling demonstration. These differences account for the 1996 scenario predicted concentrations being higher with a corresponding greater distance to demonstrate compliance than for the 2001 scenario. The requirement of additional emission controls in the standard permit is the largest factor in the reduction of the buffer size from the 1996 review. Additionally this standard permit allows no visible emissions to leave the property.

FL commented that the protectiveness review should have included haul-road and blasting particulate emissions in the modeling. FL also noted that these are large sources of contaminants that are subject to the 30 TAC Chapter 111 property line standard.

All sources of contaminants directly associated with rock crushing facilities were evaluated for this protectiveness review, though they were not necessarily evaluated through dispersion modeling. Emissions from haul roads and blasting are intermittent and not easily quantified on a short-term basis, therefore, it would not be appropriate to model the estimated emissions on a continuous basis.

Emissions from haul roads and in plant work areas are minimized by implementation of best management practices in the standard permit. If roads are maintained according to the provisions of the standard permit, emissions from these sources will be minimized. Additionally, no visible emissions are allowed to leave the site under this standard permit.

Blasting and associated equipment are not facilities which require a permit or other authorization. However, emissions from blasting are subject to 30 TAC Chapter 111. Due to the short-term duration of blasting emissions, the commission does not expect 30 TAC Chapter 111 standards to be exceeded.

BCCC commented that the commission based the protectiveness review on rock crushing plants and that concrete crushing is significantly different than rock crushing because in concrete crushing there less of the material processed was wasted.

The commission developed this standard permit to address a broad range of conditions and operating scenarios. Consequently, the commission established requirements based on those conditions that were most likely to result in emissions that would exceed property line standards in 30 TAC Chapter 111 or NAAQS.

Comments on General Requirements

TACA agrees with the definition of a "site" as a means to deter RCs from circumventing operating time restrictions.

The commission acknowledges the comment and believes that the term will help assure compliance.

TACA and TXI objected to the requirement to locate all concrete crushers and associated sources at least 440 yards from any school, church, or residence because it adversely affects the ability for portable facilities to be sited for recycling projects.

THSC § 382.065, as passed by the 77th Texas Legislature as a part of House Bill 2912, prohibits the location or operation of a concrete crushing facility within 440 yards of a building used as a single or multifamily residence, school, or place of worship. The statute provides no exceptions for recycling projects.

AGC and WE objected to the requirement that no visible emissions leave the property from roads associated with the RC operation because emissions from roads are subject to the nuisance requirements in the General Rules. WE commented that visible emissions should not be limited to 30 seconds.

Performance demonstrations from sources of emissions such as roads and plant work areas are needed to ensure compliance with the conditions of the standard permit and the prevention of nuisance conditions. Visible emission limitations and opacity requirements ensure that both the operators and TNRCC field investigators can clearly understand how to demonstrate compliance with the rules and regulations of the commission. Further, tools do not exist to accurately calculate emissions from roads. Rather, it has been agency practice to ensure that emissions from sources that cannot be accurately calculated are controlled or eliminated using best management practices. Lack of visible emissions is evidence of the effectiveness of those practices. Based on engineering judgement and wide experience with these types of facilities, the TNRCC believes that the 30-second period should allow for normal equipment operation, while ensuring proper abatement performance. Finally, minimization of emissions also serves to minimize the potential for adverse health, welfare and nuisance effects. This is consistent with NSR permitting requirements, was included in the Concrete Batch Plant Standard Permit and meets the threshold of BACT which is required for a standard permit.

TACA supports the requirement for permanently mounted spray bars at all shaker screens and transfer points. However, TACA is concerned that this might make all portable facilities wet rock crushing operations and suggests substituting the term “misting mechanism” for “spray bar.”

The commission intends water to be used to minimize visible emissions and not to alter the actual operations of RCs. The term "spray bar" has been commonly used by the TNRCC and is understood by the commission and the regulated community to be a dust suppression mechanism associated with RCs.

AGC believes that permanently mounted spray bars at the shaker screens and material transfer points are unnecessary because material will be controlled at the inlet and outlet of the crusher.

