The Texas Commission on Environmental Quality (TCEQ, agency, or commission) adopts new §106.359.

The section is adopted with change to the proposed text as published in the March 15, 2013, issue of the *Texas Register* (38 TexReg 1785) and correction notice published in the March 29, 2013, issue of the *Texas Register* (38 TexReg 2155) and will be republished.

Background and Summary of the Factual Basis for the Adopted Rule

This rulemaking adds a new permit by rule (PBR) to authorize emissions from planned maintenance, startup, and shutdown (MSS) activities and facilities at oil and gas handling and production facilities. It is intended that this PBR will be used in addition to a construction authorization at an oil and gas site (OGS). In the context of this PBR, construction authorization means the PBR, standard permit, or New Source Review (case-by-case) permit that authorizes the production emissions at an OGS. This rulemaking will be effective on September 10, 2013.

Historically, the rules of the commission and its predecessor agencies have not specifically required authorization of MSS activities. However, in December 2005, the commission established deadlines for different facility (as defined in Texas Health and Safety Code (THSC), §382.003(6)) types to submit an application to authorize planned MSS emissions or lose the ability to claim an affirmative defense for unauthorized emissions during those activities. The deadlines were adopted into 30 TAC §101.222(h). For oil and gas facilities

under Standard Industrial Codes (SIC) 1311 (Crude Petroleum and Natural Gas), 1321 (Natural Gas Liquids), 4612 (Crude Petroleum Pipelines), 4613 (Refined Petroleum Pipelines), 4922 (Natural Gas Transmission), and 4923 (Natural Gas Transmission and Distribution), the deadline was January 5, 2012. This date was subsequently changed to January 5, 2014, by the 82nd Legislature, 2011, when Senate Bill 1134 was adopted into law, now codified in THSC, §§382.051961 - 382.051964. Chapter 382 of the THSC is also known as the Texas Clean Air Act. This PBR provides applicants a streamlined authorization mechanism for planned MSS to meet the statutory deadline.

Specifically, THSC, §382.051962 states, "(c) an unauthorized emission or opacity event from a planned maintenance, start-up, or shutdown activity is subject to an affirmative defense as established by commission rules as those rules exist on the effective date of this section, June 17, 2011, if: (1) the emission or opacity event occurs at a facility described by Section 382.051961(a); (2) an application or registration to authorize the planned maintenance, start-up, or shutdown activities of the facility is submitted to the commission on or before the earlier of: (A) January 5, 2014; or (B) the 120th day after the effective date of a new or amended permit adopted by the commission under Subsection (b); and (3) the affirmative defense criteria in the rules are met. (d) The affirmative defense described by §382.051962(c) is not available for a facility on or after the date that an application or registration to authorize the planned maintenance, start-up, or shutdown activities of the facility is approved, denied, or voided."

Furthermore, THSC, §382.051962(a) states planned MSS activity "means an activity with emissions or opacity that: (1) is not expressly authorized by commission permit, rule, or order and involves the maintenance, start-up, or shutdown of a facility; (2) is part of normal or routine facility operations; (3) is predictable as to timing; and (4) involves the type of emissions normally authorized by permit."

In addition to establishing a new deadline for the submission of applications to authorize planned MSS emissions for oil and gas facilities, THSC, §382.051962 authorizes the commission to adopt PBRs or standard permits and to amend existing PBRs or standard permits to authorize planned MSS activities for OGSs. The statute also establishes actions the commission is required to take to adopt new or revise rules for oil and gas facilities. Specifically, for any new PBRs or standard permits or revisions to PBRs or standard permits, THSC, §382.051961 requires that the commission: conduct a regulatory analysis in accordance with the Texas Government Code; conduct an evaluation of credible air quality monitoring data to determine if emission limits or emissions-related requirements are needed to ensure protection of public health; use credible air quality monitoring data and credible air quality modeling that is not based on worst-case scenarios to determine emissions limits; and consider whether the requirements of the permit should be imposed on particular geographic regions of the state.

THSC, §382.051961(a)(4) requires that the commission consider whether the requirements of this PBR be imposed on particular geographic regions of the state. Based on all of the

research, analysis, and stakeholder input, the commission determined that maintenance activities at OGSs are substantially the same across the state. This PBR is based on the permit holder's development of a maintenance program for each site, and compliance will be demonstrated through recordkeeping. It is not intended that the requirements of this PBR be imposed on particular geographic regions of the state. This adopted PBR does not address other authorization types that were previously developed to address high volume urban drilling and contain specific planned MSS requirements for those conditions.

According to Texas Railroad Commission records as of January 2012, there are almost 400,000 active oil and gas wells in the state. Construction of many OGSs may be authorized by claiming a PBR (§106.352, Oil and Gas Handling and Production Facilities) or standard permit (30 TAC §116.620, Installation and/or Modification of Oil and Gas Facilities). Some companies have chosen to include planned MSS emissions in their construction authorization. However, of the more than 10,000 oil and gas projects reviewed by the commission in the last four years, only a small percentage has voluntarily included planned MSS activities. PBR §106.263, Routine Maintenance, Start-up and Shutdown of Facilities, and Temporary Maintenance Facilities, may authorize planned MSS emissions for some oil and gas related activities. However, it is limited in scope and specifically precludes its use for facilities authorized under the most common oil and gas construction authorizations, such as PBRs, §106.352 and §106.512, Stationary Engines and Turbines. There is a need to develop a planned MSS authorization for planned MSS activities and facilities other than those that are required to register under §106.352(a) -

(k) or subsections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities. Instead of requiring previously registered sites to revise existing authorizations, the commission is proposing this new PBR to provide an effective authorization mechanism for all planned MSS at an OGS.

What information did the commission use to develop the adopted PBR?

The commission conducted significant research to develop the rule. The commission analyzed oil and gas registrations submitted to the agency and conducted further review of the projects that included representations regarding planned MSS activities. The commission formed a rule team with representatives from the following commission programs: air permitting, air quality, compliance and enforcement (investigators), legal, monitoring, small business assistance, and toxicology. The commission consulted with oil and gas permitting consultants, oil and gas associations and operators, equipment vendors, and maintenance contractors. The commission reviewed relevant academic texts and gained significant details through the stakeholder process. The commission used existing monitoring data, including results from a specific monitoring project and air canister sampling data. The commission also conducted a case study regarding emissions events and reviewed state-wide benzene emission monitoring data evaluated by TCEQ's Toxicology Division. This information was used to develop the framework for the PBR, the specific requirements, and the modeling scenarios used to support the PBR requirements.

To determine what types of planned MSS activities are conducted at OGSs across Texas, the commission analyzed over 1,200 oil and gas projects submitted to the commission between January and March, 2012. Over 375 (approximately 31%) of these recent projects represented planned MSS activities. The representations in the submitted projects helped the commission evaluate which activities are appropriate for authorization under this adopted PBR.

The commission reviewed Chapter 116, Subchapter B, New Source Review Permits, (case-by-case) permits for petroleum refineries to gain additional knowledge regarding possible planned MSS activities at OGSs. Emissions associated with planned MSS activities and facilities at OGSs are similar in nature to planned MSS activities and facilities at refineries and chemical plants. The deadline for petroleum refineries (SIC 2911) to submit applications to authorize planned MSS activities was January 5, 2007. The commission evaluated the planned MSS activities represented for these types of sites to determine if there are similar activities conducted at OGSs. Where comparable, the commission evaluated how the larger facilities are maintained, how emissions are controlled, and any permit requirements specifically applicable to planned MSS activities or facilities. The commission also reviewed publications from the Petroleum Extension Services at the University of Texas at Austin, and the American Petroleum Institute. These publications describe processes for maintaining equipment in the oil field and are focused on startup and tank degassing. The commission reviewed published procedures and controls (best management practices or BMPs) used by service companies that conduct degassing. The

commission also reviewed responses to the Barnett Shale Area Special Inventory conducted by the commission in 2010. The study gathered information on facilities and normal production emissions, but did not contain planned MSS activities. The commission reviewed 58 complaint response investigations from the TCEQ Dallas-Fort Worth regional office. These investigation reports included 49 Summa canister samples.

Stakeholder input was instrumental in the development of this adopted PBR. Multiple stakeholder meetings were held, and over 150 people participated in the stakeholder process. The first meeting was held on September 27, 2012, in Austin at TCEQ headquarters with interactive video teleconference available to stakeholders at TCEQ regional offices in Amarillo, Abilene, Beaumont, Corpus Christi, Fort Worth, Houston, Harlingen, Laredo, San Angelo, Tyler, and Waco. The commission conducted additional meetings in San Antonio on October 1, 2012; in the Dallas-Fort Worth area on October 4, 2012; and in the Midland-Odessa area on October 9, 2012.

At these meetings, the commission explained the purpose of the rulemaking and the general concept and held open discussions with stakeholders. The commission also requested and received additional feedback from stakeholders on details of planned MSS activities at their specific locations and the types of maintenance programs used by the industry. The issues and concerns raised during these informal meetings were either used directly to develop the PBR language, or to guide the scope of the authorization

mechanism. The commission requests continued stakeholder involvement during implementation of the adopted rule.

What typical OGS Planned MSS activities did the commission identify?

The commission identified various planned MSS activities typical to an OGS based on research and stakeholder involvement. In general, planned MSS activities are conducted to ensure proper functioning of facilities at OGSs. The commission found that MSS activities are planned at OGSs for a variety of reasons including: predetermined intervals based on manufacturer specifications or operational knowledge, operational parameters indicating maintenance is warranted, or as a result of operator inspections.

For the protectiveness review, the commission divided planned MSS activities into three general categories based on their potential for emissions. The majority of planned MSS activities fit into the lower emission activities category. Three activities were identified that have the potential for higher levels of emissions: blowdowns, tank or vessel emptying and refilling, and tank or vessel degassing. The character, quantity, dispersion, frequency, and duration of the lower emission activities result in lower emission impacts. Because of the greater potential for impacts, the protectiveness of the higher emission activities was evaluated using modeling and evaluation of credible air monitoring data. Therefore, it was appropriate to rely on the evaluation of the higher emission activities to ensure protectiveness of the PBR. The third category relates to surface preparation and coating at OGSs.

Lower Emission Activities

The commission identified various planned MSS activities that are conducted to ensure equipment is kept in good condition and operating properly. These activities have negligible emission releases, and as a result, are included in this PBR. During proposal, the commission specifically requested comments on any other processes that should be considered planned MSS activities with the same character and quantity of emissions as the lower emitting activities listed in the proposed PBR. The commission received comments and revised the rule language as discussed the in the Response to Comments section.

Examples of activities evaluated resulting in negligible releases of air contaminants in this PBR include: lubrication and cleaning of OGS equipment, repair of process equipment, oil and oil filter changes for engines and turbines, sparkplug changes, replacement of oxygen sensors, compression checks, use of lubrication oils, leak repairs, engine overhauls, boiler refractory replacements, boiler and heater cleanings, heat exchanger cleanings, and pressure relief valve testing. Other maintenance activities that occur to ensure process equipment operates at optimum levels include replacing treatment chemicals, catalysts, and filters. The term "filters" in this PBR includes pipeline strainers, gas and liquid separators, and hydraulic and lubrication oil filters. Replacement of rod packing, pneumatic controllers, and glycol solution in glycol dehydrator vessels is also included in this category of planned MSS activities.

Relying on extensive research completed for previous rule packages in 2010 and 2011, the commission determined that planned startup and planned shutdown emissions from engines and turbines are not expected to be any higher than normal operations. The emissions from operation of engines and turbines were determined to be protective of human health and the environment under the construction authorizations currently available for engines and turbines. Emissions from routine planned startups and shutdowns are already accounted for under construction authorizations for production emissions.

Higher Emission Activities

The commission identified three types of planned MSS activities at OGSs that have the potential for higher emissions: blowdowns, tank or vessel emptying and refilling, and tank or vessel degassing.

Blowdowns

Various types of blowdowns are conducted as needed for maintenance at OGSs, such as compressor blowdowns and piping blowdowns. In addition to being a maintenance activity itself, blowdowns are conducted as the first step of maintenance activities for some OGS equipment. For example, a blowdown to relieve pressure is performed before compressor maintenance can be conducted. Additionally, process vessels under pressure must be opened and degassed before maintenance activities.

The commission evaluated over 250 oil and gas projects that represented compressor or piping blowdowns. Compressor blowdowns release gas through a stack or opening prior to maintenance. Compressor blowdown emissions vary depending on the pressure or liquid that remains in the system before the compressor is shut down. Another factor affecting emissions is how often blowdowns are conducted, which is often dependent upon operational conditions. The typical number of blowdowns per year at a particular site may vary. Representations in the projects evaluated ranged from 12 blowdowns per year to 60 blowdowns per year. The duration of blowdowns also varies. The evaluated projects represented blowdowns lasting from five minutes to one hour. The projects typically represented worst-case scenario (conservative) emissions estimates.

Pipe blowdowns are conducted by draining liquids from the piping or vessel, opening valves, and releasing the gas in the piping. The piping must be cleared of natural gas before associated process vessels under pressure can be opened and degassed. Pipe blowdowns also occur with pigging operations. A device called a pig is inserted into the piping and gas is used to force the pig through the line. The emissions from a pipe blowdown are a function of: the characteristics of what is in the pipeline, the size and length of piping, equipment connected to the system, line pressure, the number of equipment discharges, and the use of blowdown system controls.

In all of the projects reviewed, worst-case scenario or conservative emissions were represented. The emission representations for both compressor and pipeline blowdowns in submitted projects typically ranged from 0.01 to 250 pounds per hour (lb/hr) of volatile organic compounds (VOC) for short-term (hourly) emissions. Long-term (annual) emissions ranged from 0.01 to approximately 4.0 tons per year (tpy). The commission modeled blowdowns using this data, and the results are included in the Protectiveness Review section of this preamble.

Tanks and Vessels

Facilities such as pressurized and non-pressurized process vessels, associated piping, and fugitive components require periodic inspection, cleaning, and maintenance. Planned MSS activities for tanks and vessels consist primarily of emptying, purging or degassing, cleaning, refilling or recharging, and returning the system to service. The emissions associated with emptying and refilling tanks were less than the emissions from degassing. Therefore, the commission modeled degassing to determine protectiveness of both activities.

Tank or Vessel Emptying and Refilling

The commission evaluated emissions from emptying tanks or vessels, as planned shutdown of these facilities, and the refilling of the tanks or vessels as planned startup.

Based on PBR and standard permit projects, 500 and 1,000 barrel (bbl) fixed roof tanks and 100,000 bbl floating roof tanks were considered because they are typical tank sizes at OGSs. The minimum short-term emissions are associated with passive vapor expansion, and are approximately 0.5 to 32 lb/hr of potential VOC emissions. These emissions were calculated using the ideal gas law, which describes how the pressure of the gas is related to the temperature, volume, and amount of substance in the storage tank.

To evaluate emissions from forced ventilation, in addition to the ideal gas law, AP-42, Fifth Edition, Section 7 details procedures for estimating emissions from emptying, degassing and refilling tanks. Emissions are estimated using ambient temperature, Reid Vapor Pressure, true vapor pressure, vapor molecular weight, tank size, and type. Potential emissions from emptying, degassing, and refilling tanks or vessels were estimated using a light condensate oil (industry refers to this as natural gasoline) assuming a molecular weight of 50, a true vapor pressure of 9.11 pounds per square inch absolute at 95 degrees Fahrenheit and a 60% saturation of the vapor space.

There is an increasing trend of large, floating roof tanks being used in the oil and gas industry. Unlike fixed roof tanks, floating roof tanks minimize vapor space and reduce emissions by allowing the roof to float on the surface of the stored liquid. When the roof is landed for maintenance, vacuum breakers open and the area of the tank below the roof becomes like a fixed volume vessel. Keeping the seals in good condition and operating

properly, and landing the roof on its legs are examples of BMPs for floating roof tank maintenance.

Occasional, planned operational landing of floating roof tanks will occur, and is considered a planned shutdown activity. The refilling of these tanks is considered planned startup. Short-term emissions from a tank with a landed roof or an empty tank can be greater than the routine operating emissions; therefore it is BMPs that tanks should be filled and back in normal operation as safely and quickly as possible. The commission estimated that quantifying emissions associated with operational landing of floating roof tanks or operational emptying of fixed roof tanks for 50 hours per year is a reasonable approach due to the infrequency of the activity. Estimated emissions associated with these activities were based on these hours and account for the wide variety of tank sizes and types.

