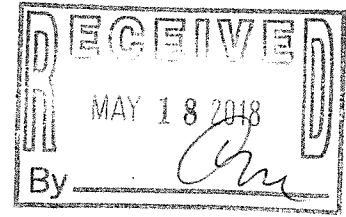


State Office of Administrative Hearings



Lesli G. Ginn
Chief Administrative Law Judge
May 15, 2018

Tucker Royall, General Counsel
Texas Commission on Environmental Quality
P.O. Box 13087
Austin Texas 78711-3087

Re: **SOAH Docket No. 582-15-2498; TCEQ Docket No. 2012-0905-MSW;
In Re: APPLICATION BY POST OAK CLEAN GREEN, INC. FOR A
NEW TYPE 1 MUNICIPAL SOLID WASTE LANDFILL IN GUADALUPE
COUNTY, TEXAS**

Dear Mr. Royall:

The above-referenced matter will be considered by the Texas Commission on Environmental Quality on a date and time to be determined by the Chief Clerk's Office in Room 201S of Building E, 12118 N. Interstate 35, Austin, Texas.

Enclosed are copies of the Proposal for Decision on Remand and Order that have been recommended to the Commission for approval. Any party may file exceptions or briefs by filing the documents with the Chief Clerk of the Texas Commission on Environmental Quality no later than 20 CALENDAR DAYS FROM ISSUANCE OF PFD. Any replies to exceptions or briefs must be filed in the same manner no later than 10 CALENDAR DAYS FROM EXCEPTIONS OR BRIEFS DEADLINE.

This matter has been designated **TCEQ Docket No. 2012-0905-MSW; SOAH Docket No. 582-15-2498**. All documents to be filed must clearly reference these assigned docket numbers. All exceptions, briefs and replies along with certification of service to the above parties shall be filed with the Chief Clerk of the TCEQ electronically at <http://www14.tceq.texas.gov/epic/eFiling/> or by filing an original and seven copies with the Chief Clerk of the TCEQ. Failure to provide copies may be grounds for withholding consideration of the pleadings.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig R. Bennett".

Craig R. Bennett
Administrative Law Judge

Enclosures
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STYLE/CASE: POST OAK CLEAN GREEN INC
SOAH DOCKET NUMBER: 582-15-2498
REFERRING AGENCY CASE: 2012-0905-MSW

STATE OFFICE OF ADMINISTRATIVE
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CORPORATION (SSLGC)

CITIES (CITY OF SCHERTZ AND CITY OF SEGUIN)

SOAH DOCKET NO. 582-15-2498
TCEQ DOCKET NO. 2012-0905-MSW

APPLICATION BY POST OAK CLEAN GREEN, INC. FOR A NEW TYPE 1 MUNICIPAL SOLID WASTE LANDFILL IN GUADALUPE COUNTY, TEXAS	§ § § § § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS
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SOAH DOCKET NO. 582-15-2498
TCEQ DOCKET NO. 2012-0905-MSW

APPLICATION BY POST OAK	§	BEFORE THE STATE OFFICE
CLEAN GREEN, INC. FOR A NEW	§	
TYPE 1 MUNICIPAL SOLID WASTE	§	OF
LANDFILL IN GUADALUPE	§	
COUNTY, TEXAS	§	ADMINISTRATIVE HEARINGS
	§	

PROPOSAL FOR DECISION ON REMAND

I. INTRODUCTION

Post Oak Clean Green, Inc. (Post Oak) applied to the Texas Commission on Environmental Quality (TCEQ or Commission) for a Municipal Solid Waste (MSW) permit to construct and operate the Post Oak Municipal Solid Waste Landfill, which would include a new Type I MSW landfill; a recyclables, used oil, and lead battery storage area; a scrap tire storage area; a large items and white goods storage area; a reusable materials staging area; and a citizens convenience area. The facility is to be located in Guadalupe County, Texas, approximately 12 miles east of Seguin, Texas. The application was referred to the State Office of Administrative Hearings (SOAH) for a contested case hearing, which was initially conducted in January 2016, with an initial proposal for decision (Initial PFD) issued on September 23, 2016.