Spray bars are an accepted method of minimizing emissions from these types of sources. Although under certain conditions spray bars at these points may not be necessary, the standard permit is intended to cover a broad range of facility configurations and operating conditions. In order to ensure compliance with all TNRCC regulations and to protect public health and welfare the commission believes that it is important to maintain the requirement to have spray bars at all screens and material transfer points.

AGC and WE commented that the stockpile height requirement was too restrictive. Representative Al Edwards and TPS commented that the stockpile heights were too high for areas adjacent to residential housing, schools, and churches.

No changes have been made to the standard permit in response to these comments. The protectiveness review indicates that the conditions of this standard permit, including stockpile height, are protective and will help ensure compliance with state and federal regulations. The commission has no statutory authority to reduce or increase the stockpile heights based on any consideration other than to protect public health and welfare and ensure compliance with applicable regulations. However, local governmental entities may impose more restrictive limits based on land use considerations such as aesthetics.

AGC and WE objected to the requirement for a runtime meter.

The temporary nature of the operation of a RC is integral to authorization of a facility by this standard permit and it is imperative that an accurate accounting of the time spent in operation be kept according to paragraph (1)(K)(i). A runtime meter provides a method by which the owner/operator may ensure an accurate record is being maintained of the time a RC is in operation.

WE commented that the written records required by the standard permit should not be required to follow the crusher from site to site as the limitations of the proposed standard permit are site-specific.

Consistent with the requirements in 30 TAC § 116.115(F)(ii) and 30 TAC § 116.115(F)(v), records are required to be kept with the RC at any site it occupies and maintained for a rolling 24 month period. The commission may need access to records in order to determine

compliance with the emission limitations (production, etc.) after a crusher has left a specific site. Also, the standard permit limits the time that a crusher may be at a specific site within a one-year time frame; therefore, records must follow the crusher in order for the commission to determine if the crusher was previously located at a site and how long it was there.

TXI objected to the exclusion of crushing quartz and sandstone even in a completely wet process such as a sand and gravel operation.

The commission has revised the standard permit based on this comment. Based on additional protectiveness review of inhalable silica from quartz and sandstone under the conditions of the standard permit, both materials will be authorized under this standard permit. This analysis of these materials indicates that there will not be any adverse health effects from respirable silica associated with the crushing of these materials.

AGC, TXI, TACA, and WE objected to the requirement that RCs operating under this standard permit shall not locate or operate on the same site as another RC. TXI and AGC asked for the scientific basis for this requirement.

The purpose of this standard permit is to authorize a single RC and modeling was based on that scenario. Further, the crushers are designed to be temporary sources for use at construction sites, subdivision developments, and road and highway projects, where multiple crushing operations do not occur simultaneously. The prohibition against locating at a site with another crusher is needed to show compliance with all TNRCC regulations and to ensure protection of public health and welfare.

Comments on Tier I Rock Crushers

TXI and WE objected to the requirement that a Tier I RC not be located at a quarry or a mine. TXI and TACA request that the TNRCC provide the basis for this requirement.

This tier of the standard permit is intended for temporary locations (e.g., construction sites) and for those locations where there is little possibility of multiple operations occurring at the same time. Facilities that do not meet the requirements of Tier I of this standard permit may be authorized under Tier II, under a PBR (30 TAC § 106.142) or by obtaining a regular air quality permit under 30 TAC Chapter 116.

AGC and TACA commented that due to production limitations and time restrictions Tier I has limited applicability for industry.

The standard permit is designed to allow for authorization of RCs that are portable and, based on business needs, move to various sites and operate at any one site for a short period of time. However, it is not intended to provide an authorization mechanism for all possible unit configurations or operating scenarios. Those facilities which cannot meet the standard permit conditions may apply for an air quality permit under 30 TAC § 116.111 or a PBR under 30 TAC § 106.142.

AGC, SHTC, TACA, and WE commented that Tier I limitations should be based on emissions rather than throughput.

Particulate emissions from a RC are closely related to throughput. It is the commission's intention to use throughput as a surrogate for actual emissions in order to provide industry with an effective method of demonstrating compliance with the provisions of the standard permit.

AGC and TACA commented that the 125 tph limit should be based on crusher capacity rather than process throughput at the feed hopper because a significant portion of the material from the feed hopper is screened out before it reaches the crusher. TXI suggested that the 125 tph limit be based on material production rather than feed hopper throughput. RM suggested that the hourly rate be an average over several production days.