Convenience tank landings occur when the tank roof is landed and the tank is subsequently filled with the same liquid with no maintenance occurring. Landing a tank roof solely for the purpose of inventory control (in lieu of other methods of metering liquid volumes) is not operating in a manner consistent with good practices for minimizing emissions. Convenience landings are not considered operational landings and are not authorized under this PBR.

Tank or Vessel Degassing

Degassing (purging), the third planned MSS activity that has the potential for higher emissions, is the removal of vapors from storage tanks in order to perform maintenance. Once a tank is emptied, residual liquids are drained from the tank and valves or hatches are opened to release the remaining vapors. Tank clean outs and degassing occur as needed for operations or regulatory compliance. Most tank interiors are cleaned infrequently, such as once every several years, or only before the tanks are moved off site.

The commission evaluated 20 oil and gas projects that represented degassing and purging of fixed roof tanks, floating roof tanks, and vessels such as separators. The commission evaluated non-pressurized tanks degassed with minimal flow rates as well as pressurized tanks and tanks degassed with the use of forced ventilation.

When a fixed volume tank, vessel, or floating roof tank is purged of liquids (except for heels and clingage) the vapor space will be partially saturated with vapors. The level of saturation is dependent on the rate and degree to which the vessel is purged and the length of time after which it is emptied. The standard environmental engineering approach to estimating emissions is an average saturation of 60%. This can be used to estimate the amount of vapor that will be pushed out when the vessel is refilled or degassed. If the tank is not purged by force it will have breathing losses associated with passive vapor expansion. The critical factors are the volume of the vessel and the concentration of the vapor, which affect the potential short-term emission rate. During the comment period, the commission learned that tanks are emptied of product and water sprays are used to clean the inside of

the tank. Using this process, tanks are not typically degassed using forced ventilation because personnel are not entering the tank.

If the space is forcefully purged with blowers, it can be completed in a few hours rather than days. The greater short-term emission rate is associated with degassing using forced ventilation. A purge using a 1,000 cubic foot per minute (cfm) blower for a 500 bbl fixed roof tank would be expected to have approximately 130 lb/hr of VOC for condensate. On larger tanks, a 5,000 cfm blower for a 100,000 bbl floating roof tank would be expected to have approximately 3,850 lb/hr of VOC for condensate. The PBR requires that degassing by forced ventilation and use of vacuum trucks to empty tanks are limited to using a single vacuum truck at a time or directing emissions out the top of the tank based on these emission rates.

Floating roof tanks must be landed before beginning the degassing process. Information gathered during the stakeholder participation process, and published industry guidance, indicated that BMP for degassing tanks using forced ventilation includes either routing the emissions to a control device or directing the emissions out the top of a tank. This venting method is possible as long as the air flow does not exceed the rating of the vacuum breakers or compromise the integrity of the tank. Allowing forced ventilation degassing at ground level without control can create explosive conditions and expose workers to emission concentrations that exceed standards regulated by the United States Occupational Safety and Health Administration (OSHA). Directing uncontrolled emissions

from forced ventilation degassing out the top of a tank is consistent with documented industry practice regarding tank degassing and cleaning.

Surface Preparation and Coating

The stakeholder process identified an additional planned MSS activity that does not fit into the lower or higher emission activities category. Over the past year, investigators in the TCEQ Midland Regional office have identified approximately 20 mobile surface coating operations that are conducting activities at OGSs across the region. Typically, the surface coaters are conducting abrasive blasting and coating of both fixed and portable equipment. Many of these sites are located miles away from a permanent surface coating location and it is not economically practical to move the portable equipment to a permanent surface coating location and then back out to the field. It is likely that this type of activity is being conducted in other parts of the state where the oil and gas industry is operating, since abrasive blasting and coating of tanks is a crucial part of tank maintenance. In accordance with THSC, §382.051961(a)(4) the commission determined it was not appropriate to have this provision only applicable to a particular region of the state. Therefore, the commission evaluated abrasive blasting and coating activities for this PBR.

The preamble to §106.263 (October 26, 2001, issue of the *Texas Register* (26 TexReg 8523)) states that the emissions from blasting and coating fixed objects have a record of insignificant emissions. This same determination is applied in this PBR to include the surface preparation and coating of equipment and supporting structures (buildings or

fencing) that are used at the site in oil and gas handling or production. This allows flexibility for oil and gas operators to perform necessary maintenance on equipment used at a location. Limiting surface preparation and coating to equipment used at the site is intended to prevent the site from being used inappropriately as a surface coating facility that would require construction authorization. PBRs in §106.433 (Surface Coat Facility) and §106.452 (Dry Abrasive Cleaning) may be appropriate construction authorizations if coating or surface preparation are being conducted on non-OGS equipment.

What does the adopted PBR require?

Based on the analysis of modeling data and correlated monitoring and sampling data, the required use of BMPs will result in reduced short-term and long-term emissions from OGSs. Monitoring data indicates that emissions at levels of concern predominately result from sites that are not properly maintained or that do not follow BMPs. Authorized emissions from planned MSS activities are short-term and result in reduced overall emissions and environmental impact. A distance limitation is not included in this PBR because the construction authorizations for production emissions from oil and gas facilities already include appropriate distance limits. Permit holders are required to develop and implement a maintenance program, and comply with the recordkeeping requirements in §106.8 (Recordkeeping) and the site-wide emission limits in §106.4 (Requirements for Permitting by Rule).

An owner or operator of an OGS that claims planned MSS emissions under this PBR will be referred to as the permit holder. This PBR requires that the permit holder develop and implement a maintenance program and use BMPs to minimize emissions. A variety of activities can be considered BMPs, for example: timeframes for maintenance activities, prohibition of certain practices, maintenance procedures, operating procedures, and other techniques to control, prevent, or reduce the emission of regulated air contaminants. BMPs may include: following manufacturer's specifications and recommendations or following an operator-developed maintenance program consistent with good air pollution control practices for repairing and maintaining equipment performance, cleaning and routine inspection of all equipment, monitoring operational parameters to predict maintenance needs, closing thief hatches, and handling liquids properly. This PBR does not prescribe all of the specific BMPs that must be followed at each OGS; rather a permit holder is responsible for determining the appropriate BMPs to minimize emissions according to industry-wide standards. Recordkeeping is the primary method for demonstrating compliance with this PBR. Regulating planned MSS emissions through a maintenance program affords flexibility and allows permit holders the ability to adapt the maintenance program as necessary with regard to planned MSS activities.

Planned MSS emissions that meet the conditions of the PBR do not require notification or registration. No paperwork is required to be submitted to the commission. While THSC, §382.051962(c)(2) requires "... an application or registration to authorize the planned maintenance, start-up, or shutdown activities of the facility is submitted to the commission

on or before... January 5, 2014," the ability to claim and not register emissions under specific PBRs has historically been an acceptable option, and it is intended that this option be available for §106.359. To authorize emissions from planned MSS by the deadline, permit holders must develop and implement the maintenance program. The commission recommends that permit holders print a copy of the PBR, sign and date it, and keep this record to demonstrate the date the PBR was claimed.

In the general rules to claim a PBR, §106.8 addresses the recordkeeping requirements which are intended to provide a clear, understandable set of expectations in order to easily demonstrate compliance. Section 106.8 provides explicit requirements and meets the test of practical enforceability, an essential element for all commission authorizations. All necessary records must be kept and contain sufficient information to demonstrate compliance. These records serve to: verify all information used to estimate emissions; verify that planned MSS emissions meet all applicable limits; list current equipment and processes; explain equipment or process changes and associated effects on emissions; and demonstrate that equipment is properly operated, monitored, maintained, and inspected. Any records that are kept for other purposes but provide the required information to support the use of BMPs are sufficient to demonstrate compliance with this PBR.

Additionally, many planned MSS activities (such as blowdowns) are practically and physically indistinguishable from those that occur as a result of emissions events. Therefore, it is important for the permit holder to record the reason for the planned MSS

activity, and demonstrate that it meets the requirements of this PBR. In some instances, adequate notice should be given to a permit holder that upstream or downstream actions may result in the need for planned MSS activities at the permit holder's OGS. If adequate notice is given for the affected permit holder to plan a response, minimize the frequency and duration of emissions, and the emissions do not exceed the limits in §106.4, then the activities may be claimed as planned MSS. Records of this notification must be kept to claim the emissions as planned MSS emissions under this PBR.

Because some oil and gas permit holders may not have included planned MSS emissions in their evaluation to determine the appropriate construction authorization for production emissions, site-wide emissions may need to be recalculated to account for the planned MSS emissions and ensure compliance with any construction authorization limitations. Specifically, in accordance with §106.4, total actual emissions authorized under PBR from the facility shall not exceed 250 tpy of carbon monoxide or nitrogen oxides (NO_X); or 25 tpy of VOC, sulfur dioxide (SO_2), or inhalable particulate matter (PM); or 15 tpy of particulate matter with diameters of 10 microns or less (PM_{10}); or 10 tpy of particulate matter with diameters of 2.5 microns or less ($PM_{2.5}$); or 25 tpy of any other air contaminant except carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen, unless at least one facility at a site has been subject to public notice and comment as required in Chapter 116, Subchapter B or Subchapter D (Permit Renewals). Section 106.4(b) requires that no person shall circumvent by artificial limitations the requirements of §116.110 (Applicability). Permit holders may be required to provide documentation demonstrating

site-wide emission totals if requested by commission staff or an air pollution control program with jurisdiction.

Site-wide emission totals, including planned MSS emissions calculations, should be supported with as much site-specific or representative sampling and testing needed to perform such emissions calculations. For example, a site with an outlet gas stream from a high pressure separator, outlet gas stream from a glycol unit, outlet gas stream from an amine unit, and outlet gas stream from a low pressure separator may require sampling and testing for all four gas streams to sufficiently complete emissions calculations for pipeline blowdowns. Failure to sample at the appropriate location can result in a mischaracterization and incorrect quantification of emissions.

While this PBR does not require registration or the submission of emission calculations to the commission, the site-wide emissions will need to be quantified to verify the site is operating under the appropriate construction authorization. Planned MSS emissions should be based on a worst-case annual emissions total. For example, planned MSS activities that only occur once every ten years cannot be averaged out over a ten-year period. Emissions from such an event should be considered as part of a worst-case annual emission total and should be accounted for, in its entirety, to support Chapter 106 compliance.

The commission has historically accepted worst-case emissions quantifications for similar units at a site. This reduces the burden on permit holders for emission calculations. Compliance may continue to be demonstrated using worst-case scenario emission estimates. For example, if an OGS has 20 pumps at a site and all of the pumps require a similar maintenance activity, a permit holder could determine which pump emitted the highest volume of emissions during that activity and use that as a worst-case representation for the same activity performed on the other pumps at the site. This same representation can then be used for pumps at other sites the company controls if the emissions are representative.

For example, a permit holder with 30 predicted annual activities could conservatively plan on some additional annual activities to account for circumstances that could cause an increase in planned MSS activities for these specific facilities. While site-specific emissions are preferred, permit holders could use a liquid and gas analysis from a representative site consistent with commission guidance. This will alleviate some of the calculation burden on permit holders, while ensuring compliance with the emission limitations in §106.4.

Additionally, the commission has created an emission calculation spreadsheet for use in estimating emissions from sites involved in the production of oil and gas. The purpose of this tool is to determine compliance with PBR or standard permit emission limits and to help quantify planned MSS emissions. The spreadsheet is available on the TCEQ Web site at: *www.TexasOilandGasHelp.org*.

In certain circumstances certification of emissions may be appropriate for sites previously claiming a construction authorization. The certification is not required but is recommended for OGSs whose cumulative site-wide emissions are within five tpy of any applicable general limit of an authorization mechanism. Facilities may limit the potential to emit (PTE) by calculating emissions based on a planned number of events. If the PTE for a site is at or above the limitations of the authorization mechanism currently used for that site, the permit holder must either obtain a new authorization or lower the site's PTE, by certification, to avoid triggering a new authorization mechanism. There is no cost to certify emissions.

In order to clarify the intent of the commission's recommendation for certain sites to certify emissions, examples are provided below. Additional information can be found on the APD-CERT form (TCEQ-10489).

First, in order to limit the PTE, if a project includes control technology, limited hours, throughput, materials, or other operational limitations, the United States Environmental Protection Agency's guidance is clear that these limitations must be federally enforceable. Certified emissions are federally enforceable. For example, if a facility requires the use of a control device in order to meet the applicable general limit of an authorization mechanism, the commission recommends a permit holder certify the destruction and/or capture efficiency of the control device.

Second, a permit holder may want to voluntarily establish federally enforceable planned MSS emission limits for air pollutants to demonstrate the site is a minor source for purposes of the Title V federal operating permit program.

Third, if a project is in an Air Pollutant Watch List area and has increases or decreases in emissions of any of the area's pollutants of concern as a result of planned MSS activities, it is recommended the representations be federally enforceable through certification.

Fourth, if a project is located at a site subject to NO_X Cap and Trade requirements in Chapter 101, the amount of NO_X subject to that program must be federally enforceable. Any increase or decrease in NO_X emissions from planned MSS activities would therefore be required to be federally enforceable.

What other rules apply to sites claiming this adopted PBR?

It is intended that this PBR will be used in addition to a construction authorization for production emissions at an OGS. OGSs must also comply with the requirements in Chapter 106 to claim the proposed PBR, and the applicable requirements in 30 TAC Chapter 101, General Air Quality Rules. The most common parts of Chapter 101 affecting OGSs are §101.4, Nuisance; §101.10, Emissions Inventory Requirements; and §101.201, Emissions Event Reporting and Recordkeeping Requirements. Potential nuisance

conditions from activities in the oil and gas industry include odors, smoke, and dust from in-plant roads, work areas, and traffic.

All sites in Texas must comply with opacity limitations in 30 TAC Chapter 111, Control of Air Pollution from Visible Emissions and Particular Matter. All OGSs, especially sour sites, must ensure compliance with the ambient air quality standards in 30 TAC Chapter 112, Control of Air Pollution from Sulfur Compounds. OGSs in certain areas must comply with various standards in 30 TAC Chapter 115, Control of Air Pollution from Volatile Organic Compounds; and 30 TAC Chapter 117, Control of Air Pollution from Nitrogen Compounds.

Federal rules may also apply. Federal standards applicable to OGSs can be found in 40 Code of Federal Regulations (CFR) Part 60, New Source Performance Standards (NSPS), and 40 CFR Parts 61 and 63, National Emissions Standards for Hazardous Air Pollutants (NESHAP). Certain activities required under federal rules may be considered planned MSS activities and authorized under this PBR. For additional information about rules that may apply to OGSs, visit *www.TexasOilandGasHelp.org*.

Protectiveness Review

Modeling and Monitoring

After the commission assessed typical planned MSS activities conducted at OGSs, the emissions associated with these activities were evaluated for inclusion in this PBR. The

protectiveness review focused on blowdowns and tank or vessel degassing because they were identified as the sources of the highest emissions related to planned MSS activities.

THSC, §382.051961 requires that the commission review credible air quality monitoring and modeling data in order to determine that emissions limits or other emissions-related requirements of this PBR are necessary to protect public health and the environment. In developing the protectiveness review, the commission incorporated both modeling and monitoring information from three sites in the Air Quality Analysis (AQA), conducted a case study of Automatic Gas Chromatograph (AutoGC) monitoring data from emission events, reviewed monitoring data near a tank farm, reviewed complaint investigation reports with associated summa canister air samples, and reviewed the state-wide benzene emissions data evaluated by the TCEQ's Toxicology Division.

In the air permit process, the commission uses short-term and long-term effects screening levels (ESLs) to evaluate modeling of proposed emissions for their potential to adversely affect human health and the environment. For evaluation of air monitoring results, air monitoring comparison values (AMCVs) are used to assess the potential for adverse health effects from exposure to the measured concentrations of certain pollutants. When developing individual permit requirements, modeled potential emissions are compared to the applicable ESLs so that when multiple sources are in an area, monitored emissions will be below the applicable AMCVs. The long-term ESL and long-term AMCV for benzene are

both 1.4 parts per billion (ppb) or 4.5 micrograms/cubic meter (µg/m^3). The short-term ESL for benzene is 54 ppb (170 µg/m^3) and the short-term AMCV is 180 ppb (580 µg/m^3).

The AQA was performed using AERMOD (version 12060). AERMOD is based on the Gaussian distribution equation and is inherently conservative due to the main simplifying assumptions made in its derivation: conditions are steady-state (for each hour, the emissions, wind speed, and wind direction are constant) and the dispersion from source to receptor is effectively instantaneous; there is no plume history as model calculations in each hour are independent of those in other hours; mass is conserved (no removal due to interaction with terrain, deposition, or chemical transformation) and is reflected at the surface; and plume spread from the centerline follows a normal Gaussian distribution and only vertical and crosswind dispersion occurs-dispersion downwind is ignored.