The Commission considered the Initial PFD at an open meeting on April 12, 2017. At that time, the Commission voted to remand the matter to SOAH for additional evidence and arguments on four discrete issues, with the order remanding the case being issued by the Commission on April 19, 2017. The Administrative Law Judge (ALJ) convened the hearing on remand on January 17-19 and 22-23, 2018.¹ The record on remand closed on March 16, 2018, with the filing of post-hearing briefing and other post-hearing pleadings.

¹ ALJ Sarah Ramos, who co-presided over the original evidentiary hearing, has since retired. Therefore, the hearing on remand was held solely by the undersigned ALJ, who co-presided with ALJ Ramos in the original hearing.

As noted in the Initial PFD, the Executive Director (ED) of the TCEQ supports issuance of the permit. Numerous other parties oppose permitting of the landfill. Specifically, the following parties have appeared and are currently opposed to the application:² the Office of Public Interest Counsel (OPIC); Guadalupe County, Texas; the City of Schertz, Texas (Schertz); the City of Seguin, Texas (Seguin); the Schertz/Seguin Local Government Corporation (SSLGC); Guadalupe County Groundwater Conservation District (GCGCD); Stop Post Oak Dump (SPOD) (a citizens group); and Kathryn Brady, individually.³

After considering the evidence on remand, the ALJ concludes that Post Oak's application, as modified by the recommended additional requirements contained herein, generally complies with all applicable rules and statutes, with two significant caveats: (1) The Commission must determine whether the plugging of oil and gas wells, when not completed by the time of application but rather done after the initial hearing, adequately satisfies 30 Texas Administrative Code § 330.61(1)(2); and (2) the Commission must determine whether the inclusion of an outside agreement between Post Oak and the United States Air Force may be implemented in a manner that satisfies the Commission. If the Commission affirmatively decides both of these questions, which are discussed in more detail in this PFD on remand (Remand PFD), then the ALJ recommends the application be granted and the permit be issued.

To assist the Commission, the ALJ is submitting a proposed order with this Remand PFD that addresses all necessary issues in the event the Commission decides to approve the permit. However, this Remand PFD addresses only the four specific issues remanded by the Commission. Therefore, it must be read in conjunction with the Initial PFD when the Commission is considering the matter for issuance of a final order.

² When mentioned collectively herein, all parties opposed to the application are referred to as the "opposing parties," except for the Office of Public Interest Counsel, which opposes the application on more limited grounds related to bird hazards and land use.

³ Although Ms. Brady was admitted as an individual party, she also is a member of SPOD and has been formally aligned with SPOD for purposes of this proceeding. *See* SOAH Order No. 3 (May 6, 2015).

II. THE FOUR ISSUES ON REMAND

In its Interim Order of April 19, 2017, the Commission identified the following four purposes of its remand:

- 1) to ensure that written certifications that all wells within the jurisdiction of the Railroad Commission of Texas are properly capped, plugged, and closed in the permit boundary are contained in the evidentiary record within a timeframe to be determined by the ALJ;
- 2) to allow additional evidence on the issue of bird hazards;
- 3) to allow additional evidence on the subsurface characterization, including characterization of the groundwater; and
- 4) to allow additional evidence on the need for 24 hour per day, 7 day per week operating hours.

On remand, the parties disagree as to the intent of remand item number three above, related to the taking of additional evidence on the subsurface characterization, including characterization of the groundwater. The opposing parties argue that the issue is not limited, but is broad enough to allow evidence related to any challenges to the subsurface characterization. At the remand hearing, the ALJ disagreed and limited the issue, based upon the recommendation in the Initial PFD that additional groundwater measurements should be taken to show that the prior groundwater measurements were accurate in light of drought conditions that existed when the prior measurements were taken. Thus, the ALJ has construed the Commission's remand on this issue to be for the limited purpose of taking additional evidence of subsequent groundwater data to verify the accuracy of prior data. At the remand hearing, the ALJ generally did not allow additional evidence related to other, unrelated groundwater or subsurface characterization issues. The ALJ continues to stand by that determination in this Remand PFD. The ALJ now addresses each of the four issues remanded by the Commission.