The 125 tph limit is based on total facility capacity rather than material production or crusher capacity because this includes quantification of emissions from all sources. This would include emissions from all hoppers, screens, crushers and conveyors. The commission selected the total facility capacity scenario rather than those listed above because total facility capacity and all associated sources represents the worst case scenario, i.e., all material fed into the system is crushed. The authorized hourly production rate of 125 tph is necessary in order to ensure compliance with 30 TAC Chapter 111 one- and three-hour standards.

AGC commented that associated facilities should not be limited to placement at least 200 ft. from the nearest property line and gave the example of a road. Representative Edwards and Representative Callegari commented that the distance limitation was too short.

Property line distance limitations are used instead of off property receptor distance limitations to protect public health and welfare, and to ensure that the operating facility is in compliance with all TNRCC regulations, particularly the property line standards in 30 TAC Chapter 111. The protectiveness review indicated that the 200 ft. distance limitation from the property line ensures that RCs meet TNRCC regulations and protect public health and welfare. Roads are not facilities under THSC and are not subject to the distance requirement. However, they are sources of emissions and are controlled by best management practices such as watering and are prohibited from emitting visible emissions that cross the property line.

AGC and TACA commented that the requirement to fully enclose screen sides and conveyors is not practical because it will make the conveyors more difficult to move. AGC and TXI also stated that fully enclosed screen sides and conveyors were not necessary due to the minimal emissions from these facilities and asked what the scientific basis for this requirement was. AGC and WE stated that the commission should not dictate the type of equipment used to control emissions. TM requested that the commission clarify the meaning of enclosed conveyor and said that different conveyor manufacturers had indicated that in other states they put a half-moon cover over the top of the conveyor.

In order to minimize property line distance requirements, while being protective of public health and ensuring that the facility is in compliance with TNRCC regulations, the commission modeled emissions from facilities with enclosed screens and conveyors. The commission has clarified the requirement for enclosed conveyors to mean a cover that fits over the top of the conveyor. Also, because there was an identical requirement in the Tier II requirements, the commission removed this requirement from Tier I and Tier II and added it to the General Requirements.

AGC objected to the requirement that Tier I RCs be restricted to one primary crusher, two conveyors, and two screens because the type of job and nature of the required product might require more equipment.

In order to minimize property line distance requirements, while being protective of public health and ensuring that the facility is in compliance with TNRCC regulations, the commission modeled emissions on a prescribed amount of equipment based on what was expected at the majority of temporary RC sites. If Tier I requirements cannot be met, the facility has the option of meeting Tier II or obtaining a permit under 30 TAC § 116.111 or a PBR under 30 TAC § 106.142.

AGC, TXI, TACA, and WE objected to the requirement that RCs authorized by this standard permit not locate or operate on a site with an asphalt or concrete batch plant. WE and TACA commented that the restriction against co-location with a concrete or asphalt plant prevents recycling of aggregate materials at these plants. AGC and TXI requested to know the scientific basis for this determination.

The purpose of this standard permit is to authorize a single RC and the protectiveness review was based on that scenario. **Tier I of the standard permit is intended for those types of locations (e.g., construction sites) that are not permanent aggregate handling operations and for those locations where there is little possibility of multiple operations occurring at the same time. The commission intended for no cumulative effects to occur at Tier I locations. Tier II may be used at these types of sites where all the requirements of Tier II are met.**

AGC commented that limiting the time on site for RCs located in urban/suburban areas is reasonable but makes little sense in sparsely populated areas and that many highway projects require more time and would make the standard permit unusable for those situations. WE commented that project delays and change orders could cause the RC to run out of time before finishing a job. AGC and WE added that 24 hours was not a sufficient amount of time to disassemble equipment and move out.

The commission intends for the standard permit to cover a broad range of facility configurations and operating conditions for temporary RCs. It is not intended to provide an authorization mechanism for all possible unit configurations or operating scenarios. Those facilities which cannot meet the standard permit conditions may apply for an air quality permit under 30 TAC § 116.111 or a PBR under 30 TAC § 106.142. Further, the

commission anticipates that, for the types of facilities intended to be authorized by this standard permit (which is highly portable), 24 hours is an adequate amount of time disassemble the equipment and move offsite.