To determine which contaminants would be modeled for the AQA, the commission first determined which speciated VOC would be the contaminant of concern. In the recent rule package for PBR, §106.352, effective February 27, 2011, numerous speciated VOCs (benzene, toluene, ethylbenzene, xylenes, propane, butane, and others) were evaluated using representations from projects and hypothetical cases based on concentration percentage and associated ESL. In almost every instance, the compound benzene was identified as the contaminant of concern before any other VOC compound. The annual (long-term) ESL for benzene is substantially lower than any of the corresponding ESLs for other air contaminants expected to be emitted at an OGS. Therefore, the commission

determined that conducting a protectiveness review of benzene is appropriate for demonstrating that planned MSS activities at OGSs do not adversely affect human health and the environment. To analyze the annual acceptable emissions of benzene, both the hourly and annual impacts were evaluated for protectiveness.

Assuming 1% of VOC emissions are benzene provides a conservatively high benzene emission rate. This assumption is used when direct measurement or sampling is unavailable. This percentage was used as the basis for emission estimates of benzene from VOC.

The AQA included an evaluation of information from TCEQ's Barnett Shale Formation Tank Battery Monitoring Project from July 2010 to develop modeling for two of the sites presented in the project.

The first site is the Chesapeake Energy Little Hoss Lease, located in Johnson County, approximately 1.75 miles west of State Highway 171. Monitoring at this location was conducted from noon on July 12, 2010, to noon on July 13, 2010.

The second site is the ConocoPhillips Company Gage Pitts Lease, located in Wise County, approximately one half mile south of US Highway 380. Monitoring at this location was conducted from 12:15 pm on July 14, 2010, to 12:15 pm on July 15, 2010.

The commission used the monitoring project to develop a representative modeling scenario for evaluating planned MSS tank degassing activities. In order to develop the representative modeling scenario, the commission placed off-property receptors at the same location as the monitors in the study. A tank thief hatch adapter sampling apparatus was installed at the two sites for the monitoring project and was the source of emissions evaluated in the representative modeling analysis. The commission used photographs included in the monitoring report and aerial photography to locate the sources. The commission modeled the tank thief hatch adapter as a point source with pseudo point parameters using emission rates from contractor information. The modeling used meteorological data from the same period as the monitor study. The Little Hoss evaluation used surface data from Granbury Regional Airport (station #53977). The Gage Pitts evaluation used surface data from Decatur Municipal Airport (station #53694). Both evaluations used upper air data from Fort Worth (station #3990). These meteorological stations are the closest Automated Surface Observing Systems (ASOS) stations to each location.

Using the representative parameters, the commission conducted modeling and compared the model results to the monitored values to evaluate model performance. The predicted concentrations were added to the concentration from up-wind monitors, and the total concentrations were generally within 20% of the monitored value with the exception of one receptor at the Little Hoss Lease. The predicted concentration at this receptor was approximately two times greater than the monitored value. Because the model results

were within the generally accepted limit of model performance (within a factor of two), the commission used the model setup to evaluate benzene emissions from typical tank degassing activities. For the rule proposal, the protectiveness review considered that while there may be several tanks at a site, tank degassing typically will not occur simultaneously at more than one tank at a site at a time. During the comment period, the commission learned that tanks manifolded together at a site may be degassed simultaneously. The commission subsequently evaluated the emissions from emptying and degassing a system of potentially manifolded tanks and the use of vacuum trucks. The commission determined that the impacts from these activities are protective if certain requirements in §106.359(b)(9)(A) - (C) are met.

The commission evaluated four degassing activity scenarios at the Little Hoss and Gage Pitts locations: unassisted degassing from a fixed roof tank less than or equal to 500 bbl, forced ventilation degassing from a fixed roof tank less than or equal to 500 bbl, forced ventilation degassing from a 1,000 bbl fixed roof tank, and forced ventilation degassing from a 100,000 bbl floating roof tank. The modeling used a point source with pseudo point parameters to evaluate the unassisted tank degassing activity, a point source with representative parameters for the forced ventilation degassing of 500 bbl and 1,000 bbl tanks, and a volume source for the degassing of a 100,000 bbl floating roof tank. Receptors were placed at 50-foot intervals beginning at the property line and extending a quarter mile from the property line. The modeling used the same meteorological stations as the representative modeling scenario, but was conducted for an entire year, specifically

2010. The predicted benzene concentrations for the unassisted tank degassing scenario were all less than the ESL for benzene. The maximum predicted hourly concentration for the forced ventilation tank degassing scenario from fixed roof tanks was approximately 14 times the short-term ESL for benzene. However, the frequency of ESL exceedance is only one hour per every ten years for each tank degassing activity.

The commission modeled the 100,000 bbl floating roof tank release height at 40 feet (top of the tank) based on industry representations of BMPs and research conducted by staff on tank degassing activities. The maximum predicted hourly concentration for the floating roof tank degassing scenario was approximately 21 times the short-term ESL for benzene. However, the frequency of ESL exceedance is only one hour per every ten years for each tank degassing activity. The predicted annual impacts are below benzene's long-term ESL. The TCEQ Toxicology Division reviewed the modeling results and has determined that tank degassing that complies with the conditions in this PBR are expected to be protective of human health and the environment.

The AQA also evaluated planned MSS activities at the Ponder Compressor Station, located in Ponder, Denton County. The Ponder Compressor Station is located approximately 1,100 feet south-southeast of the AutoGC Monitor at the Dish Airfield (CAMS 1013). The commission reviewed a recent standard permit application for the site and used parameters represented in the application to evaluate benzene emissions from blowdown activities. The commission used 12 months of actual blowdown records, which indicated

that a typical blowdown at this site lasted less than five minutes and resulted in an average of 12.64 lb/hr of VOC emissions. There were 35 blowdowns in the 12 months of data evaluated. The blowdown activity was modeled as a point source with the parameters represented in the application. Blowdown activities may occur up to 60 times per year, with typically one blowdown per hour for a duration of five minutes. The Ponder evaluation used 2011 meteorological surface data from Denton Municipal Airport (station #3991) and upper air data from Fort Worth (station #3990). The surface station is the closest ASOS station, at approximately eight miles to the north. The commission located receptors at 50-foot intervals beginning at the property line and extending a quarter mile from the property line, as well as an additional receptor at the location of the Dish Airfield Monitor. The maximum hourly monitored value for 2011 is 8 $\mu g/m^3$. The maximum predicted concentration from the modeling at the location of the monitor receptor is 9.25 $\mu g/m^3$. The maximum predicted concentration at any receptor is 160 $\mu g/m^3$, which is less than the short-term ESL for benzene.

Case Studies: Emission Events and Various Monitoring

A case study to examine the effect of emissions events on nearby monitors was conducted. While this PBR does not authorize emissions events, the reporting requirements for these events provided the commission with an estimated amount of emissions and a defined time of release. The commission reviewed these emissions events to evaluate the impact on monitors from benzene emissions as a proxy for evaluating planned MSS emissions.

The monitors used in this research were AutoGCs because they provide the most usable, consistent data with regard to the activities evaluated for this PBR. Because the activities evaluated for the PBR are typically less than 24 hours in duration, AutoGCs are the ideal monitoring equipment type. AutoGCs are designed to collect data at a given sampling location over time and provide hourly measurements, seven days a week.

Once the appropriate AutoGC monitors were selected, the commission identified sites reporting estimated benzene emissions resulting from emission events. In order to determine the benzene effects associated with planned MSS activities the commission compared the associated benzene emission events at these sites to the collected, verified AutoGC monitoring data.

An emissions event at a site located approximately 2,000 feet northwest of the Oak Park Monitor in Corpus Christi, Texas was evaluated. This site reported a release of approximately 94 pounds of benzene over a 13.5-hour period. Wind direction during this event was consistently coming from the northwest, which would carry emissions from the site towards the monitor. The highest detected benzene concentration at the monitor during the event was 0.78 ppb.

An emissions event at a second site located approximately 4,000 feet northeast of the Solar Estates Monitor in Corpus Christi, Texas was also evaluated. This site reported a release of 15 pounds of benzene over a 1.5 hour period. During this time period, wind direction was

consistently coming from the northeast, which would carry emissions from the facility towards the monitor. The highest detected benzene concentration at the monitor during the event was 0.19 ppb. This site reported a second release of 3.9 pounds of benzene over a 40-minute period. During this time period, wind direction was consistently coming from the northeast. The highest detected benzene concentration at the monitor during the event was 0.46 ppb. This site reported a third release of 7,900 pounds of benzene over a three-hour period during the event. During this time period, wind direction fluctuated but was generally coming from the northeast towards the monitor when the AutoGC took the air sample. The detected benzene concentration at the monitor during that measurement was 1.80 ppb. All of the monitored values during the case study emission events were below the short-term AMCV for benzene.

The emissions event estimate (7,900 lb of benzene/three hours) represents a much greater amount than is expected for any planned MSS activities at OGSs. The highest planned MSS activity at OGSs was approximately 38 lbs of benzene in one hour, which is 1% of the total 3,850 lb/hr of VOC estimated from using forced ventilation to degas a 100,000 bbl floating roof tank. Therefore, the emissions from planned MSS are less than 1% of the emissions from the event in the case study and would be expected to be monitored below the short-term AMCV.

In addition to the monitoring data associated with emissions events, the commission reviewed data from a monitor located between two large tank batteries. The commission

evaluated 12 months of validated data from the Huisache monitor in the Corpus Christi area. The two tank batteries are part of two large refineries that conduct tank degassing activities at a higher frequency than expected at an OGS. Based on permit representations, degassing activities occur at these facilities because of regulatory requirements and because of frequent changes of service. Although degassing of tanks storing high vapor pressure compounds is controlled, and despite not having any site-specific data for an OGS near one of these monitors, it is likely that multiple degassing events of large tanks took place in the 12 months for which data was evaluated. The monitoring data did not show any exceedances of the short-term AMCV for benzene for the 12 months evaluated.

Additionally, the commission reviewed 58 complaint response investigations from the TCEQ Dallas-Fort Worth regional office. Of the 58 investigations, 49 included the collection of Summa canister samples that were subsequently analyzed. Summa canisters are air monitoring tools the commission uses to collect air samples and analyze them for the possible presence of various air contaminants. The time of sample collection can range from a few seconds to 30 minutes. The samples from the investigations were analyzed for elevated concentrations of 84 petroleum-related compounds (i.e., propane, isobutene, n-butane, or benzene). The analysis of the Summa canister samples did not show any elevated concentrations of petroleum-related compounds associated with planned MSS activities.

State-wide Benzene Emission Summary

The TCEQ Toxicology Division's analysis of monitored benzene emissions state-wide shows an overall trend of improvement. In 2011, benzene emissions at all monitors were below the long-term AMCV of 1.4 ppb. The intent of this PBR is to ensure that equipment and facilities at OGSs are operating properly, in good condition, and that unauthorized emissions caused by equipment failure are minimized, so that monitored benzene emissions continue to show improvement. Additional details on particular areas can be found on the TCEQ Web site *www.tceq.texas.gov/toxicology/regmemo/AirMain.html*.

Section Discussion

Section 106.359, Planned Maintenance, Startup, and Shutdown (MSS) at Oil and Gas Handling and Production Facilities

The commission adopts new §106.359 to authorize emissions from planned MSS activities at various oil and gas handling and production facilities. This PBR is intended to cover all known planned MSS activities at OGSs. Permit holders must comply with the general requirements to claim a PBR, in Chapter 106, which include recordkeeping and meeting site-wide emissions limits.

Section 106.359(a) is adopted with change to the proposed text. Adopted §106.359(a) establishes the applicability of this PBR to certain OGSs. Subsection (a) requires permit holders to follow all conditions in the PBR to authorize planned MSS emissions at a site. If the permit holder does not comply with all conditions in the PBR (such as development

and implementation of the maintenance program and adequate recordkeeping to demonstrate compliance), emissions from planned MSS activities are not authorized.

Subsection (a) also authorizes any emission capture and control facilities used to reduce emissions from planned MSS activities and facilities.

The THSC, §382.051962 definition of planned MSS activities used in this PBR differs from the §101.1 (Definitions) of scheduled MSS activity. In §101.1, scheduled MSS is defined as unauthorized emissions. Once a permit holder authorizes planned MSS activities, the requirements in §101.211 (Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements) do not apply to the authorized emissions. Planned MSS activities are routine and predictable, but not necessarily scheduled for a specific date in the future.

OGSs operating under several available construction authorizations may be eligible to claim this PBR to authorize planned MSS emissions. This PBR may be used with historical standard exemptions, historical exemptions from permitting, and historical PBRs for oil and gas facilities. This proposed PBR may also be used with current PBRs: §106.351, Salt Water Disposal (Petroleum); §106.353, Temporary Oil and Gas Facilities; §106.354, Iron Sponge Gas Treating Unit; §106.492, Flares; §106.511, Portable and Emergency Engines and Turbines; and §106.512.

OGSs that claim §106.352(l) may be eligible to claim this PBR. However, OGSs that are authorized under §106.352(a) - (k) or subsections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities have planned MSS addressed in those authorizations and are not eligible to use this PBR. Sites that are located outside of the counties listed in §106.352(a)(1) that have voluntarily registered under §106.352(a) - (k), or subsections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities, may opt to change their authorization to §106.352(l), or the standard permit in §116.620, if eligible, and claim this PBR to authorize planned MSS emissions.

The PBR §106.355, Pipeline Metering, Purging, and Maintenance, authorizes sections of pipelines between sites. These sources should continue to use that authorization and are not eligible to claim this PBR.

Tanks that are authorized under §106.478, Storage Tank and Change of Service, or other PBRs in Chapter 106, Subchapter U (Tanks, Storage and Loading) have historically been eligible to authorize planned MSS activities under §106.263. This will not change as a result of this PBR. The PBRs in Subchapter U are applicable to a broader range of sources than OGSs. Sites authorized under PBRs in Subchapter U will not be eligible to authorize planned MSS activities under this PBR. The intent of this PBR is to limit the applicability to certain oil and gas handling and production facilities or sites including but not limited to tank batteries between sites that handle liquids from oil and gas production, and not

necessarily tank farms holding final product. However facilities authorized under PBRs under Subchapter U that can meet the requirements of §106.352(l) may opt to change their authorization to §106.352(l) and claim this PBR for planned MSS authorizations.

This PBR will be available for OGSs authorized under the standard permit in §116.620.

If certain planned MSS activities were claimed as part of a previous authorization under historical standard exemptions, PBRs, or standard permits, permit holders may choose to switch to §106.359. However, subsection (a)(2) prohibits the removal of emission control methods used under the previous authorization, in order to prevent hourly emission increases from planned MSS activities.

This PBR specifically addresses all planned MSS activities at OGSs, and ensures they are protective. The requirement to develop a maintenance program and keep records provides flexibility while not overburdening permit holders and the commission with unnecessary paperwork.

Facilities or sites authorized under case-by-case permits will be able to authorize certain planned MSS emissions under this PBR. If a case-by-case permit authorized a specific number of activities for a facility, §106.359 may be used to increase the number of those activities, as long as the additional number of activities is conducted in compliance with all

applicable rules and permit special conditions, including emission controls, monitoring, and recordkeeping, in the case-by-case permit for that activity.

Section §106.359 may also be used to authorize additional planned MSS activities that were not previously accounted for in the special conditions and the Maximum Allowable Emission Rate Table (MAERT). If a new facility is constructed at an existing site that has a case-by-case permit, then §106.359 may be used to authorize planned MSS from that new facility. All PBRs would be incorporated at the next permit action, per commission guidance.

Additionally, if a planned MSS activity is authorized in a case-by-case permit, companies may not alter the permit to delete the activities and claim them under this PBR while continuing to authorize the facilities or a portion of them in the case-by-case permit. This is consistent with the memorandum on "Voiding Permits and Claiming Permits by Rule or Standard Permits" dated December 9, 2005. The memorandum is available on the TCEQ Web site at *http://www.tceq.texas.gov/permitting/air/memos/pbr_memos.html*.

This PBR does not authorize emissions associated with emissions events, malfunctions, upsets, unplanned startup, unplanned shutdown, or unplanned maintenance activities that require immediate corrective action. An upset event is the unplanned and unavoidable breakdown of a process that releases unauthorized emissions of air contaminants. For additional information, see §101.1 and §101.201, Emissions Event Reporting and

Recordkeeping Requirements. However, if a permit holder conducts planned maintenance on an accelerated timeframe while a facility is shutdown because of an emissions event, the planned maintenance as documented in the permit holder's maintenance program and the subsequent startup of the facility may be claimed as planned maintenance and planned startup covered by this authorization.