III. PLUGGING OF OIL AND GAS WELLS

Oil and gas wells are addressed in the Commission's rules at 30 Texas Administrative Code § 330.61(1)(2). These wells must be identified, and the owner or operator must provide written certification at the time of application that these wells have been properly plugged, capped, and closed according to all applicable rules of the Railroad Commission of Texas (RRC). If identified in the permit for the facility, producing oil or natural gas wells that do not affect or hamper landfill operations may remain in their current state.

In this case, Post Oak did not provide a certification at the time of application that all oil and gas wells had been plugged. In the Initial PFD, the ALJs found that there were 42 oil and gas wells under the RRC's jurisdiction within the proposed permit boundary, and two of those wells were within the proposed limit of waste. Six of those wells, including one within the proposed limit of waste, had not been plugged at the time of issuance of the Initial PFD.

Because Post Oak had not ensured that all wells were plugged at the time of application, the ED recommended that a special permit provision be included requiring certification later that the wells had been plugged. The Commission concluded that was not an appropriate way to proceed and instead remanded the matter to allow Post Oak to obtain the required certification and enter it into the record before the Commission issued a final order in this case.

On remand, Post Oak submitted evidence demonstrating that the original calculation of 42 wells incorrectly included a well that had been permitted by the RRC but never drilled. Thus, only 41 wells existed that had to be plugged. Post Oak has now plugged all of these wells, and submitted into evidence certified copies of the 41 well-plugging reports filed with and approved by the RRC.⁴ The opposing parties' expert, John Long, agrees that all known oil and gas wells have

⁴ Post Oak Ex. 3. *See also* Post Oak Ex. 71 and Tr. at 2413.

now been plugged.⁵ Similarly, OPIC notes in its written closing arguments the “written certifications indicate that [Post Oak] has now complied with § 330.61(1)(2).”⁶ No parties dispute this. Therefore, Post Oak has demonstrated compliance with the primary substantive requirements of 30 Texas Administrative Code § 330.61(1)(2).

However, the opposing parties argue that this certification comes too late, because the rule requires that the certification be made at the time of application. Since Post Oak indisputably did not do this, but rather only on remand finally ensured that the wells were plugged and the required certification obtained, the opposing parties argue the application should be denied for failure to comply with the rule.

As noted in the Initial PFD, the ALJs found the application did not demonstrate strict compliance with 30 Texas Administrative Code § 330.61(1)(2) because the required plugging and certification did not occur by the time of application. Whether such non-compliance may be remedied by Post Oak’s subsequent efforts is a matter left to the Commission’s determination, as it is purely a legal conclusion related to the interpretation of 30 Texas Administrative Code § 330.61(1)(2). Post Oak has cited numerous prior cases where the Commission allowed this requirement to be met later, rather than at the time of application.⁷ On the other hand, the courts have previously reversed the Commission’s issuance of a permit when they determined that the Commission did not follow the plain language of its own rule.⁸

The parties have briefed this issue extensively, and it was discussed in more detail in the Initial PFD. Because it involves a pure question of interpretation of the Commission’s own rule, it is the Commission that must decide what is meant by the rule’s language. Because this was discussed

⁵ Tr. at 1865.

⁶ OPIC’s *Closing Argument in Hearing on Remand* at 2.

⁷ See Post Oak’s *Reply to Closing Arguments on Remand* at 6-7.