AGC and WE commented that the 365 day period before relocating to the site is too long.

The commission developed the standard permit for temporarily-sited RCs. It is designed to allow for authorization of RCs that are portable and, based on business needs, move to various sites. **Tier I of the standard permit is intended for those types of projects (e.g., construction sites, subdivision developments, roads and highways) that do not require permanent aggregate handling operations and for those locations where there is little possibility of the necessity for rock crushing to occur at the site again. However, in the unlikely event that additional crushing operations are needed at a site that has already been occupied, the 365 day minimum time frame still allows for a crusher to return that site.**

AGC stated that the time on site and operation time restrictions did not take into account factors beyond the owner's/operator's control such as machinery downtime, weather, phased projects, and engineer change orders.

During the development of the standard permit, the factors above were taken into consideration. As a result, the site time was increased from 20 days to 45 days for Tier I, and from 60 days to 180 days for Tier II.

Comments on Tier II Rock Crushers

AGC and TACA commented that due to production limitations and time restrictions Tier II has limited applicability for industry.

The standard permit is designed to allow for authorization of RCs that are portable and, based on business needs, move to various sites. However, it is not intended to provide an authorization mechanism for all possible unit configurations or operating scenarios. Those facilities which cannot meet the standard permit conditions may apply for an air quality permit under 30 TAC § 116.111 or a PBR under 30 TAC § 106.142.

AGC and TACA commented that the 250 tph limit should be based crusher capacity rather than process throughput at the feed hopper because a significant portion of the material from the feed hopper is screened out before it reaches the crusher. TXI and WE suggested that the 250 tph limit be based on material production rather than feed hopper throughput. AGC, TACA, and SHTC suggested that restrictions should be based on emissions rather than throughput. SHTC requested the basis for the 250 tph restriction. RM suggested that the hourly rate be an average over several production days.

The 250 tph limit is based on total facility capacity rather than material production or crusher capacity because this includes quantification of emissions from all sources. This would include emissions from all hoppers, screens, crushers and conveyors. The commission selected the total facility capacity scenario rather than those listed above because total facility capacity

and all associated sources represents the worst case scenario, i.e., all material fed into the system is crushed. The authorized hourly production rate of 250 tph is necessary in order to ensure compliance with 30 TAC Chapter 111 one- and three-hour standards.

AGC commented that the distance limitation of 300 ft. from the nearest property line is reasonable in urban/suburban areas but makes little sense in sparsely populated areas and that many highway projects will not be able to meet the 300 ft. limit and the standard permit will be unusable for those situations. TXI, BCCC, and WE commented that the 300 ft. limitation will preclude the use of temporary RCs at many sites and suggested restricting the distance to 300 ft. to an off property receptor rather than 300 ft. to the property line. TACA added that the 300 ft. setback distance is not based on any scientific modeling data and questioned the basis for this restriction. Representative Callegari and FL commented that the 300 ft. distance is too short.

Property line distance limitations are used instead of off property receptor distance limitations to protect public health and welfare, and to ensure that the operating facility is in compliance with all TNRCC regulations, particularly the property line standards in 30 TAC Chapter 111. The protectiveness review indicated that the 300 ft. distance limitation from the property line ensures that RCs meet TNRCC regulations and protect public health and welfare. Roads are not facilities under THSC and are not subject to the distance requirement. However, they are sources of emissions and are controlled by best management practices such as watering and are prohibited from emitting visible emissions that cross the property line.

The commission intends for the standard permit to cover a broad range of facility configurations and operating conditions for temporary RCs. However, the standard permit is not intended to provide an authorization mechanism for all possible unit configurations or operating scenarios.