Alternate operating scenarios are not considered planned MSS activities and emissions associated with them are not authorized under this PBR. The maintenance activity performed on a piece of control equipment can be considered a planned MSS activity; however the emissions released from the normally controlled facilities during this downtime are considered an alternate operating scenario and not a planned MSS activity. For example, for 50 weeks out of the year, a vapor recovery unit controls a series of tanks. For the other two weeks the vapor recovery unit undergoes maintenance and the tanks are not controlled, but vented to the atmosphere. This is considered two operating scenarios: the normal operating scenario (tanks controlled) and the alternate operating scenario (tanks not controlled). Both scenarios should be reflected as production emissions from tanks and are not considered planned MSS activities.

Subsection (a)(3) was deleted to reduce redundant requirements regarding the general requirements to claim a PBR in §106.4.

Section 106.359(b) is adopted with changes to the proposed text. Adopted subsection (b) establishes the types of planned MSS activities and facilities that are intended to be eligible for authorization under this PBR. The list of activities included in the proposed PBR was developed through research conducted by the commission and from stakeholder input.

The intent of this subsection is to provide a clear and simple list of the types of activities and facilities that may be authorized under this PBR. This subsection is comprised of three groups of planned MSS activities. Subsection (b)(1) - (5) lists the planned MSS activities that are considered lower emitting activities. Subsection (b)(6) includes activities with the same character and quantity of emissions as those listed under subsection (b)(1) - (5) to allow flexibility for planned MSS activities that are protective because of their negligible emissions. Adopted subsection (b)(7) - (9) addresses planned MSS activities that have a greater potential for emissions - the higher emitting activities. Adopted subsection (b)(10) addresses abrasive blasting and coating for maintenance.

The list of planned MSS activities in subsection (b)(1) - (5) covers a range of lower emitting activities. For example, subsection (b)(1) lists planned engine maintenance as an activity eligible for authorization under the proposed PBR. Planned engine maintenance can include filter changes, oxygen sensor replacements, compression checks, lubricant changes, spark plug changes, rod packing, emission control system maintenance, and facilities used for testing and repair of engines and turbines. Engine overhauls that involve opening the engine, taking it apart, cleaning and lubricating it, and reassembling with all

original parts would also be included in subsection (b)(1). These activities are considered BMPs to keep an engine operating properly and in good condition. Similar BMP activities for emission control devices, turbines, compressors, boilers, heater and heat exchangers, and other combustion facilities are also eligible for authorization under this PBR.

Adopted subsection (b)(2) authorizes the planned repair, adjustment, calibration, lubrication, and cleaning of process equipment at an OGS. This paragraph is intended to authorize these maintenance activities for the numerous facilities found at an OGS. Repairing, adjusting, calibrating, lubricating, and cleaning of facilities are common BMPs to keep equipment in good condition and operating properly. Cleaning of storage tanks and vessels is not included in subsection (b)(2), but is eligible under subsection (b)(9).

Adopted subsection (b)(3) and (4) authorize planned replacement of certain facilities at OGSs. Examples of replacements included as planned MSS include: piping components, pneumatic controllers, wet and dry seals on turbines, meters, instruments, analyzers, screens, filters, boiler refractories, and turbine or engine component swaps.

Replacement of an entire engine or turbine is not authorized under subsection (b)(4) as these are new facilities and require a separate construction authorization for the production emissions. Planned turbine and engine component (or hot section) swaps are authorized under this PBR as maintenance consistent with current commission guidance. Engine overhauls that involve opening the engine, taking it apart, cleaning and lubricating

it, and reassembling with some replacement parts would be included in subsection (b)(4). To ensure proper maintenance, good operation, and to limit petroleum production interruptions, portions of turbine and engine sets used by the oil and gas industry are commonly replaced with components that have been rebuilt off-site. In these cases, no changes are made to the supporting equipment (anchors, piping connections, fuel system, lubrication system, control system, structure, skids, and inlet and exhaust ducts) which allows the combustion device to operate. The replacement combustion, compressor units, or power turbines are typically of the same horsepower, operate in the same manner, and have equal or less emissions than the original devices (in-kind). The new components operate in the same manner, provide no increase in throughput, and have equal or less emissions with no different characteristics than the original devices. Under THSC, §382.003(9) and 30 TAC §116.10(11) (General Definitions) exchanges of in-kind components that do not increase the amount or change the character of emissions are not considered a "modification." Planned replacement of engine and turbine components should be considered a maintenance activity. The replacement of existing permitted engines and turbines with in-kind facilities results in no environmental changes. To maintain good operation, the existing facilities need to undergo maintenance or rebuilding and if not replaced, would likely emit higher amounts of air contaminants to the atmosphere over time. This is consistent with the memorandum on "Replacement of All Engine and Turbine Components for Oil and Gas Production - Revised" dated September 1, 2005. The memorandum is available on the TCEQ Web site at *http://www.tceq.texas.gov/assets/public/permitting/air/memos/replacement.pdf*.

Replacement of other equipment not listed in this PBR would require evaluation of the need for a construction authorization. For example, replacement of a glycol dehydrator originally authorized by a standard permit will require a revision to the standard permit. Replacement of equipment not included in the list in subsection (b)(3) that would not require a construction authorization may be included as planned MSS under subsection (b)(6) if applicable. The intent is to authorize the maintenance using BMPs that are integral to proper operation of equipment and to ensure that unauthorized emissions events caused by equipment failure are minimized. The maintenance program should address the predicted frequency of these types of planned MSS activities, and logs should be kept of these activities to demonstrate compliance with this PBR.

Adopted subsection (b)(5) addresses piping that is used during planned MSS activities. The construction and use of piping that is necessary to bypass a facility, or piping section that is undergoing maintenance is authorized under the proposed PBR. This bypass piping may allow materials to be directed around a process unit or control device for the period of time when maintenance is occurring. The commission does not consider the piping to be an alternate operating scenario, but rather a BMP to minimize emissions during planned MSS activities. The records in the maintenance program should demonstrate when the bypass piping is used for planned MSS. However, a permanent bypass pipeline not being used for maintenance is not authorized under this PBR. This scenario is an alternate operating scenario and fugitive emissions associated with the use of this bypass piping

should be authorized under the construction authorization. The Response to Comments section provides additional information on the use of bypass piping for planned MSS.

The list of activities in this PBR is not all inclusive. Under adopted subsection (b)(6), the commission intends to allow planned MSS activities that are the same in character and quantity of emissions as the types of activities listed in subsection (b)(1) - (5) to be authorized by this PBR. The character, quantity, dispersion, frequency, and duration of the lower emission activities will result in lower emission impacts than higher emission activities, and ensures protectiveness. Planned MSS activities that are within the scope of the protectiveness review conducted for these activities may also be authorized using this PBR, even if they are not specifically listed. This flexibility will allow for advances in industry planned MSS technology while still remaining protective. Unauthorized emissions resulting from upsets will not be authorized by this PBR, even if the emissions are the same in character and quantity as those reviewed for protectiveness. The resetting of pressure relief devices to a closed position and sealing the vessels and piping are BMPs. However, emissions from activation of a pressure relief device may be an emissions event. Additional details will be provided in published guidance to clarify not only the types of activities, but character and quantity of emissions so that additional activities can be authorized under §106.359(b)(6).

Adopted subsection (b)(7) includes the emissions from the pigging and purging of piping at a site if it is a planned MSS activity or facility. Before piping can be taken out of service for

operational or maintenance purposes, it must be "purged" or depressurized by venting the natural gas to the atmosphere. To effectively purge the pipeline, sometimes a device (pig) is inserted into the line and gas is used to force the pig through the line. In addition to purging the gas in the line, pigging for maintenance also scrapes off solid deposits and pushes liquids through a multi-phase pipeline. Operational pigging is considered startup or shutdown activities for the purposes of this PBR. Startup or shutdown pigging can include pigging for separation of products as well as separation of product quantity. Subsection (a) authorizes any emission capture and control facilities associated with pigging or purging of piping.

The emissions generated by purging are a function of the pipe diameter, length, and pressure. To demonstrate compliance, records should be kept detailing the date and time of each pigging occurrence with corresponding pipeline diameter, length, and pressure. These records are important to determine the site-wide emissions totals to demonstrate compliance with the general requirements to claim this PBR as well as the construction authorization for the production emissions at the site. Alternatively, a permit holder may establish and calculate emissions from a representative pigging activity and use the representative activity to simplify recordkeeping. The permit holder could document the parameters used to develop the representative activity, including pipe contents, diameter, length, pressure, etc... The simplified records could be a log of the number of pigging activities that meet the parameters of the representative activity. The records should

provide more detail on the pigging activities which exceed the parameters of the representative activity.

Adopted subsection (b)(8) addresses equipment blowdowns. Various types of equipment blowdowns were evaluated for this PBR. Examples of blowdowns typically conducted at OGSs include compressor blowdowns, vessel blowdowns, and piping blowdowns. Liquids drained out of pipelines or vessels to prepare for blowdown activities should be drained off to a container and handled properly, according to BMPs. The commission expects negligible emissions from the liquids. Subsection (a) authorizes any emission capture and control facilities associated with blowdowns.

Many planned MSS activities (such as blowdowns) are practically and physically indistinguishable from those that occur as a result of emissions events. Therefore, it will be important for the permit holder to record the reason for the planned MSS activity, demonstrating that it meets the requirements of this PBR. In some instances, adequate notice will be given to a permit holder that upstream or downstream actions may result in the need for planned MSS activities at the permit holder's OGS. If adequate notice is given for the affected permit holder to plan a response, minimize the frequency and duration of emissions, and the emissions do not exceed the limits in §106.4, then the activities may be claimed as planned MSS. Records of this notification must be kept to demonstrate that the emissions were associated with a planned MSS activity.

To demonstrate compliance with this PBR, records for blowdowns must be kept of the date, time, and equipment, and should demonstrate the permit holder is following the maintenance program as required in subsection (c)(2). Alternatively, a permit holder may establish and calculate emissions from a representative blowdown activity and use the representative activity to simplify recordkeeping. The permit holder could document the parameters used to develop the representative activity, and the simplified records could be a log of the number of blowdown activities that meet the parameters of the representative activity. The records should provide more detail on the blowdown activities which exceed the parameters of the representative activity. Also, because blowdowns may be a result of upsets or unplanned maintenance at the site, information reflecting the cause or reason for the blowdown must be part of the record.

Adopted subsection (b)(9) addresses authorization of emptying, purging, degassing, or refilling of process equipment and storage tanks or vessels. Based on the research and the protectiveness review conducted by the commission, emptying and degassing of tanks and vessels typically located at OGSs are covered under this PBR if BMPs are used and the conditions in the PBR are followed. Permit holders have three options for the emptying or degassing of tanks using forced ventilation. Subsection (b)(9)(C)(i) requires that degassing by forced ventilation is limited to the use of a single vacuum truck at any time. Subsection (b)(9)(C)(ii) requires that emissions are directed out the top of the tank. Subsection (b)(9)(C)(iii) requires that emissions are routed through a closed system to a control device. Providing these three options to permit holders allows flexibility for emptying and

degassing tanks while remaining protective of human health and the environment. Under this PBR, BMPs for a degassing event include completely emptying all the liquids from the tank before degassing begins. In accordance with BMPs, liquids and solids that are removed from the tank or vessel should be directed to covered containment equipment and properly disposed of or recycled. BMPs are required to be used to remove air contaminants from tanks or vessels.

Floating roof tanks must be landed prior to beginning the degassing process. In accordance with subsection (b)(9), BMP for forced ventilation degassing of tanks includes either routing the emissions to a control device or directing the emissions out the top of the tank. Allowing forced ventilation degassing at ground level without control can create explosive conditions and expose workers to emissions that exceed standards regulated by OSHA. Controlling or routing emissions out the top of the tank is consistent with documented industry practice regarding tank degassing and cleaning. In some cases industry may opt to control emissions from the degassing or purging of tanks or vessels. For example, degassing emissions may be sent to a control device like a thermal oxidizer. Subsection (a) authorizes any emission capture and control facilities associated with degassing tanks or vessels.

Planned operational landings of floating roof tanks or operational emptying of fixed roof tanks are authorized under this PBR as shutdown activities. The refilling of these tanks is considered a startup activity. Air emissions from floating roof tanks are greater while the

tank roof is landed and remain so until the tank is refilled and the roof is again floating. For operational landings, it is BMP that tanks should be filled and back in normal operation as safely and quickly as possible. However, the commission clarifies that "convenience landings" are not considered operational landings and are specifically excluded from authorization in subsection (b)(9). This PBR does not authorize emissions from convenience landings consistent with the memorandum on "Air Emissions During Tank Floating Roof Landings" dated December 5, 2006. The memorandum is available on the TCEQ Web site at *http://www.tceq.state.tx.us/assets/public/permitting/air/memos/tank_landing_final.pdf*.

To demonstrate compliance with §106.8 for the requirements in subsection (b)(9), records should be kept of the date, time, and the equipment used for degassing as well as the date and time of any operational landing or operational fixed roof tank emptying. Also, because degassing and purging of vessels may also be a result of upsets or unplanned maintenance at the site, or from upstream or downstream upsets or unplanned maintenance, records should reflect the cause or reason for the degassing or purging. Because degassing and blowdowns were identified as the source of the highest potential emissions related to planned MSS activities, permit holders may need to quantify emissions from these planned MSS activities to be able to demonstrate compliance with the general limits for claiming this PBR and the OGS construction authorization claimed.

Adopted subsection (b)(10) authorizes the facilities used for abrasive blasting, surface preparation, and surface coating at OGSs. Historically, the commission has authorized these maintenance activities under §106.263, if the blasting, surface preparation, and coating supplies and equipment are taken to the object fixed in place and there is no practical means of moving the object offsite for surface preparation. If an object can be taken offsite, then other PBRs such as §106.433, and §106.452, would apply.

The preamble to §106.263 (October 26, 2001, issue of the *Texas Register* (26 TexReg 8523)) states that the emissions from blasting and coating fixed objects have a record of insignificant emissions. This same determination is applied in this PBR to include the surface preparation and coating of equipment that is used at the site for oil and gas handling or production. This allows flexibility for oil and gas operators to perform necessary maintenance on equipment and supporting structures used at a location. Limiting surface preparation and coating to equipment used at the site is intended to prevent the site from being used inappropriately as a surface coating facility, which would require construction authorization. For example, a permit holder cannot bring equipment to the site that is not part of the oil and gas handling and production activities at the site. Surface preparation and coating of non-process equipment should have separate authorization such as §106.433, §106.452, or a case-by-case permit. Records documenting surface preparation and coating activities must be kept to demonstrate compliance with this PBR and as part of the maintenance program in accordance with subsection (c)(2).

Section 106.359(c) is adopted with changes to the proposed text. Adopted §106.359(c) establishes the requirement to keep facilities in good condition and operating properly, and develop and implement a maintenance program that is based on BMPs.

Adopted subsection (c)(1) specifically requires facilities that have the PTE air contaminants be maintained in good condition and operated properly. This includes keeping appropriate hatches closed when not being used; following the permit holder's maintenance program (which may include manufacturer's recommendations) for operation, maintenance, and corrosion prevention of equipment and structures; and keeping piping intact from normal wear and tear to prevent upset conditions. The lack of planned maintenance or failure to conduct planned maintenance that results in emissions may be deemed noncompliance with this PBR. For example, tanks or piping with holes resulting from the lack of corrosion prevention are not facilities in good condition.

Adopted subsection (c)(2) requires the permit holder develop and implement a maintenance program. The purpose of the maintenance program is to keep track of planned and performed maintenance, to maintain consistency of implementation among different personnel, and to demonstrate compliance with this PBR. The commission anticipates that several parts of the maintenance program are already a part of the normal operation of many OGSs. Subsection (c)(2)(A) - (E) lists the basic requirements for a maintenance program. Specifically, the maintenance program should address the cleaning and routine inspection of all equipment, repair of equipment on schedules to prevent

failure and maintain performance, training for appropriate personnel, and records of conducted planned MSS activities.

Training of personnel may be accomplished in a number of ways. The training is not intended to create a requirement for certification or expensive formal training, but is intended to ensure that personnel who are responsible for implementing the maintenance program have the knowledge necessary to do so. The commission anticipates that on-the-job training will be conducted to familiarize personnel with the requirements of the maintenance program and the actions necessary to implement the program.