⁸ See, e.g., *BFI Waste Sys. of N. Am., Inc. v. Martinez Environmental Group*, 93 S.W.3d 570 (Tex.App.—Austin 2002, pet. den’d).

in the Initial PFD, the ALJ sees no reason to discuss it further now, other than to say that both Post Oak and the opposing parties have a legitimate legal basis for their position. Namely, although the plain language of the rule appears to require the certification at the time of application, the Commission has previously allowed it to be obtained later. Regardless of how the Commission chooses to resolve this legal issue, the ALJ notes that, as of the date of this Remand PFD, the wells have been plugged and the required certification obtained from the RRC. Thus, the only dispute relates to the timing of Post Oak's actions, and not the sufficiency of them.

IV. BIRD HAZARDS

A. Applicable Law

The Commission's rules address bird hazards in relation to new MSW facilities. A bird hazard is defined as an increase in the likelihood of bird/aircraft collisions that may cause damage to an aircraft or injury to its occupants.⁹ Commission rule 30 Texas Administrative Code § 330.545 provides that:

- (a) Owners or operators of new municipal solid waste landfill units . . . that are located within 10,000 feet of any airport runway end used by turbojet aircraft or within 5,000 feet of any airport runway end used by only piston-type aircraft shall demonstrate that the units are designed and operated so that the municipal solid waste landfill unit does not pose a bird hazard to aircraft.
- (b) Owners or operators proposing to site new municipal solid waste landfill units and lateral expansions located within a six-mile radius of any small general service airport runway end used by turbojet or piston-type aircraft shall notify the affected airport and the Federal Aviation Administration. Owners or operators proposing to site new municipal solid waste landfill units . . . located within a five-mile radius of any large general public commercial airport runway end used by turbojet or piston-type aircraft shall notify the affected airport and the Federal Aviation Administration.

⁹ 30 Tex. Admin. Code § 330.3(16).

- (c) The owner or operator shall submit the demonstration in subsection (a) of this section with a permit application or a permit amendment application. The demonstration will be considered a part of the operating record once approved.
- (d) Landfills disposing of putrescible waste shall not be located in areas where the attraction of birds can cause a significant bird hazard to low-flying aircraft. Guidelines regarding location of landfills near airports can be found in Federal Aviation Administration Order 5200.5(A), January 31, 1990. All landfill facilities within a six-mile radius of any small general service airport runway or within a five-mile radius of any large general public commercial airport runway shall be critically evaluated to determine if an incompatibility exists.

In the Initial PFD, the ALJs interpreted paragraph (d) to be a separate requirement, regardless of the distance from an airfield. The Commission has not yet definitively ruled on this interpretation by the ALJs, although it appeared to agree with this interpretation when it remanded the matter for additional evidence on this issue. In keeping with this interpretation, the ALJ evaluates this issue not from a pure distance evaluation, but rather from the perspective of whether the proposed location of the landfill is in an area where the attraction of birds would cause a significant bird hazard to low-flying aircraft regardless of the distance to any particular airfield.

B. Post Oak's Memorandum of Understanding

In December 2016, after the initial hearing and issuance of the Initial PFD, but before the Commission considered the Initial PFD and remanded the matter, Post Oak entered into a Memorandum of Understanding (MOU) with the United States Air Force (USAF).¹⁰ The MOU was designed to address bird strike concerns that some USAF personnel had expressed in regard to the proposed landfill and its impact on USAF training flights from the Seguin Auxiliary Airfield (Seguin Airfield). The MOU contains a number of agreements between Post Oak and the USAF. Based on Post Oak's agreement to the MOU, the USAF submitted a letter to the Commission requesting that

¹⁰ Post Oak Ex. 57.

the MOU be incorporated into the operational requirements of the permit and withdrew its prior objections to the landfill being permitted.¹¹

The MOU sets out 14 enumerated “responsibilities” of Post Oak, including the following obligations:¹²