The state property line standards for PM are the controlling standards for the distance limitations. To demonstrate compliance, the modeling team tabulated the total number of modeled exceedances of the one-hour and three-hour standards over a five-year period that occurred over each tier's receptor grid. The compliance prediction was based on an evaluation of the total hours of modeled exceedances divided by the total hours in the applicable review period (43,824 hours for the one-hour standard and 14,608 hours for the three-hour standard) and, the conservative nature of assumptions made in the review. For each source configuration, the maximum distance to obtain 99.9 percent predicted compliance was used as the basis for the distance limitation for each tier. Given the conservative nature of the modeling and limited hours of operation, the team expects a predicted compliance of 99.9 percent to be 100 percent compliance in practice. In addition, the NAAQS for PM_{10} should not be exceeded based on the results of the one-hour and three-hour analyses, limited hours of operation, and lower emission rates for each tier.

AGC, TXI, TACA and WE objected to the requirement that a RC be located at least 550 ft. from a concrete or asphalt batch plant. TACA and TXI stated that, due to operations restriction on batch plants and local ordinances that may prohibit nighttime operation of a RC, the standard permit provision that allows operation of a RC that cannot meet the 550 ft. requirement when the concrete or asphalt plant is not operating is impractical. AGC, SHTC, and WE added that RCs are often used to produce aggregate for asphalt plants and are often located less than 550 ft. from the asphalt plant. Having the crusher separated from the asphalt plant will increase emissions from unpaved roads and result in increased traffic and haul truck emissions due to the need to bring aggregate from off site.

The 550 ft. distance requirement is necessary to offset the cumulative emissions of multiple facilities operating simultaneously and to ensure compliance with the TNRCC regulations and protect public health. Additionally, this standard permit was developed to address a broad range of operating conditions and does not take into account local ordinances that might preclude its use in certain situations.

AGC, BCCC, and TACA commented that the requirement to fully enclose screen sides and conveyors is not practical because it will make the conveyors more difficult to move. AGC and TXI also stated that fully enclosed screen sides and conveyors are not necessary due to the minimal emissions from these facilities and asked what the scientific basis for this requirement is. AGC and WE stated that the commission should not dictate the type of equipment used to control emissions. TM requested that the commission clarify the meaning of enclosed conveyor and said that different conveyor manufacturers had indicated that in other states they put a half-moon cover over the top of the conveyor.

In order to protect public health and welfare and ensure compliance with TNRCC regulations and NAAQS, this standard permit underwent a detailed protectiveness review that took into account emission reductions from the use of enclosed screens and conveyors. The commission has clarified the requirement for enclosed conveyors to mean a cover that fits over the top of the conveyor. Also, because there was an identical requirement in the Tier I requirements, the commission removed this requirement from Tier I and Tier II and added it to the General Requirements.

AGC objected to the requirement that Tier II RCs be restricted to one primary crusher, one secondary crusher, and two screens because type of job and nature of the required product might require more equipment.

In order to provide owners/operators with as short a property line distance requirement as possible while being protective of public health and ensuring that the facility is in compliance with TNRCC regulations, the commission modeled emissions based on a prescribed amount of equipment based on what was expected at the majority of temporary RC sites. If Tier II requirements cannot be met, the facility has the option of obtaining a permit under 30 TAC § 116.111 or a PBR under 30 TAC § 106.142.

AGC commented that the time on site limitations are reasonable for RCs located in urban/suburban areas but that many highway projects require more time and the time limit will make the standard permit unusable for those situations. They added that 24 hours is not a sufficient amount of time to disassemble equipment and move out. BCCC stated that although the time limitations would not have been exceeded in any of their previous projects, they are concerned that the time limits might preclude long term projects. SHTC requested justification for the onsite time limitations. WE commented that the time restrictions limits their ability to bid certain projects.

The standard permit is designed to allow for authorization of RCs that are portable and, based on business needs, move to various sites. However, it is not intended to provide an authorization mechanism for all possible unit configurations or operating scenarios. Those facilities which cannot meet the standard permit conditions may apply for an air quality permit under 30 TAC §116.111.

AGC, SHTC, and WE commented that the 365 day period before relocating to the site is too long.

The commission developed the standard permit for temporarily-sited RCs. It is designed to authorize RCs that are portable and, based on business needs, move to various sites. Tier II of the standard permit expands the types of sites that a crusher may occupy (specifically, Tier II adds quarries and mines). However, Tier II, like Tier I, is intended for those types of projects (e.g., construction sites, subdivision developments, roads and highways) that do not require permanent aggregate handling operations and for those locations where there is little possibility of the necessity for rock crushing to occur at the site again. However, in the unlikely event that additional crushing operations are needed at a site that has already been occupied, the 365 day minimum time frame still allows for a crusher to return that site.