The maintenance program may be written or electronic, but must be made available to agency personnel upon request. Each individual piece of equipment must have a corresponding record. Records kept demonstrating compliance with other applicable rules (such as federal rules or the general requirements to claim a PBR) may fulfill some of the requirements for the maintenance program. The maintenance program should demonstrate planned MSS activities for each piece of equipment, and include the corresponding records of planned MSS that was conducted. This is necessary to demonstrate that the plan has been implemented and is being followed at the OGS.

Proposed subsection (d) was deleted to reduce redundant requirements regarding the general requirements to claim a PBR. Recordkeeping for this PBR must follow §106.8. These recordkeeping requirements are intended to provide a clear, understandable set of

expectations in order to easily demonstrate compliance. Providing explicit requirements aids practical enforceability, which is an essential element for all commission authorizations. All necessary records must be maintained and contain sufficient information to demonstrate compliance. These records are important to: verify all information used to estimate emissions; verify that planned MSS emissions meet all applicable limits; demonstrate current equipment and processes; explain equipment or process changes and associated effects on emissions; and demonstrate that equipment is properly operated, monitored, maintained, and inspected. Any records that are kept for other purposes, but demonstrate the necessary information, may be sufficient to demonstrate compliance with this PBR.

Records may be written or electronic and should be kept as part of the maintenance program. Examples of records that may demonstrate compliance include: personnel training logs, information used to estimate emissions, inspection logs, maintenance activity logs or receipts, or copies of the maintenance program. Examples of records for specific activities include: the date and time of each pigging occurrence with corresponding pipeline contents, diameter, length, and pressure; records for blowdowns kept by the date, time, planned cause or reason, and the equipment; degassing activity date, time, planned cause or reason, and the equipment used; and blasting and coating of equipment used at the site in oil and gas handling and production. Correspondence and documentation (i.e., notice) of planned MSS activities that occur as a result of third party actions must be maintained and made available.

Claiming the PBR and maintaining the required recordkeeping will fulfill the requirement to "file an application" to authorize planned MSS emissions as required in THSC, §382.051962. Records must be readily available to the commission or an air pollution control program with jurisdiction upon request.

Final Regulatory Impact Determination

The commission reviewed the adopted rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225 and determined that the rulemaking does not meet the definition of a "major environmental rule." Texas Government Code, §2001.0225 states that a "major environmental rule" is, "a rule the specific intent of which is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state." While the purpose of this rulemaking is to authorize emissions from planned MSS activities at oil and gas handling and production facilities, it is not expected that this rulemaking will adversely affect in a material way the economy, a sector of the economy, productivity, jobs, the environment, or the public health and safety of the state or a sector of the state.

Furthermore, while the rulemaking does not constitute a major environmental rule, even if it did, a regulatory impact analysis would not be required because the rulemaking does not

meet any of the four applicability criteria for requiring a regulatory impact analysis for a major environmental rule. Texas Government Code, §2001.0225 applies only to a major environmental rule which: "(1) exceeds a standard set by federal law, unless the rule is specifically required by state law; (2) exceeds an express requirement of state law, unless the rule is specifically required by federal law; (3) exceeds a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or (4) adopts a rule solely under the general powers of the agency instead of under a specific state law." Specifically, the rule does not meet any of the four applicability criteria listed in Texas Government Code, §2001.0225 because: 1) the rulemaking is not designed to exceed any relevant standard set by federal law; 2) the rulemaking does not exceed an express requirement of state law; 3) no contract or delegation agreement covers the topic that is the subject of this rulemaking; and 4) the rulemaking is authorized by specific sections of THSC, Chapter 382, also known as the Texas Clean Air Act, and the Texas Water Code, which are cited in the Statutory Authority section of this preamble.

The commission's interpretation of the regulatory impact analysis requirements is also supported by a change made to the Texas Administrative Procedure Act (APA) by the legislature in 1999. In an attempt to limit the number of rule challenges based upon APA requirements, the legislature clarified that state agencies are required to meet these sections of the APA against the standard of "substantial compliance" as required in Texas Government Code, §2001.035. The legislature specifically identified Texas Government

Code, §2001.0225 as falling under this standard. The commission has substantially complied with the requirements of Texas Government Code, §2001.0225.

Additionally, THSC, §382.051962 applies to this rulemaking. THSC, §382.051962 states that the commission may adopt one or more PBRs or one or more standard permits and may amend one or more existing PBRs or standard permits to authorize planned MSS activities for facilities described by THSC, §382.051961(a). THSC, §382.051962 also states that the commission may not amend an existing PBR or an existing standard permit relating to an oil and gas facility unless the commission: 1) conducts a regulatory analysis as provided by Texas Government Code, §2001.0225; 2) determines, based on the evaluation of credible air quality monitoring data, that the emissions limits or other emissions-related requirements of the permit are necessary to ensure that the intent of the Texas Clean Air Act is not contravened, including the protection of the public's health and physical property; 3) establishes any required emissions limits or other emissions-related requirements based on (A) the evaluation of credible air quality monitoring data and (B) credible air quality modeling that is not based on the worst-case scenario of emissions or other worst-case modeling scenarios unless the actual air quality monitoring data and evaluation of that data indicate that the worst-case scenario of emissions or other worst-case modeling scenarios yield modeling results that reflect the actual air quality monitoring data and evaluation; and 4) considers whether the requirements of the permit should be imposed only on facilities that are located in a particular geographic region of the state.

The commission has conducted a regulatory analysis in accordance with Texas Government Code, §2001.0225 as previously described. Additionally, the intent of the rule is to authorize emissions from planned MSS activities at oil and gas handling and production facilities. The executive director examined monitoring and modeling data associated with planned MSS activities at oil and gas handling and production facilities and sites as discussed in Background and Summary of the Factual Basis for the Adopted Rule. Therefore, the rule is adopted in accordance with THSC, §382.051962.

The commission invited public comment regarding the draft regulatory impact analysis determination during the public comment period. No comments were received on the draft regulatory impact analysis determination.

Takings Impact Assessment

The commission evaluated the rulemaking and performed an analysis of whether the rulemaking constitutes a taking under Texas Government Code, Chapter 2007. The commission's preliminary assessment indicates Texas Government Code, Chapter 2007 does not apply.

Under Texas Government Code, §2007.002(5), taking means: "(A) a governmental action that affects private real property, in whole or in part or temporarily or permanently, in a manner that requires the governmental entity to compensate the private real property

owner as provided by the Fifth and Fourteenth Amendments to the United States Constitution or Section 17 or 19, Article I, Texas Constitution; or (B) a governmental action that: (i) affects an owner's private real property that is the subject of the governmental action, in whole or in part or temporarily or permanently, in a manner that restricts or limits the owner's right to the property that would otherwise exist in the absence of the governmental action; and (ii) is the producing cause of a reduction of at least 25 percent in the market value of the affected private real property, determined by comparing the market value of the property as if the governmental action is not in effect and the market value of the property determined as if the governmental action is in effect."

Promulgation and enforcement of the rulemaking is neither a statutory nor a constitutional taking of private real property. The primary purpose of the rulemaking is to authorize emissions from planned MSS activities at oil and gas handling and production facilities. The rulemaking does not affect a landowner's rights in private real property because this rulemaking does not burden, restrict, or limit the owner's right to property, nor does it reduce the value of any private real property by 25% or more beyond that which would otherwise exist in the absence of the regulations. Therefore, this rule would not constitute a taking under Texas Government Code, Chapter 2007. No comments were received on the Takings Impact Assessment.

Consistency with the Coastal Management Program

The commission determined that this rulemaking action relates to an action or actions subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act of 1991, as amended (Texas Natural Resources Code, §§33.201 *et seq*.), and commission rules in 30 TAC Chapter 281, Subchapter B, Consistency with the Texas Coastal Management Program. As required by 30 TAC §281.45(a)(3), Actions Subject to Consistency with the Goals and Policies of the Texas Coastal Management Program (CMP), and 31 TAC §505.11(b)(2), Actions and Rules Subject to the Coastal Management Program, commission rules governing air pollutant emissions must be consistent with the applicable goals and policies of the CMP. The commission reviewed this action for consistency with the CMP goals and policies in accordance with the rules of the Coastal Coordination Advisory Committee and determined that the action is consistent with the applicable CMP goals and policies.

The CMP goal applicable to this rulemaking action is to protect, preserve, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas (31 TAC §501.12(l), Goals). The rulemaking does not increase emissions of air pollutants and is therefore consistent with the CMP goal in 31 TAC §501.12(1) and the CMP policy in 31 TAC §501.32, Policies for Emission of Air Pollutants.

Promulgation and enforcement of these rules will not violate or exceed any standards identified in the applicable CMP goals and policies because the rulemaking is consistent

with these CMP goals and policies and because this rulemaking does not create or have a direct or significant adverse effect on any coastal natural resource areas. Therefore, in accordance with 31 TAC §505.22(e), Consistency Required for New Rules and Rule Amendments Subject to the Coastal Management Program, the commission affirms that this rulemaking action is consistent with CMP goals and policies.

No comments were received on the consistency of this rulemaking with the CMP.

Effect on Sites Subject to the Federal Operating Permits Program

This PBR is a potentially applicable requirement under 30 TAC Chapter 122, Federal Operating Permits Program. Upon the effective date of this rulemaking, permit holders subject to the Federal Operating Permit Program that choose to claim this PBR to authorize planned MSS activities at their sites will be subject to the requirements of this section. Currently, an OGS may be authorized by PBR, standard permit, permits, or a combination of these authorizations. This PBR was developed to provide an updated, comprehensive and protective authorization for common planned MSS at OGSs in Texas. New and existing OGSs may be subject to the Title V federal operating permit program and if so, must obtain a site operating permit or a general operating permit that codifies all applicable requirements.

Public Comment

The commission held a public hearing on this proposal in Austin on April 4, 2013, at 2:00 p.m., in Building E, Room 201S, at the commission's central office located at 12100 Park 35 Circle.

The commission received comments from Devon Energy Corporation (Devon), Eagle Rock Energy (Eagle Rock), an individual, the Lone Star Chapter of the Sierra Club (Sierra Club), Marathon Oil Company (Marathon), Plains All American (Plains), Pioneer Natural Resources (Pioneer), the Texas Oil and Gas Association (TXOGA), and the Texas Pipeline Association (TPA). Sierra Club generally supported the rule. TPA and TXOGA supported aspects of the rule. An individual was not supportive of the rule. Devon, Eagle Rock, Marathon, Plains, Pioneer, TXOGA, and TPA each recommended changes to the proposed rule, as discussed in the Response to Comments section of this preamble.

Response to Comments

The Sierra Club commented in support of the rule, and in support of extending the requirements specific to the Barnett Shale counties statewide.

The commission appreciates the support. The extension of the requirements §106.352(a) - (k) and in subsections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities is outside

of the scope of this rulemaking. The commission made no change to the rule in response to this comment.

TPA commented in support of several aspects of the proposed rule: to add a PBR for planned MSS activities; omission of hourly limits and distance requirements; the rule not prescribing specific BMPs; no registration or notification required; and authorizing all known planned MSS activities.

The commission appreciates the support.

TXOGA commented in support of several aspects of the proposed rule: the rule is comprehensive and attempts to be inclusive of all planned MSS activities; focuses on use of BMPs instead of specific control requirements or emission limits without being overly prescriptive; clarifies that MSS activities will not be subject to §106.261/262 emission limits upon standard permit or New Source Review permit amendment or renewal; no registration is required for authorization; and it meets TCEQ's stated goal of keeping it comprehensive yet short and simple to understand.

The commission appreciates the support.

Eagle Rock commented that the THSC, §382.051962(c) requires that an application or registration be submitted to the agency to qualify for affirmative defense for these

emissions, but the PBR does not require registration. Eagle Rock requested clarification regarding meeting the requirement in the THSC.

The commission clarifies that an application or registration is not required to be submitted to the TCEQ to claim §106.359. To authorize planned MSS emissions under §106.359 and meet the requirements of THSC, §382.051962(c), a permit holder must claim the rule, develop and implement a maintenance program, and keep records. The commission recommends that the permit holder print out a copy of the PBR and sign and date it to document the date of the initial claim. No change was made to the rule in response to this comment.

TXOGA and Plains commented that THSC, §382.051962(c) established a deadline of the earlier of January 5, 2014 or the 120th day after the effective date of a new rule adopted by the commission under THSC, §382.051962(b). They commented that the anticipated effective date of the proposed rule would be more than 120 days prior to January 5, 2014 and suggested that the rule not accelerate the deadline.

The commission agrees with the comments. Language clarifying the effective date has been added to the preamble. The PBR §106.359 will become effective on September 10, 2013. This date will ensure that the deadline remains

January 5, 2014, while providing adequate time for implementation of the rule.

TPA and Pioneer commented that they would like the opportunity to participate in the development of guidance materials to assist in the implementation of the rule.

The commission has updated the Web site *www.TexasOilandGasHelp.org* to provide the opportunity for all stakeholders to participate in the development of guidance materials during implementation. There are three ways to participate as guidance and implementation tools are developed: 1) share ideas for guidance and tools to be developed, 2) actively participate in the development of guidance and tools by contacting Joe Shine at (512) 239-6595 or Joe.Shine@tceq.texas.gov, and 3) provide feedback on guidance and tools when they are posted to the Web Site.

On the Web Site, stakeholders can also can sign up for the email group "Oil and Gas Compliance-Resource Updates" to be notified when guidance material is available for comment, as well as other information from TCEQ that is pertinent to the oil and gas industry.

TXOGA commented that clarification was needed regarding the use of §106.359 with production emission authorizations. TXOGA commented that "the rule language in

Subsection (a)(1) says that 106.359 can't be used for sites authorized under 106.352(a) - (k), but in the preamble (38 TexReg 1794) TCEQ says that sites located outside the Barnett Shale that have voluntarily registered under 106.352(a) - (k) or 116.620 may use 106.359 to authorize planned MSS emissions. " TXOGA suggested revisions to the rule language, and suggested that the commission consider reopening the §106.352 and the non-rule Standard Permit to clarify what conditions of §106.359 may be used with those authorizations. Marathon commented that sites which voluntarily registered production emissions under §106.352(a) - (k) or subsections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities should be eligible to use §106.359 to authorize emissions from planned MSS. TPA suggested revising proposed §106.359(a)(1) to include the phrase "required to be" regarding sites authorized under §106.352(a) - (k) and subsections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities.

The commission clarifies that the proposal preamble did not allow sites which voluntarily registered under §106.359(a) - (k) or subsections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities to use §106.359. The commission's intent is to exclude the use of §106.359 for any site authorized under §106.352(a) - (k) or subsections (a) - (k) of the non-rule Air Quality Permit for Oil and Gas Handling and Production Facilities.

However, permit holders which voluntarily authorized facilities under either §106.352(a) - (k) or subsections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities may choose to revise their authorization to either §106.352(l) or the standard permit in §116.620, if eligible, and then claim §106.359 to authorize planned MSS authorizations.

To change the authorization of a registered site that is eligible to claim §106.352(l), the commission recommends that the permit holder send a letter to the commission to void the registered PBR however, this is not required. To change the authorization of a non-registered site, the permit holder should update recordkeeping, but does not need to send a letter to the TCEQ. The permit holder must comply with all of the requirements of the newly claimed authorization. No change was made to the rule in response to these comments.

Plains commented that many crude oil gathering, pipeline breakout and storage facilities are currently authorized using §106.478 and those sites should not be prohibited from using §106.359 to authorize planned MSS as proposed in §106.359(a)(1). Plains suggested that SIC codes could be used to limit which facilities authorized under §106.478 that could use §106.359. Plains also requested clarification on the need to re-register in order to

change authorization from §106.478 to §106.352(l) as discussed in the preamble in the March 15, 2013, issue of the *Texas Register* (38 TexReg 1794).

The commission respectfully disagrees with the use of §106.359 to authorized planned MSS from facilities authorized by the PBRs in Chapter 106, which includes §106.478. Authorization of planned MSS activities for facilities under Subchapter U may be accomplished through the use of §106.263. Since industries other than oil and gas claim PBRs in Subchapter U, excluding the use of §106.359 for facilities authorized under Subchapter U will limit confusion. Long standing practice has prohibited the use of multiple PBRs to authorize planned MSS at a single site. To maintain consistency with the existing regulatory requirements, facilities that are not excluded under §106.263(b) should continue to use that PBR to authorize planned MSS. Limiting the applicability of §106.359 to facilities which are not eligible to use §106.263 is protective of public health and the environment by preventing the stacking of multiple authorizations for planned MSS at sites with tanks.