- Post Oak will continue to pursue 24/7 Operating Hours for the landfill to allow landfill operations the ability to avoid the USAF’s peak flight training hours (9:00 a.m. to 4:00 p.m., Monday to Friday) by expanding the time for landfill waste disposal operations outside the USAF’s peak training hours.
- Post Oak will install a bird radar system at the landfill site at a cost not to exceed \$600,000 to facilitate the monitoring of bird movements, and such radar data shall be made available to the USAF. Post Oak will also spend \$25,000 per year for maintenance of the bird radar system.
- Post Oak will retain the services of a United States Department of Agriculture (USDA) wildlife hazard management biologist with appropriate United States Fish and Wildlife Service (USFW) certifications to undertake or direct actions to keep birds away from the landfill site, track bird trends, and conduct predictive bird modeling.
- If large numbers of birds are observed on or within 500 yards of the landfill waste placement footprint, Post Oak must notify the USAF’s designated personnel.
- Post Oak will maintain a robust program to minimize the attractiveness of the landfill to birds and predatory wildlife species, including the use of pyrotechnics, auditory harassment techniques, and propane cannon systems, among others.
- Post Oak will not plant, and will maintain or remove, trees and shrubs so that they will not serve as nesting sites.
- Post Oak will install and maintain a perimeter fence around the site to keep medium to large mammals from entering the site.

¹¹ Post Oak Ex. 57 at 1.

¹² Post Oak Ex. 57. The responsibilities are not identified in the same order they are set out in the MOU; rather, the ALJ identifies some of the more significant responsibilities first.

The ED recommends that the MOU and the obligations contained therein be incorporated into the permit. Post Oak does not oppose this. OPIC also appears to support inclusion of the MOU into the permit, although it has not stated so explicitly. The opposing parties oppose inclusion of the MOU into the permit and argue that such would require additional notice and a remand to the ED. The ALJ discusses the parties' positions on the MOU and bird strike issues below.

C. Post Oak's Position

Post Oak first disputes that the landfill is in an area where the attraction of birds can cause a significant bird hazard to low-flying aircraft. It notes that the landfill is well outside the five and six-mile radii referred to in 30 Texas Administrative Code § 330.545(b) and (d), and well outside the bird aircraft safety hazards (BASH) relevancy area demonstrated in the Joint Land Use Study (JLUS) issued in July 2015, while the Post Oak application was still pending technical review. Post Oak places great emphasis on the BASH area identified in the JLUS, pointing out that USAF personnel and many of the opposing parties participated in that study.

Post Oak also cites to the Commission's prior decision in regard to the Tessman Road landfill, wherein the Commission noted that a site-specific demonstration showing no significant bird hazard risk was not required by the applicant when the facility was beyond the five-mile distance in the Commission's rule.¹³ In fact, Post Oak asserts this would be the first case where the Commission interpreted the first sentence of 30 Texas Administrative Code § 330.545(d) as providing a stand-alone requirement. Thus, Post Oak contends the Commission should not read the rule this way, no additional evaluation should be required, and the proposed site should be found to not create a significant bird strike hazard based simply on its location and distance from airfields.

¹³ See the Commission's Order issuing Permit No. 1410-C to BFI Waste Systems of North America, TNRCC Docket No. 99-0455-MSW; SOAH Docket No. 582-99-0784.

Post Oak notes that the only basis for bird strike concerns is Colonel Snell's letter identifying USAF training flight paths from the Seguin Airfield as coming near or over the proposed landfill site.¹⁴ Post Oak points out that Colonel Snell's concerns have been withdrawn in light of the MOU entered into with the USAF. Moreover, Post Oak notes that the flight paths in issue generally involve flights at 1,500 feet above ground level, whereas USAF bird strike data from 1995-2015 demonstrates that 85% of bird strikes occur below 1,000 feet above ground level.¹⁵ Post Oak asserts that, if the USAF flight paths from the Seguin Airfield were really a concern, then the JLUS would have included the flight paths in the BASH relevancy area and included the Post Oak site within the BASH risk area; but, it did not. Thus, Post Oak argues, this demonstrates that the proposed landfill site does not present a bird strike risk to the USAF training flights.