AGC, BCCC, and WE requested that the TNRCC (Regional Office) respond to a notification of intent to locate a Tier II RC within 30 days.

Subchapter F of Chapter 116 requires the agency to respond to all standard permit applications within 45 days or as soon as practical. The commission intends to continue with this practice.

X. STATUTORY AUTHORITY

This standard permit is issued under TCAA § 382.011, which authorizes the commission to control the quality of the state's air, TCAA § 382.023, which authorizes the commission to issue orders necessary to carry out the policy and purposes of the TCAA § 382.051, which authorizes the commission to issue permits, including standard permits for similar facilities for numerous similar sources, and TCAA § 382.05195 which authorizes the commission to issue standard permits according to the procedures set out in that section.

Air Quality Standard Permit for Temporary Rock Crushers

This air quality standard permit authorizes crushing operations which meet all of the conditions listed in paragraph (1) and paragraph (2) for Tier I or paragraph (3) for Tier II. As described in 30 TAC § 116.605(d), any changes that are made to this standard permit by the commission shall apply to all existing and future facilities that are authorized by this standard permit. The owners/operators that are affected by these changes shall apply for a new authorization under the standard permit.

(1) General Requirements

(A) 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).

(B) When crushing concrete, the crusher and all associated sources (screens, transfer points on belt conveyors, material storage or feed bins, work areas that are only associated with the facility, or stockpiles) shall be located at least 440 yards from any structure used as a single family or multifamily residence, school, or place of worship.

(C) All screen sides shall be enclosed and all conveyors shall be covered with a half-moon or equivalent enclosure that covers the top of the conveyor to minimize emissions.

(D) Except for those periods described in 30 TAC §§ 101.6 and 101.7, no visible fugitive emissions shall leave the property from the crusher, associated sources, and in-plant roads associated only with the facility. Visible emissions shall be determined by a standard of no visible emissions exceeding 30 seconds in duration in any six-minute period as determined using EPA Test Method (TM) 22.

(E) Except for those periods described in 30 TAC §§ 101.6 and 101.7, opacity of emissions from any transfer point on belt conveyors or any screen shall not exceed 10 percent and from any crusher shall not exceed 15 percent, averaged over a six-minute period, and according to EPA TM 9.

(F) Permanently mounted spray bars shall be installed at the inlet and outlet of all crushers, at all shaker screens, and at all material transfer points and used as necessary to maintain compliance with all commission regulations.

(G) Dust emissions from all in-plant roads and active work areas that are associated with the operation of the crusher shall be minimized at all times by at least one of the following methods:

(i) covered with a material such as, but not limited to, roofing shingles or tire chips (when used in combination with (ii) or (iii) of this subsection);

(ii) treated with dust-suppressant chemicals;

(iii) watered; or

(iv) paved with a cohesive hard surface that is maintained intact and cleaned.

(H) All stockpiles shall be sprinkled with water, dust-suppressant chemicals, or covered, as necessary, to minimize dust emissions.

(I) Raw material and product stockpile heights shall not exceed 45 feet.

(J) The crusher shall be equipped with a runtime meter.

(K) Written records shall be kept for a rolling 24 month period and shall accompany the rock crusher to any site at which it operates. These records shall be made available at the request of any personnel from the commission or any local air pollution control program having jurisdiction. These written records shall contain the following:

(i) hours of operation including daily start and stop time;

(ii) the throughput per hour of the feed hopper (as determined by an appropriate method based upon physical measurement or calculated using a production factor determined to be acceptable by the commission); and

(iii) the date(s) the crusher was placed on site and the date(s) it was removed from the plant site.

(L) 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).

(M) Crushers that are authorized by this standard permit shall meet all applicable conditions of 40 CFR Part 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants.

(N) Only crushers that are processing nonmetallic minerals or a combination of nonmetallic minerals that are described in 40 CFR Part 60, Subpart OOO, shall be authorized by this standard permit.