The suggestion to use SIC codes to limit applicability may unintentionally prohibit sites from using §106.359 because the SIC system has not been updated since 1987 and has been replaced with the North American Industry Classification System. These classification systems are not under the commission's control and are subject to change. Changes to the codes could

cause a site that the commission intended to be eligible to use §106.359 to be excluded from claiming the PBR, and additional rulemaking may be needed to update the rule if applicability was based on these codes.

Tanks authorized by PBRs in Subchapter U may claim §106.263 to authorize planned MSS. The commission clarifies that registration is not required for every PBR. If registration is required, it will be listed in the specific PBR rule language. It was not the commission's intent to create a registration requirement not listed in a PBR. Appropriate updates to the preamble have been made to reflect that sites authorized by PBRs in Subchapter U, that can meet the requirements of §106.352(l), may opt to re-authorize their site under §106.352(l) in order to claim §106.359 for planned MSS. Unregistered, sweet sites may change their authorization from §106.478 to §106.352(l) by revising their records, and do not have to submit a registration to the commission. Sites that handle sour gas must register with the commission per §106.352(l)(5). If the facility is registered under §106.478(7) or registered voluntarily under PBRs in Subchapter U and is changing the authorization for production emissions, the commission recommends that the company send a letter to void the registration in order to update records with the commission, however this is not required. No change has been made to the rule in response to this comment.

TXOGA commented that the discussion in the preamble in the March 15, 2013, issue of the *Texas Register* (38 TexReg 1794), that prohibited the use of §106.359 to authorize specific planned MSS activities already authorized under a case-by-case permit in §116.111 was contrary to the commission's use of §106.263 to authorize planned MSS emissions. The example included in the preamble with the §106.359 proposal stated, "if an OGS represented ten blowdown activities and the associated emissions from those blowdowns were evaluated for protectiveness, then it would not be appropriate to use the proposed PBR to authorize additional blowdown activities that were not accounted for in the case-by-case permit impacts review. " TXOGA commented that the case-by-case permit and §106.359 were subject to protectiveness reviews, and that the PBR would undergo Modeling and Effects Review Applicability when incorporated into the case-by-case permit, TXOGA suggested that §106.359 be available to include additional maintenance activities already authorized in the case-by-case permit to avoid unnecessary permit actions to revise case-by-case permits which would have a detrimental impact on TCEQ resources as well as cause companies to wait for case-by-case permitting actions to be completed for activities what have already undergone a protectiveness review as part of rulemaking for §106.359.

The commission has re-evaluated the use of §106.359 with case-by-case permits in §116.111. The commission clarifies that §106.359 may be used to authorize planned MSS from facilities that are included in the case-by-case permit under certain circumstances, consistent with the use of §106.263.

If a case-by-case permit authorized a specific number of activities for a facility, §106.359 may be used to increase the number of those activities, as long as the additional number of activities is conducted in compliance with all applicable rules and permit special conditions, including emission controls, monitoring, and recordkeeping, in the case-by-case permit for that activity. For example, if an engine and ten blowdowns associated with that engine are included in the case-by-case permit, §106.359 may be used to authorize additional blowdowns for that engine if the blowdowns are conducted in compliance with all applicable rules and special conditions of the New Source Review permit.

Section §106.359 may also be used to authorize additional planned MSS activities that were not previously accounted for in the special conditions and the MAERT. If a new facility is constructed at an existing site that has a case-by-case permit then §106.359 may be used to authorize planned MSS from that new facility. For example, if a new flare is constructed at an existing site and the authorization for the production emissions for that flare is §106.492, then §106.359 may be used to authorize the planned MSS from that new flare. All PBRs would be incorporated at the next permit action, per commission guidance.

Section 106.359 may not be used to remove existing special conditions and the associated (MAERT) limits related to planned MSS from an existing case-by-case permit. If a planned MSS activity is authorized in a case-by-case permit, companies may not alter the case-by case permit to delete the activities and claim them under §106.359. No change was made to the rule in response to this comment.

TPA commented that TCEQ should clarify that facilities in the Barnett Shale counties that operate under historical authorizations may claim §106.359. TPA referenced §106.352(b)(7) as potentially confusing regarding the options for authorizing emissions from planned MSS at these historically authorized sites.

The commission agrees with this comment. It is the commission's intent that §106.359 supersede the requirements in §106.352(b)(7)(A) for facilities in the counties listed in §106.352(a)(1), which are authorized under historical authorizations.

Existing sites located in the counties listed in §106.352(a)(1) that have not had a new project on or after April 1, 2011, are not required to register under §106.352(a) - (k) or subsections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities. These existing sites may be operating under authorizations such as historical standard

exemptions, the prior version of §106.352 (before the revisions effective February 27, 2011), §106.352(l), or the standard permit in §116.620. When a facility becomes subject to §106.352(a) - (k), because of a new project at the site, planned MSS must be authorized under §106.352(i). No change was made to the rule in response to this comment.

TXOGA recommended that §106.359(a)(2) be revised to clearly state that §106.359 can be used with historical standard exemptions, historical PBRs, current PBRs (such as §§106.351, 106.352(l), 106.353, 106.354, 106.492, 106.511, and 106.512), the standard permit in §116.620, and construction permits.

The commission clarifies that §106.359(a)(1) provides a complete list of construction authorizations for production emissions which cannot be combined with §106.359 to authorize planned MSS. This approach was used to keep the rule language simple and avoid unintentionally leaving off an eligible authorization. The commission clarifies that §106.359 may be combined with production authorizations including historical standard exemptions, historical PBRs, current PBRs (such as §§106.351, 106.352(l), 106.353, 106.354, 106.492, 106.511, and 106.512), the standard permit in §116.620, and case-by-case permits. No change was made to the rule in response to this comment.

TXOGA commented that the additional limitation in §106.359(a)(2) to prohibit an increase in emissions was inappropriate and suggested relying on existing thresholds for PBRs.

The commission has changed the rule language in response to this comment to add the term "hourly" in §106.359(a)(2). The commission's intent is to prohibit an increase in hourly emissions from controlled planned MSS in previously represented authorizations. A permit holder may authorize additional planned MSS activities or facilities than previously represented, if all requirements of §106.359 are met.

TPA commented that if planned MSS emissions were previously authorized, a company should have the option to change the authorization for those planned MSS emissions and claim additional planned MSS under §106.359. For example, if planned MSS emissions were registered and represented under a historical PBR or standard permit in §116.620, and a company authorizes additional planned MSS under §106.359, TPA commented that there would be two sets of compliance requirements for planned MSS and suggested all the planned MSS should be able to be authorized under §106.359.

The commission agrees that in certain circumstances §106.359 may be used to supersede (re-authorize) all planned MSS emissions providing for a single set of compliance requirements for planned MSS at a site. Section 106.359(a)(2) allows companies to change authorization of planned MSS from previously

claimed authorizations in Chapter 106 and §116.620, if emission control methods, techniques, and devices that were previously represented continue to be used at the site. Section 106.359(a)(2) does not allow a company to pull authorized planned MSS out of a case-by-case permit in §116.111 and instead claim §106.359 for those emissions. However, if a case-by-case permit authorized a specific number of activities for a facility, §106.359 may be used to increase the number of those activities, as long as the additional number of activities is conducted in compliance with all applicable rules and permit special conditions, including emission controls, monitoring, and recordkeeping, in the case-by-case permit for that activity. No change was made to the rule in response to this comment.

Additionally, TPA requested clarification on a specific example: "If 50 MSS compressor blowdowns are currently authorized in a construction permit, could a company pull those emissions out of the construction permit and authorize 75 blowdowns in the MSS PBR?"

In the example provided by TPA, it was not clear if the term "construction permit" was referring to a case-by-case permit under §116.111, construction authorizations in Chapter 106, or the standard permit in §116.620. If one assumes the term "construction permit" used in the example above is referring to a case-by-case permit in §116.111, the 50 MSS compressor blowdowns could not be pulled out of the case-by-case permit. However, the

additional 25 blowdowns could be authorized by §106.359 as long as they are conducted in accordance with the special conditions for MSS blowdowns in the case-by-case permit. At the next permitting action, the blowdowns authorized by §106.359 would be rolled into the case-by-case permit.
If one assumes the term "construction permit" used in the example above is referring to authorizations in Chapter 106 and §116.620, the production emissions could remain under those authorizations, and §106.359 could be used to authorize the 75 blowdowns. No change was made to the rule in response to this comment.

Additionally, TPA requested clarification on a specific example: "...If a process vessel needs to be blowndown for maintenance and it requires a control device to meet the short-term, site-wide limits under the standard permit (usually due to propane), would the control device be required under the MSS PBR?"

Section 106.359(a)(2) allows companies to supersede Chapter 106 and §116.620 for planned MSS, if emission control methods, techniques, and devices that were previously represented continue to be used at the site.

The commission added the term "hourly" in §106.359(a)(2). The commission's intent is to prohibit an increase in hourly emissions from controlled planned MSS in previously represented authorizations. A permit

holder may authorize more planned MSS activities or facilities than previously represented, if all requirements of §106.359 are met.

TXOGA also commented that the rule language could be interpreted to mean that only existing facilities equipped with emission controls may use §106.359, and suggested rule language revisions.

The commission clarifies that if the permit holder did not represent emission control methods, techniques, or devices in the previous authorization of planned MSS emissions, §106.359 may still be used to supersede that authorization.

The intent of §106.359(a)(2) is to allow sites that have previously authorized planned MSS emissions under a PBR in Chapter 106 or the standard permit in §116.620 to use §106.359 to supersede the previously claimed authorization of planned MSS emissions, if certain requirements are met. To clarify the commission's intent, the rule language in §106.359(a)(2) has been changed in response to this comment. The commission has restructured the rule language, moving the phrase "for planned MSS" to clarify which authorization may be superseded.

TXOGA commented that it was clear that §106.359 can be used to authorize planned MSS that was covered under previous authorizations, but requested clarification on the option to continue to use the previous authorization of planned MSS.

The permit holder has the option, but is not required, to switch to §106.359. The rule language was not changed in response to this comment.

TXOGA recommended that the rule language in §106.359(a)(3) be revised to reflect that cumulative PBR emission limits only apply when no facility a site has undergone public notice, according to §106.4(a)(4).

The commission agrees that the reference in proposed §106.359(a)(3) in regard to §106.4 could lead to confusion and has changed the rule language in response to this comment. Permit holders who claim §106.359 must comply with all requirements in §106.4.

Since a permit holder must comply with all the general requirements to claim a PBR, this entire subsection is redundant. The commission has deleted this reference from the rule language, to maintain simplicity.

Pioneer commented that clarification was needed for the use of §106.359 at a site authorized under the standard permit in §116.620. Pioneer commented that it was not

clear if the emissions from planned MSS authorized under §106.359 would be subject to the hourly emission requirements of §116.620, and recommended additional rule language for §106.359(a)(2). TXOGA requested clarification on the need to incorporate §106.359 into a standard permit under §116.620 upon renewal. TXOGA commented that many sites would no longer be eligible for the standard permit in §116.620 if the planned MSS emission claimed under §106.359 were required to be evaluated for compliance with the hourly emission limits in §116.620.

The commission has not changed the rule language in response to this comment, but clarifies that emissions from planned MSS activities authorized under §106.359 are not subject to the hourly emission requirements in the standard permit in §116.620. The hourly emission requirements for the production emissions claimed under the standard permit in §116.620 are included in §116.610(a)(1), Applicability, which references §106.261, Facilities (Emission Limitations), which references §106.262, Facilities (Emission and Distance Limitations). Planned MSS emissions authorized under §106.359 are not subject to §116.610 and thus are not subject to the referenced requirements in §106.261 or §106.262. Emissions authorized under §106.359 are subject to the applicable requirements for that PBR, and the emissions claimed under §116.620 are subject to the applicable requirements for the standard permit. The commission clarifies that §106.359 may be incorporated by reference into the standard permit in §116.620.

TXOGA commented that activities in §106.359(b)(1) - (6) produce inherently negligible emissions, and many of these activities result from BMPs. TXOGA has suggested categorizing these activities as Inherently Insignificant or alternatively inherently low emitting.

The commission has not changed the rule language to classify activities as inherently insignificant or inherently low emitting. The term insignificant applies to all emissions covered under PBRs as stated in §106.1, Purpose. TXOGA's suggested use of the term "insignificant" could lead to confusion and would conflict with the commission's use of the term. In order to keep the rule simple and straightforward, the commission did not add rule language to classify emissions from activities in §106.359(b)(1) - (6) as inherently low emitting.

Eagle Rock commented that the preamble to the rule identifies the emissions from activities listed in §106.359(b)(1) - (6) as negligible emissions and requested clarification regarding the need for companies to have quantified emissions associated with these activities, and if the emissions should be included in an annual emission inventory. Similarly, TXOGA commented that these activities will essentially have no impact on compliance with the emission limits in the general requirements to claim a PBR in §106.4. Pioneer commented that performing calculations on these activities would be time

intensive and may require additional personnel and suggested TCEQ develop a realistic, minimal assumed total that permit holders could choose to use to estimate emissions from these activities.

The commission will provide optional default emission values in guidance for these activities as a group which permit holders may use to simplify recordkeeping and minimize calculations for demonstration of compliance with the emission limits in §106.4. The commission recognizes that the default values may be conservatively estimated and may not be appropriate for all sites or activities. All emissions resulting from the activities authorized under §106.359(b)(1) - (6) should be quantified unless the optional default values are claimed for these emissions. Quantified emissions may be significantly less than the optional default value(s) depending on specific site activities. Further, the small quantification of the activities in §106.359(b)(1) - (6) may affect demonstration of compliance with the site-wide emission limits under §106.4. An announcement will be sent via the email group "Oil and Gas Compliance-Resource Updates" when the guidance is developed.

Sites that are required to submit Emission Inventories under §101.10 must include all emissions in their inventories. Section 101.10(b)(1) states: "Reported emission activities must include annual routine emissions; excess emissions occurring during maintenance activities, including start-ups and

shutdowns; and emissions resulting from upset conditions..." No change was made to the rule in response to this comment.

TXOGA recommended adding language §106.359(b)(1) to include maintenance on compressors, boilers, heaters, heat exchangers, and emission control devices.

The commission has changed the rule in response to this comment. Compressors are considered a component of engines and turbines for the purposes of this rule. All other combustion devices have been included to provide flexibility. The changes provide a simple authorization group for all similar activities of this type. The language of §106.359(b)(1) has been changed to read "engine, compressor, turbine, and other combustion devices..."

TXOGA commented that new engine "break-in" periods during initial startup should be covered in §106.359.

If emissions from new engine "break-in" periods can meet the general requirements to claim a PBR, including the emission limitations in §106.4, and any applicable state or federal requirements, they may be authorized under §106.359 as planned startup. No change has been made to the rule in response to this comment.

TXOGA commented that "routine engine startups should also be considered inherently insignificant as they are short duration events with emissions similar to normal operating emissions."

The commission partially agrees with this comment. The commission agrees that emissions from routine engine startups are of short duration and are accounted for when production emissions are calculated and authorized. However, the emissions may not be inherently insignificant, depending on any particular engine and its controls. No change was made to the rule in response to this comment.

Plains recommended adding pump repair and maintenance, replacement of amine in amine treatment units, and replacement of heat transfer fluid in hot oil systems to the list of activities authorized under §106.359(b).

The commission agrees these activities should be eligible for authorization under §106.359 but has not changed the rule in response to this comment. To clarify, §106.359(b)(2) authorizes these activities. Replacement of process equipment fluids is considered cleaning.

Activities such as addition or replacement of glycol solution in glycol dehydrators, replacement or addition of amine solution to amine treaters, and replacement of heat transfer fluid in hot oil systems were evaluated for this rulemaking. Additionally natural gas, condensate, other petroleum vapors and liquids were evaluated. Typical lubricants and greases were also evaluated.

Eagle Rock requested clarification on emissions associated with the replacement of filters authorized under §106.359(b)(3). Specifically, Eagle Rock asked how the emissions from the blowdown of the filter case and the change of saturated filters were authorized in the PBR.

The commission considers the replacement of a filter as two separate planned MSS activities. The first step of the activity includes the blowdown process, as authorized under §106.359(b)(8). The second step of the activity is the removal and replacement of the saturated filters as authorized under §106.359(b)(3). No change was made to the rule in response to this comment.

TXOGA suggested changing the rule language in §106.359(b)(3) to include the phrase "equipment such as. "

The commission has not changed the rule in response to this comment. This suggested change could cause confusion because §106.359(b)(6) authorizes planned MSS activities with the same character and quantity of emissions as those specified in §106.359(b)(3). Replacement of equipment not specifically listed must be evaluated to determine whether a construction authorization for the production emissions from the new facility is needed. Equipment replacements that do not require a new construction authorization may be covered under §106.359(b)(6).