Post Oak presented the testimony of Dr. Russell P. DeFusco, a retired USAF officer who also previously served as USAF BASH Team Chief.¹⁶ He has significant experience in regard to assessing and addressing bird strike concerns. He testified at length regarding the issue of bird strikes. Dr. DeFusco ultimately opined that, while it was proper for the USAF to be concerned about the landfill's impact on training flights, ultimately the MOU's mitigation efforts and the distance between the Seguin Airfield and the proposed landfill site are more than adequate to minimize bird strike concerns.¹⁷ Thus, he concluded that the landfill would not cause a significant bird hazard to low-flying aircraft operating from the Seguin Airfield.¹⁸

Even if the landfill arguably would present a bird strike hazard, Post Oak asserts it has sufficiently minimized that hazard by entering into the MOU and committing to the mitigation measures contained in it. Post Oak argues the MOU provisions may be incorporated into the permit

¹⁴ SSLGC Ex. 7.

¹⁵ SSLGC Ex. 11 at 1.

¹⁶ Post Oak Ex. 51.

¹⁷ Post Oak Ex. 51 at 11-12; Tr. at 1928, 1937.

¹⁸ Post Oak Ex. 51 at 12.

as an enhancement and a more-detailed explanation of Post Oak's obligation in Section III.M of the current draft permit, which requires Post Oak to "to assure that the attraction of birds does not cause a significant hazard to low-flying aircraft."¹⁹ Given the location of the proposed site and the mitigation measures it has agreed to with the USAF, Post Oak asserts there are no existing significant concerns regarding bird strikes that would prevent the permitting of the landfill.

D. The Opposing Parties' Position

1. The Landfill Would Cause a Significant Bird Strike Hazard

The opposing parties contend the landfill is located in an area where the attraction of birds would cause a significant bird hazard because the USAF conducts training flights near and over the proposed landfill site. These parties cite Colonel Snell, then-commander of the 12th Flight Training Wing; and Dan Sullivan, the Acting Chief of the USAF's BASH Team, both of whom indicated that portions of the route for aircraft utilizing the Seguin Airfield are over the proposed landfill and that movement of these flight paths is significantly constrained.²⁰ In addition to the statements from Colonel Snell and Mr. Sullivan, the opposing parties offered the testimony of Ronald Merritt, a retired USAF officer who also previously served as USAF BASH Team Chief.²¹

The opposing parties' evidence shows that the number of USAF flights coming in proximity to the landfill site is significant. The USAF averages over 1,100 operations at the Seguin Airfield each month, and over 13,000 operations per year.²² This is not much less than the San Antonio International Airport, which had 14,000 flights in 2014.²³

¹⁹ Post Oak Ex. 11 at 9.

²⁰ SSLGC Ex. 7 at 1, 3; SSLGC Ex. 11 at 1; SSLGC Ex. 9 at 2.

²¹ SPOD Ex. 41 at 2 (testimony page; references to SPOD Ex. 41 are to the testimony page, not the exhibit page).

²² SSLGC Ex. 7 at 1.

²³ SSLGC Ex. 7 at 1.

Additionally, the opposing parties note that witness testimony shows that the T-38 type of aircraft used for training at the Seguin Airfield is particularly vulnerable to bird strike damage.²⁴ So, the opposing parties argue, even if the likelihood of a bird strike is small, the severity of the damage should it occur makes it a significant risk.²⁵ This potentially catastrophic vulnerability of the T-38, coupled with the behavior of turkey vultures, creates an especially dangerous risk of bird strikes, according to the opposing parties. The evidence indicates that turkey vultures become active during mid-morning and remain aloft until late afternoon, often soaring on thermals (warm air currents) that can be found in the 1,000-2,000 foot range. The opposing parties point out that even Dr. DeFusco, Post Oak's expert, conceded that vultures are regularly within the 1,000- to 2,000-foot altitude in the area of the landfill as they go about their activities.²⁶

The opposing parties also cite to the fact that the Federal Emergency Management Agency (FEMA) utilizes the Seguin Airfield, bringing in equipment and material for disaster relief efforts.²⁷ They note that Post Oak has made no effort to identify the type of aircraft used by FEMA at the airfield, the type of approach used by FEMA aircraft, or how the attraction of birds to the area of the landfill would impact FEMA's use of the airfield.