(O) The rock crusher and all associated facilities operating under this standard permit shall neither locate nor operate on the same site as any other rock crusher.

(P) This standard permit shall not require compliance with 30 TAC § 116.614 “Standard Permit Fees.”

(Q) Notifications under this standard permit shall not be registered in accordance with 30 TAC § 116.611 “Registration to Use a Standard Permit.”

(2) A Tier I crusher shall comply with paragraph (1) of this standard permit and all of the following:

(A) The crusher shall not be located at a quarry or mine.

(B) The crusher feed hopper throughput shall not exceed 125 tons per hour.

(C) The crusher and all associated sources shall be located no less than 200 ft. from the nearest property line.

(D) The equipment authorized under this paragraph shall be limited to one primary crusher, two conveyors, and two screens.

(E) The rock crusher and all associated sources operating under this standard permit shall neither locate nor operate on the same site as any concrete batch plant or asphalt batch plant.

(F) The crusher and associated sources (excluding stockpiles) shall not operate for more than 360 hours or 45 non-consecutive calendar days on site, whichever occurs first. The owner or operator shall remove the crusher and associated equipment from the site within 24 hours of ceasing operation. The 24 hours allotted for the removal shall not be used as additional operational time above the 360 hours or 45 non-consecutive calendar days.

(G) If the time periods listed in paragraph 2(F) have not been exhausted during any rolling 365 day period, the operator may return to the authorized site and operate for the remaining balance of time for that site. To return to the site, the operator shall notify the commission as described in paragraph 2(H). Once the operating hours (360) or calendar days (45) for the site have been exhausted and the site has been vacated, the owner or operator shall not use a standard permit to locate any rock crusher on the site for at least 365 days.

(H) The owner or operator shall notify the appropriate regional office in writing at least 10 calendar days prior to locating at the site. The notification shall include the owner or operator's name, address, phone number, site location, crusher serial number, expected duration at the site, expected hours of operation, expected date of arrival on site and expected date to vacate the site. When the applicant has previously occupied a site, the applicant shall also include its previous duration at the site to show compliance with paragraph 2(F).

(3) A Tier II crusher shall comply with paragraph (1) of this standard permit and all of the following:

(A) The crusher's feed hopper throughput shall not exceed 250 tons per hour.

(B) The crushers and all associated sources shall be located no less than 300 ft. from the nearest property line.

(C) The crushers and associated sources operating under this standard permit shall be located at least 550 ft. from any concrete batch plant or asphalt batch plant. If this distance cannot be met, then the crusher authorized under this standard permit shall not operate at the same time as the concrete batch plant or asphalt batch plant.

(D) The equipment authorized under this paragraph shall be limited to one primary crusher, one secondary crusher, two screens and any associated conveyors.

(E) The rock crushers and associated sources (excluding stockpiles) shall not operate for more than 1080 hours or 180 non-consecutive calendar days on site, whichever occurs first. The owner or operator shall remove the crusher and associated equipment from the site within 24 hours of ceasing operation. The 24 hours allotted for the removal of equipment shall not be used as additional operational time above the 1080 hours or 180 non-consecutive calendar days.

(F) If the time periods listed in paragraph 3(E) have not been exhausted during any rolling 365 day period, the operator may return to a site and operate for the remaining balance of time for that site. To return to a site, the operator shall notify the commission as described in paragraph 3(G). Once the operating hours (1080) or calendar days (180) for the site have been exhausted and the site has been vacated, the owner or operator shall not use a standard permit to locate any rock crusher on the site for at least 365 days.

(G) No owner or operator shall locate a crusher on site without first obtaining written approval from the executive director. The owner or operator shall notify the appropriate regional office in writing at least 30 calendar days prior to locating at the site. The notification shall include the owner or operator's name, address, phone number, site location, plot plan, crusher serial number, commission air account number, expected duration at the site, expected hours of operation, expected date of arrival on site and expected date to vacate the site. When the applicant has previously occupied a site, the applicant shall also include its previous duration at the site to show compliance with paragraph (3)(E). A compliance history review shall performed by the executive director in accordance with 30 TAC Chapter 60. If a facility is determined to be a poor performer, as defined in 30 TAC Chapter 60, a standard permit notification will not be accepted or approved.