TXOGA suggested rule language changes to §106.359(b)(4) to clarify the term "hot section swap. " TXOGA suggested revised rule language that would authorize the replacement of entire engines under §106.359.

The commission has changed the rule language in response to this comment. The term "hot-section" was replaced with the term "component". The commission has not changed §106.359 to allow an entire engine or turbine replacement as these are new facilities and require a separate construction authorization for production emissions. Turbine hot section swaps or exchanges of turbine or engine components are covered by the revised language. Overhauls may be authorized under §106.359(b)(1) or (4). Overhauls that are conducted and reassembled using all of the original parts

are authorized under subsection (b)(1). Overhauls conducted using replacement parts during reassembly are authorized under subsection (b)(4).

TXOGA commented that clarification was needed for bypass piping covered under §106.359(b)(5).

Section 106.359(b)(5) authorizes the installation of piping used to bypass equipment during maintenance and authorizes the emissions generated after the installation of the bypass piping when used during planned MSS. The fugitive component emissions generated, which are not related to planned MSS, and instead occur due to the result of continued routine operation under an alternate operating scenario are not authorized under §106.359. The emissions occurring as part of an alternate operating scenario should be authorized under the construction authorization for production emissions. No change was made to the rule in response to this comment.

Plains commented that it was not clear what emissions were evaluated for the requirement in §106.359(b)(6) to have an activity result in the same character and quantity. Plains recommended that language similar to the §106.264, Replacements of Facilities, PBR be used, but allow the replacement of chemicals. TXOGA commented that further classification of the emissions associated with activities in §106.359(b)(1) - (5) would make it easier for permit holders to comply with this PBR.

The commission has not changed the rule in response to this comment. The intent of §106.359(b)(6) is to allow industry flexibility in authorizing low emitting planned MSS activities that are not specified in §106.359(b)(1) - (5) if they have same character and quantity of emissions.

Activities such as addition or replacement of glycol solution in glycol dehydrators, replacement or addition of amine solution to amine treaters, and replacement of heat transfer fluid in hot oil systems were evaluated. The commission has considered emissions from solvents, paints, aerosol cans, and other substances used at OGSs. Additionally, as discussed in the proposal preamble, natural gas, condensate, other petroleum vapors and liquids were evaluated, along with typical lubricants and greases. The character of all of these emissions has been considered for the purposes of this rule. The suggestion to allow the replacement of chemicals would not ensure protectiveness of §106.359 because they were not evaluated.

Pioneer commented that the use of sonic flares should be allowed under §106.359 for operations claimed under §106.359(b)(7). Pioneer commented that sonic flares are currently used for control of emissions from routine pigging operations. Pioneer commented that sonic flares have a higher exit velocity than allowed in 40 CFR §60.18, General control device and work practice requirements, or 30 TAC §106.492.

The commission agrees that emissions authorized under §106.359(b)(7) should be eligible for control, but has not changed the rule language to explicitly authorize sonic flares in response to this comment. The commission has changed the rule language in §106.359(a) to allow for the control of any planned MSS activity authorized by §106.359 instead of limiting the authorization of control facilities to tank degassing.

The commission agrees that due to flare tip velocity, sonic flares are unable to meet 40 CFR §60.18. The general requirements for PBRs require that a facility meet all applicable federal requirements per §106.4(a)(6). PBR §106.359 does not authorize facilities which do not meet this general requirement. However, if 40 CFR §60.18 does not apply to the control device for planned MSS emissions and all other applicable requirements are met, sonic flares may be authorized under §106.359. Sonic flares cannot be authorized under §106.359 for control of production emissions or an alternate operating scenario. Control devices authorized under §106.359 for emissions from planned MSS are not required to meet the requirements in §106.492.

TXOGA commented that activities listed in §106.359(b)(7) - (9) can produce negligible emissions under certain circumstances. TXOGA suggested rule language changes to allow

a method for companies to use site-specific factors to identify negligible activities (less than one tpy of VOC) and create a one-time record that companies could review annually. Pioneer supported TXOGA's suggestion. TXOGA also presented several tables demonstrating a range of emissions for a high pressure system when a pig launcher or receiver is purged, and a blowdown from a 1,775 horsepower compressor package. The tables considered variables such as VOC content of produced gas, operating pressures, equipment volumes, frequency of occurrence for these activities and demonstrated the fluctuation of emissions that may be emitted during planned MSS activities.

The commission agrees that activities listed in §106.359(b)(7) - (9) may have negligible emissions under certain conditions, but has not changed the rule language in response to this comment. The commission has reviewed the extensive tables submitted by TXOGA and appreciates their diligent efforts. These tables clearly demonstrate examples of blowdowns and pigging activities that result in negligible emissions. The majority of the results presented fall within the range of 0.01 to 250 lb/hr of VOC which was evaluated as part of the rule development. (In the proposal preamble, the range was inadvertently listed as 0.01 to 25 lb/hr of VOC, and the typo has been corrected.) Since activities listed in §106.359(b)(7) - (9) may result in higher emission levels, emissions from these activities must still be included in recordkeeping.

The commission clarifies that representative activities may be used to simplify calculations and recordkeeping. These representative activities are not limited to activities which have negligible emissions. Permit holders may identify an emission source, calculate conservative (or worst-case) emissions for an activity, document the parameters of the representative activity in the maintenance program, and then use those calculated emissions for each activity that meets the same parameters as the representative activity. For example, a company may use the same methodology used in the tables provided by TXOGA to develop representative emissions and then use this value to represent similar activities. Permit holders may also use the representative activity across multiple sites if the calculation parameters are appropriate.

For representative activities, the permit holder would keep records as part of the maintenance program which demonstrate the basis used to calculate the emissions, and the parameters that activities would have to meet to be considered to emit the same or less emissions than the representative activity. Recordkeeping would be simplified by allowing the permit holder to document the number of representative activities, and only keep more detailed records for activities that do not meet an established representative activity in the maintenance program. Once developed, the representative emissions should be updated as part of the maintenance program in

accordance with §106.359(c)(2). This may include when emission calculations are no longer representative because the parameters (i.e., VOC content of product) have changed.

Whether the activities are negligible or substantial, the company may still use representative analysis for those emissions, to simplify calculations and recordkeeping.

TXOGA and TPA commented that additional clarification regarding emptying tanks for convenience purposes was needed and provided suggested changes to the rule language. TPA commented that the rule language proposed in §106.359(b)(9)(E) regarding emptying tanks for convenience purposes appeared more broad than the discussion about convenience tank landings in the preamble and referenced memo.

The commission agrees with the comments and has made changes to the rule language. Convenience tank landings occur when the tank roof is landed and the tank is subsequently filled with the same liquid with no maintenance occurring. This is explained in the memo "Air Emissions During Tank Floating Roof Landings" dated December 5, 2006. As stated in the memo, "Landing a tank roof solely for the purpose of inventory control (in lieu of other methods of metering liquid volumes) is not operating in a manner consistent with good practices for minimizing emissions." The commission

clarified the rule language specifying that the requirement applies to floating roof tanks for consistency with long standing practice and the intent of the guidance memo.

Plains commented that the proposed rule language in §106.359(b)(9) only authorized temporary emission capture and control facilities associated with tank cleaning activities, and recommended that the rule be revised to expand the authorization of capture and control facilities to other planned MSS activities authorized under the PBR.

The commission agrees and has changed the rule language in response to this comment. The commission changed §106.359(a) to read, "This section applies to certain authorized oil and gas handling or production facilities or sites, and authorizes emissions from planned maintenance, startup, and shutdown (MSS) facilities and activities, and any associated emission capture and control facilities if all of the applicable requirements of this section are met." By moving the phrase from §106.359(b)(9) to §106.359(a), the PBR authorizes any capture and control facilities for all planned MSS authorized under §106.359. The commission also deleted the word "temporary" from the rule language to authorize any and all emission capture and control facilities for planned MSS emissions.

TXOGA commented that the requirement in §106.359(b)(9)(A) to drain liquid to a pan and cover within an hour should instead be listed in §106.359(b)(2) because the emissions from the activity are low and demonstration of compliance with the BMP could be problematic. TXOGA submitted calculations for emissions from this activity to demonstrate the emissions expected.

The commission has reviewed TXOGA's calculations and compared the expected emissions to the protectiveness review conducted for this rulemaking. The commission agrees that the emissions from the activity are low. The removal of liquids and solids is part of cleaning process equipment as authorized in §106.359(b)(2), and the covering of open pans or sumps is considered a BMP. The commission has changed the rule language in response to this comment.

TXOGA commented that the requirement in proposed §106.359(b)(9)(C) to degas a single tank or vessel at a time limited operational flexibility when tanks are connected in a manifold system and a vacuum truck is used for the degassing. Pioneer commented that the requirement in proposed §106.359(b)(9)(C) to degas a single tank or vessel at a time would be operationally infeasible because of the manifold system on tanks and suggested changes to the proposed rule language. Pioneer suggested limiting the total volume that could be degassed using forced ventilation based on the sizes of fixed roof and floating roof

tanks. Pioneer also commented that the commission evaluated condensate tanks and suggested adding different requirements for tanks which hold crude product.

The commission has evaluated these comments and has made changes to the rule language in response to comment. To provide operational flexibility and remain protective of human health and the environment, the commission has changed the rule language to require degassing by forced ventilation using a single vacuum truck at any time, directing emissions out the top of the tank, or routing emissions through a closed system to a control device.

The commission evaluated Pioneer's suggestion of limiting tank volume amounts to 1,000 bbl for fixed roof tanks and 100,000 bbl for floating roof tanks. The commission did not intend to prohibit tanks over those volume sizes from being eligible to claim §106.359 to authorize planned MSS, if all applicable requirements are met. The changes to the rule language provide flexibility, but avoid unintended consequences. Adding requirements for specific product types could make the rule difficult to understand and implement, for both the permit holder and the commission. The changes made in response to comments about tank degassing will provide flexibility and protectiveness for planned MSS for tanks without requiring the complexity of different requirements for specific tank contents.

Plains commented that proposed §106.359(b)(9)(B) requires that emissions must be directed out the top of floating roof tanks, but does not include a tank volume requirement, and the preamble language indicates that it is a BMP to use a control device or direct the emissions out the top of large floating roof tanks (100,000 bbl). Plains requested clarification on the need to apply this BMP to smaller floating roof tanks. Plains also commented that basing the use of a control device or the BMP to direct emissions out the top of the tank on safety concerns and not environmental protection went beyond the TCEQ's mandate under the Texas Clean Air Act. Plains recommended that the rule should include more flexibility for degassing and suggested monitoring the lower explosive limit around a tank being degassed to ensure a hazardous condition does not exist.

As the result of this comment and comments from TXOGA and Pioneer, the commission has changed the rule language regarding tank degassing. The changes clarify that the commission considers directing emissions out the top of the tank to be a BMP for forced ventilation of fixed and floating roof tanks of all sizes, based on published industry guidance (American Petroleum Institute Recommended Practices 2016).

The commission respectfully disagrees with the comment that the agency went beyond its mandate. THSC, 382.002 states, "The policy of this state and the purpose of this chapter are to safeguard the state's air resources from pollution by controlling or abating air pollution and emissions of air

contaminants, consistent with the protection of public health, general welfare, and physical property..." Requiring the BMP that forced-ventilation degassing be directed out the top of the tank is based on stakeholder provided information, review of published industry guidance, and protection of public health, general welfare and physical property.

The commission has not changed the rule to allow monitoring of a lower explosive limit around a tank, but has changed the tank degassing requirements to provide additional flexibility.

Plains commented that subsection (e) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities and §106.352(e) for the Barnett Shale counties requires that paint on tanks be in good condition, but the planned MSS requirements in those rules do not authorize painting. Plains suggested that those authorizations be revised to include surface preparation and coatings or that sites under those authorizations be eligible to use §106.359(b)(10) to authorize painting or surface preparation activities.

Changes to the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities or §106.352 are outside of the scope of this rulemaking. The commission respectfully disagrees with allowing the partial use of §106.359 with facilities or sites authorized under §106.352(a) - (k) or sections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas

Handling and Production Facilities. The commission has established a clear and distinct separation between the requirements applicable to new projects (begun on or after April 1, 2011) in the counties listed in §106.352(a)(1) and to the rest of the state for OGSs. Maintaining the clear separation avoids confusion for permit holders and regulatory staff and does not inadvertently lead to noncompliance.

Surface preparation and coating for planned MSS purposes at sites authorized under §106.352(a) - (k) or sections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities have existing authorization options.

The commission revised the language in §106.359(b)(10) to clarify that surface preparation and coating for planned MSS purposes may be conducted on facilities and structures used at the site in oil and gas handling and production. The change of terminology from "equipment" to "facilities" is consistent with the definition of facility in THSC, §382.003(6). The term facility includes storage tanks. The commission also changed "or" to "and" for consistency when referring to "...handling and production facilities."

Plains commented that the definition in the Texas Clean Air Act of the term "air contaminants" could be broadly interpreted to include water vapor and suggested that §106.359(c)(1) instead use the term "regulated air pollutant. "

The commission has not made changes to the rule based on this comment. The term "air contaminant" is defined in THSC, §382.003(2). However, in accordance with §106.4(a)(1), water is not included in actual emissions authorized by a PBR.

TXOGA commented that the requirement in §106.359(c)(1) to keep facilities in good working order does not provide companies with adequate information to meet the requirement because the rule does not specifically establish a standard for what is considered good working order. TXOGA suggested changes to the proposed rule language to establish that the development of a maintenance program would satisfy the requirement to keep facilities in good working order. Pioneer supported TXOGA's comments. Additionally, Plains commented that the general requirement in §106.4(c) already required equipment be in good condition and operated properly, and that adding the provision to keep all equipment in good working order was placing requirements on routine operations authorized under a construction authorization instead of on planned MSS activities.

The commission appreciates the comment. In order to be consistent with §106.4(c), the commission has made the following change to §106.359(c)(1):

"good working order" has been replaced with "good condition." The language parallels the general requirements for all PBRs which apply to control equipment. The commission changed this language to clarify that all facilities under §106.359 shall be maintained in good condition and operated properly without considering whether those facilities meet a formal definition of "control equipment." By ensuring proper operation (including maintenance of equipment) emissions estimates (or certified limits) can be considered accurate, representative, and federally enforceable, if appropriate. If equipment is not in good condition and operating properly, the equipment is not likely to perform efficiently, or may fail catastrophically, resulting in greater emissions. The commission also respectfully disagrees that the phrases "in good condition" and "operated properly" require the establishment of a specific standard, as such phrases point to good engineering practices and industry standards which are generally understood by operators. The standard is the same as the existing enforceable requirements in §106.4(c).

The commission agrees that the development and implementation of a maintenance program would ensure that facilities would be in good condition. However, a maintenance program in and of itself would not be sufficient to ensure that facilities are operated properly. The maintenance program and the requirement to keep facilities in good condition and operating properly

are both necessary to ensure overall emissions are minimized and that the PBR has appropriate enforceable limitations.

TXOGA commented that the requirement in §106.359(c)(2) that each permit holder develop a maintenance program and the discussion in the preamble that the maintenance program be site-specific is burdensome. TXOGA commented (and Pioneer supported) that the maintenance program be equipment-specific instead of site-specific. Plains commented that requiring a site-specific maintenance program for the large number of remote sites could result in a recordkeeping burden and suggested §106.359 allow a company to have a company-wide maintenance program for similar sites or facilities.

The commission issues authorizations for the emission of air contaminants from facilities at a specific site. Due to the variability of the equipment and maintenance needs for OGSs, it is necessary to develop maintenance programs that address all equipment at a site. The commission recognizes that permit holders may have the same maintenance program and facilities at many different sites across the state and therefore a centralized recordkeeping system may be implemented to claim this PBR. The maintenance program may be the same for multiple sites and can be used company-wide as long as the maintenance program addresses this issue clearly and distinguishing factors among sites and facilities are addressed properly. For example, an equipment-specific maintenance program could be

developed and implemented on a site-specific basis, utilizing the portions of a company-wide program that apply to the site(s) being authorized. The commission is committed to working with all stakeholders to develop appropriate guidance. No changes were made to the proposed rule language in response to these comments.

Plains commented that except in a few specifically listed cases it was unclear what methods the TCEQ considers as BMP. Plains requested additional guidance to understand what a TCEQ investigator would consider BMP.