The opposing parties disagree that FAA guidance is dispositive in regard to analyzing the bird strike hazards associated with USAF flights, because the military has purposefully not adopted the FAA separation criteria. As Mr. Sullivan stated, "application of [FAA separation distances] requires careful consideration because the flight tracks and speeds flown by the Air Force at its auxiliary airfield for military training are very different than those surrounding typical public use airports."²⁸ Whereas FAA guidelines are premised on 3-degree instrument landing approaches, the

²⁴ SPOD Ex. 41 at 37-38; Tr. at 1936-37.

²⁵ Tr. at 2234.

²⁶ Tr. at 2125.

²⁷ SPOD Ex. 42 at 64-65; SPOD Ex. 38 at 6.

²⁸ SSLGC Ex. 9 at 2; *See also* SPOD Ex. 41 at 39.

military flights are conducted quite differently, at varying speeds, altitudes, and approach angles. Therefore, according to the opposing parties, FAA guidance on appropriate distances does not apply to the military flights in issue here.

Given all of these considerations, the opposing parties' expert, Mr. Merritt, testified that the proposed landfill will create significant bird hazards for the USAF training flights from the Seguin Airfield.²⁹ The opposing parties assert that this hazard cannot be eliminated by mitigation measures, arguing that the language of 30 Texas Administrative Code § 330.545(d) is a mandatory prohibition not subject to remedial measures. Specifically, that rule states that "Landfills disposing of putrescible waste *shall not* be located in areas where the attraction of birds can cause a significant bird hazard to low-flying aircraft."³⁰ Having determined that the area of the proposed landfill is one where the attraction of birds would present a significant bird hazard to low-flying aircraft, the opposing parties argue the analysis stops there and the rule prohibits the landfill from being permitted at this location. They point to other rules containing similar language, and assert that there is a difference between absolute prohibitions and prohibitions in the absence of a remedial showing. They argue that the rule in issue falls under the former and prohibits permitting the landfill regardless of Post Oak's agreement to the MOU measures.

2. The MOU Does Not Remove the Bird Strike Risk

The opposing parties also disagree that the MOU adequately mitigates the bird hazard risk or reflects a decision by the USAF that the landfill presents no significant risk if the MOU is adopted. Rather, they argue that the USAF entered into the MOU merely in an effort to make the landfill more acceptable in the event it was permitted. In support of this, they cite the USAF's Director of Community Initiatives for the 12th Flight Training Wing, who stated, "Obviously there is still the chance that TCEQ rules against the landfill, which is of course the safest course of action from our

²⁹ SPOD Ex. 41 at 51.

³⁰ Emphasis added.

perspective.”³¹ So, the opposing parties assert that the MOU does not remove the significant bird strike hazard that would be presented by the landfill; it merely serves to reduce the risk in ways the USAF deems beneficial.

This argument is also supported by Mr. Merritt’s testimony. In particular, he testified that, “even with a comprehensive bird mitigation program, there will be significant residual risk well above and beyond current conditions.”³² He then concluded that the landfill, even with the MOU conditions, would adversely impact flight safety for USAF planes using the Seguin Airfield.³³ Therefore, the opposing parties argue the MOU does not remove the potential bird strike hazard and should not be used as a justification for creating the hazard in the first place.