BMPs are methods or techniques selected to be the most effective and practical means in achieving an objective, such as preventing or minimizing pollution, while making the optimum use of the permit holder's resources. BMPs can consist of schedules of activities, prohibitions of practices, maintenance procedures or other techniques to control, prevent, or reduce the release of contaminants. BMPs also include treatment requirements, operating procedures, and practices to control emissions. The commission has purposely not listed specific BMPs to allow regulated entities the flexibility to select measures that best suit the needs of each individual site or piece of equipment that are consistent with good engineering practices and industry standards which minimize the release of air contaminants. The commission is committed to working with all stakeholders to develop

appropriate guidance. No changes were made to the proposed rule language in response to this comment.

TXOGA commented that the PBR should allow a 6-month grace period to establish a maintenance program for new sites or existing sites changing ownership, and suggested rule language changes. Marathon also commented in favor of a 6-month grace period, giving permit holders the opportunity to adapt the maintenance program to the nature of the product and the specific conditions found at their location.

The commission respectfully disagrees with these comments. In order to authorize emissions from planned MSS under §106.359 all PBR conditions must be met from the first day the authorization is claimed. The 6-month grace period would be contrary to the intent of the PBR and THSC. Also, this PBR is written to allow the permit holders flexibility to establish, implement, and update the maintenance program as necessary. This flexibility allows the permit holder to diligently update their maintenance program in response to the changing nature of products or specific conditions found at their location. Once new or changing conditions are known to the permit holder, their maintenance program should be updated as appropriate and records demonstrating compliance with §106.359 must be keep in accordance with §106.8. No changes were made to the proposed rule language in response to these comments.

TPA commented that clarification was needed regarding the level of detail required in the maintenance program under §106.359(c)(2)(A).

The intent of the maintenance program is to ensure that facilities at each site are in good condition so that they operate properly and, as a result, minimize emissions. The PBR requires that the permit holder consider the maintenance that is necessary for all facilities at the site and create a program (or document existing maintenance practices) so personnel can take proper care of those facilities. The maintenance program is required to be written or electronic and available upon request. The rule language includes the minimum requirements of the maintenance program so that permit holders will have the flexibility to design an effective program for their company and sites. The commission is committed to working with stakeholders to develop tools and guidance to assist in the implementation of this requirement.

The maintenance program is required to address each facility at the site that has the PTE air contaminants and should consider what maintenance is necessary to ensure proper operation and prevent upsets caused by equipment failure due to corrosion, stuck valves, worn seals, or connections, etc. The intent of the maintenance program is also to ensure that equipment does not exceed its useful life. As an example, the permit holder may establish

inspection and replacement timeframes for pump or compressor seals so they are replaced to minimize leaks. The maintenance program should be updated when new facilities are added or when the maintenance needs change. The maintenance program should use industry BMPs, good air pollution control practices, and manufacturer recommendations or operator knowledge, to proactively maintain facilities. The maintenance program must address cleaning and routine inspection schedules. Sites may have more frequent inspection schedules based on the nature of products handled (i.e. sour product), the complexity of the site, or age of the equipment. The maintenance program must also address the timeframe for repairs and can consider operational indicators, meter readings, or equipment performance that indicates maintenance or repair is needed. The personnel who implement the maintenance program must be trained to understand the requirements and how to take the actions appropriate to keep facilities in good condition and operating properly. The recordkeeping required as part of the maintenance program must be sufficiently detailed to demonstrate that the requirements of the PBR are being followed, which may include operator logs and business receipts.

To further clarify the intent of the maintenance program, the commission has changed the proposed rule language to replace references to the word

"equipment" with the term "facilities" (where appropriate) to maintain consistency with other commission rules.

TXOGA, Pioneer, and Devon commented that documenting the numerous occurrences of the activities listed in §106.359(b)(1) - (5), and the activities in §106.359(b)(6) would be impractical and burdensome while providing no environmental benefit. Pioneer also commented that documenting those types of activities at thousands of small tank batteries would be impractical and onerous.

The commission respectfully disagrees with these comments. No changes were made to the proposed rule in response to these comments.

All PBRs require recordkeeping of sufficient information to demonstrate compliance with all applicable general requirements of the rule or the general requirements in effect at the time of the claim and all applicable PBR conditions. The recordkeeping requirements in §106.8 to demonstrate compliance with the activities in §106.359(b)(1) - (6) are intended to demonstrate that the maintenance program requirements are being followed and the facilities are being maintained in good condition and operated properly; thus, lessening the potential environmental impact from emissions. Permit holders already maintain information of this type in the form of a

combination of operator logs and business receipts, which may suffice for the records of activities in §106.359(b)(1) - (6).

In addition, based on the comments received, the commission is analyzing activities in §106.359(b)(1) - (5) to estimate a conservative default value, which will be published online for public use, if the permit holders choose to use it. Permit holders may demonstrate their own emissions for those activities as an option. Also, the commission will work with stakeholders to draft tools and guidance for the permit holder to develop the maintenance program.

Plains commented that it was not necessary to include the requirement to follow §106.8(c) as stated in proposed §106.359(d) because §106.8 it is already a general requirement for all PBRs. Plains commented the duplication of the requirement would create the potential for multiple violations of the same requirement and could increase the complexity of Title V deviation reporting.

The commission agrees with this comment. The commission has removed this subsection from the rule as all permit holders authorized under a PBR are required to follow §106.8.

An individual commented that BMPs did not prevent the gulf oil spill in 2010 and that BMPs do not protect public safety. Additionally, the individual commented that recordkeeping was subjective and able to be skewed to a company's benefit.

The commission has not made changes to the rule based on this comment. The use of BMPs is intended to keep facilities with the PTE air contaminants operating properly thereby reducing emissions over time. If equipment is not in good condition and operating properly, the equipment is not likely to perform efficiently, or may fail catastrophically, resulting in greater emissions. This PBR does not authorize emissions from equipment failure or other upset conditions. However, the requirement to keep records to demonstrate compliance with §106.359 is enforceable. Failure to comply with the general requirements to claim a PBR in §106.8 may subject the permit holder to enforcement action by the commission.

Marathon commented that the PBR did not authorize the flaring of process gas rerouted during planned MSS activities, and recommended that these emissions be authorized under the PBR and not considered an alternate operating scenario because the emissions would be attributed to maintenance activities.

TXOGA commented that emissions from gas being flared during maintenance of process equipment with no emissions point during normal operations while a site continues to

operate are directly attributable to a maintenance activity. TXOGA provided the following example, "A compressor station has three natural gas compressors. One needs to be shut down for 3 hours to conduct required planned maintenance. So that production can continue without shutting in wells while the single compressor is shut down, the remaining two compressors continue to operate. However, the inlet volume of gas exceeds the capacity of the two running compressors so the excess gas is flared until the time when the compressor shut down for maintenance is restarted. "TXOGA believes flaring emissions in the example is planned MSS and requested confirmation.

TXOGA also commented that emissions from the end point of piping used to bypass a facility during maintenance, as included in §106.359(b)(5), should be authorized as planned MSS and suggested additional rule language: *§106.359(b)(11) Rerouting produced gas to a flare during periods of planned MSS for gas processing equipment such as natural gas compressors.*

The commission disagrees with the comments and has not changed the rule language. TXOGA's example is considered an alternate operating scenario and not planned MSS.

Alternate operating scenarios are different modes of operation that can be foreseen or anticipated for a facility or group of facilities. If a facility is taken down for maintenance and product that is normally sent to that facility is instead rerouted to a different facility, the commission considers that to be an

alternate operating scenario and does not consider it planned MSS. The emissions associated with the actual maintenance performed on the shutdown facility are planned MSS. However, because the process gas that normally flows to the facility which is shutdown is routed to a different facility, any emissions from that different facility are considered part of an alternate operating scenario and not planned MSS. The emissions occurring as part of an alternate operating scenario should be authorized under the construction authorization for production emissions.

Section 106.359 authorizes temporary flares to be brought onto a site to control tank degassing and those emissions are considered planned MSS. The difference between this activity and the one described by the commenter is that there is no product routed to the tank as it is being degassed and the emissions from the flare are not from the production process. In the example, the emissions being routed to the flare are not from the facility that is being maintained, but are from a pipeline that is still in normal operation. The commission considers that to be an alternate operating scenario, while the tank degassing situation is considered planned MSS.

The commenter is correct in assuming that the use of the piping allowed under subsection (b)(5) could be to divert product from a compressor to a flare, however, this activity is not planned MSS. In their example, this piece of

piping is used to route product away from a piece of equipment that is currently down for maintenance so that the site can continue to operate. The materials being handled in the piping and the associated fugitive emissions are only occurring because production continues. Only the construction of this piece of bypass piping, and those fugitive emissions while being used for planned MSS will be considered planned MSS. Planned MSS from this piping could be from draining equipment (such as a temporary control device) which does not continue in production.

In another example, a site has a Vapor Recovery Unit (VRU) which controls production tank emissions. If vapors from tanks are routed to a temporary flare when the VRU is shut down for maintenance, those emissions are considered an alternate operating scenario. When the VRU starts up, the liquid from piping and knock-out drum associated with the flare is drained, and those emissions are considered planned MSS.

TPA requested that TCEQ clarify if incomplete compliance with the PBR requirements would result in total disqualification of the authorization of planned MSS at the site. TPA commented that certain violations of recordkeeping or maintenance program requirements may not be a reason to deem all planned MSS emissions to have been unauthorized, as compared to complete failure to comply with PBR requirements.

The failure of one condition will not retroactively void the PBR but may result in ongoing unauthorized emissions at the time of the violation and until the permit holder can prove that the conditions of the PBR are being met. No changes were made to the proposed rule language in response to this comment.

Eagle Rock requested clarification regarding the need to conduct modeling for PM, SO_2, and hydrogen sulfide from planned maintenance emissions authorized under §106.359.

The commission clarifies that permit holders claiming §106.359 will not be required to model PM, SO_2, or H2S planned MSS emissions. Each of those pollutants has been evaluated throughout the rule development. However, any incorporation of this PBR into a case-by-case permit under §116.111 would be subject to permitting guidance at that time. No change was made to the rule in response to this comment.

TXOGA commented that effective dates of existing rules that were referenced in the preamble language should be deleted to avoid confusion with the rule language.

The commission agrees with this comment and deleted the effective dates from the preamble language. A correction notice was published in the *Texas Register* on March 29, 2013 (38 TexReg 2155).

Plains commented that the TCEQ has historically considered that planned MSS activities were already included in §106.352, and that they question the purpose and usefulness of §106.359.

The commission clarifies that §106.359 is an option to authorize planned MSS at OGSs. The commission has evaluated all known planned MSS activities that occur at OGS for the §106.359 rulemaking. Historically, the commission acknowledges that planned MSS was considered as inherent in §106.352, which reflected the information available at the time. A more current analysis and evaluation has been performed in conjunction with this rulemaking. No change was made to the rule in response to this comment.

SUBCHAPTER O: OIL AND GAS

§106.359

Statutory Authority

The new rule is adopted under Texas Water Code (TWC), §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the TWC; and under Texas Health and Safety Code (THSC), §382.017, concerning Rules, which authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The permit by rule is also adopted under THSC, §382.002, concerning Policy and Purpose, which establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.051, concerning Permitting Authority of Commission; Rules, which authorizes the commission to issue a permit by rule for types of facilities that will not significantly contribute air contaminants to the atmosphere; §382.05196, concerning Permits by Rule, which authorizes the commission to adopt permits by rule for certain types of facilities; §382.051961, concerning permit for certain Oil and Gas Facilities, which establishes specific requirements and analyses that must be conducted before the commission may adopt a new, or amend an existing permit by rule or standard permit for oil and gas facilities; §382.051962, concerning Authorization for Planned Maintenance,

Startup or Shutdown Activities Relating to Certain Oil and Gas Facilities which extended the deadline for owners or operators of oil and gas facilities to submit an application to authorize maintenance, startup, and shutdown emissions to January 5, 2014; and §382.057, concerning Exemption, which authorizes exemptions from permitting.

The adopted new rule implements THSC, §§382.002, 382.011, 382.012, 382.017, 382.051, 382.05196, 385.051961, 382.051962, and 382.057.

§106.359. Planned Maintenance, Startup, and Shutdown (MSS) at Oil and Gas Handling and Production Facilities.

(a) Applicability. This section applies to certain authorized oil and gas handling or production facilities or sites, and authorizes emissions from planned maintenance, startup, and shutdown (MSS) facilities and activities, and any associated emission capture and control facilities, if all of the applicable requirements of this section are met.

(1) This section does not apply to oil and gas handling or production facilities or sites authorized under §106.352(a) - (k) of this title (relating to Oil and Gas Handling and Production Facilities), subsections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities, §106.355 of this title (relating to Pipeline Metering, Purging, and Maintenance), or Subchapter U of this chapter (relating to Tanks, Storage, and Loading.)

(2) This section may not be used to supersede an existing authorization for planned MSS under Chapter 106 of this title (relating to Permits by Rule) or §116.620 of this title (relating to Installation and/or Modification of Oil and Gas Facilities) ~~for planned MSS~~ unless any ~~the~~ previously represented emission control methods, techniques, and devices remain in use ~~continue to be used~~ and there is no resulting increase in hourly emissions.

~~(3) All emissions covered by this section are limited to, collectively and cumulatively, emissions that are less than or equal to any applicable emission limit under §106.4(a)(1) - (3) of this title (relating to Requirements for Permitting by Rule) in any rolling 12-month period.~~

(b) Activities. Planned MSS activities and facilities authorized by this section include the following:

(1) engine, compressor, ~~and~~ turbine, and other combustion facilities maintenance;

(2) repair, adjustment, calibration, lubrication, and cleaning of ~~oil and gas~~ site process equipment;

(3) replacement of piping components, pneumatic controllers, boiler refractories, wet and dry seals, meters, instruments, analyzers, screens, and filters;

(4) turbine or engine component ~~hot section~~ swaps;

(5) piping used to bypass a facility during maintenance;

(6) planned MSS activities with the same character and quantity of emissions as those listed in paragraphs (1) - (5) of this subsection;

(7) pigging and purging of piping;

(8) blowdowns;

(9) emptying, purging, degassing, or refilling of process equipment, storage tanks and vessels (except landing floating roof tanks for convenience purposes ~~as excluded in subparagraph (E) of this paragraph~~), if subparagraphs (A) - (C)of this paragraph ~~and any associated temporary emission capture and control facilities if the following requirements~~ are met.~~:~~

(A) all contents from process equipment or tanks ~~storage vessels~~ must be removed to the maximum extent practicable prior to opening facilities ~~equipment~~ to

commence degassing and maintenance. ~~Liquid and solid removal must be directed to covered containment, recycled or disposed of properly. If it is necessary to drain liquid into an open pan or sump, the liquid must be covered or transferred to a covered vessel within one hour of being drained;~~

(B) facilities must be degassed using best management practices to ensure air contaminants are removed from the system to the extent allowed by facility ~~process equipment or storage vessel~~ design. ~~Emissions must be directed out the top of floating roof tanks;~~

(C) tanks may be ~~and vessels~~ emptied or degassed by forced ventilation if: ~~are limited to degassing a single tank or vessel at a time;~~

(i) only one vacuum truck is in use at any time;

(ii) emissions are directed out the top of the tank; or

(iii) emissions are routed through a closed system to a control device.

~~(D) in lieu of the requirements in subparagraphs (A) and (B), or (C) of this paragraph, facilities may route emissions through a closed system to a control device; and~~

~~(E) emptying tanks for convenience purposes is not authorized; and~~

(10) ~~facilities used for~~ abrasive blasting, surface preparation, and surface coating of facilities ~~on equipment~~ and structures used at the site in oil and gas handling and ~~or~~ production.

(c) Best Management Practices.

(1) All facilities with the potential to emit air contaminants must be maintained in good condition ~~working order~~ and operated properly.

(2) Each permit holder shall establish, implement, and update, as appropriate, a program to maintain and repair facilities as required by paragraph (1) of this subsection. The minimum requirements of this program must include:

(A) a maintenance program developed by the permit holder for all facilities ~~equipment~~ that is consistent with good air pollution control practices, or

alternatively, manufacturer's specifications and recommended programs applicable to facility ~~equipment~~ performance and the effect on emissions;

(B) cleaning and routine inspection of all facilities ~~equipment~~;

(C) repair of facilities ~~equipment~~ on timeframes that minimize ~~equipment~~ failures and maintain performance;

(D) training of personnel who implement the maintenance program; and

(E) records of conducted planned MSS activities.

~~(d) Recordkeeping. Records to demonstrate compliance with this section must be kept in accordance with §106.8(c) of this title (relating to Recordkeeping).~~