3. The MOU May Not be Considered or Incorporated into the Permit

Assuming arguendo that the bird strike hazard could be mitigated by the MOU, the opposing parties argue that it may not be considered in this proceeding and may not be incorporated into the permit because such would constitute a “major amendment” to the permit.³⁴ If the MOU is to be considered, the opposing parties assert, the application must be remanded back to the ED for additional notice and consideration, as well as input from the Texas Parks and Wildlife Department (TPWD).³⁵

Commission rule 330.23(h) provides that “TPWD has jurisdiction over certain environmental issues that may be affected by MSW facilities including, but not limited to, endangered species and wetlands. The executive director will solicit comments from, and consider information provided by,

³¹ SPOD Ex. 46 at 3.

³² SPOD Ex. 41 at 51-52; See also SPOD Ex. 41 at 22.

³³ SPOD Ex. 41 at 52; Tr. at 2324-26.

³⁴ Citing 30 Tex. Admin. Code §§ 281.23(a) and 305.62(a).

³⁵ *Id.*

TPWD.”³⁶ The ED did that in this case and, pursuant to its statutory authority, the TPWD made numerous recommendations regarding the operation of the landfill. Within its application, Post Oak agreed to abide by those recommendations,³⁷ and Post Oak’s agreement to follow TPWD’s recommendations has been incorporated as a binding requirement of the draft permit issued by the ED.³⁸

The opposing parties allege that, in several instances, the MOU is directly contrary to the recommendations by the TPWD. Even the ED’s own witness, Mr. Odil, acknowledged some inconsistencies.³⁹ For example, the MOU generally requires that trees be removed from the site, while the TPWD recommendations require the maintenance of trees where possible, and require their replacement if removed.⁴⁰ Specifically, the TPWD recommendations provide that “clearing of mature, native trees be avoided,” and that if tree removal is necessary that the tree either be transplanted or replaced at a ratio of three saplings for every tree lost.⁴¹ On the other hand, the MOU requires that Post Oak “will not plant trees or shrubs that attract or accommodate bird nesting or roosting, and will maintain or remove existing trees or shrubs, as needed, to limit nesting or roosting sites as allowed by any applicable state or federal regulatory limitations.”⁴² Further, the TPWD comments include provisions specifically intended to protect raptor nesting at the proposed landfill site, such as the prohibition on construction activities within 100 meters around any raptor nest between February 1st and July 15th,⁴³ while the MOU has requirements specifically intended to harass raptors, such as the use of “auditory harassment techniques” and pyrotechnics.⁴⁴

³⁶ 30 Tex. Admin. Code § 330.23(h).

³⁷ Post Oak Ex. 1 at 392-394.

³⁸ Post Oak Ex. 11 at 5.

³⁹ Tr. at 2539.

⁴⁰ Tr. at 2539.

⁴¹ Post Oak Ex. 1 at 395.

⁴² Post Oak Ex. 57 at 3, paragraph 4.f.

⁴³ Post Oak Ex. 1 at 396.

⁴⁴ Post Oak Ex. 57 at 3, paragraph 4.e.

Given these and other allegedly directly-conflicting provisions, the opposing parties argue that the MOU cannot be incorporated into the permit unless and until it is remanded back to the ED for additional comments from the TPWD on how to reconcile the inconsistencies. And, in the absence of the MOU being incorporated into the permit, the USAF's concerns are not alleviated and there are no adequate mitigation efforts in the permit to alleviate the significant bird strike hazard that would be presented by the landfill.

4. The MOU is not Enforceable or Compatible with the Site Operating Plan

The opposing parties also argue the MOU provisions are not detailed or specific enough to be integrated into the permit in any enforceable manner, nor are they reconcilable with the Site Operating Plan (SOP). They note the SOP contains detailed provisions setting out the operational requirements of the landfill, including those related to personnel, training, equipment, recordkeeping, access control, vector control, endangered species protection, etc. The MOU addresses many of these same areas, but without the information in the MOU being carried over to the SOP.

For example, the SOP does not include the biologist required by the MOU in the list of landfill personnel, nor is the equipment required by the MOU for bird strike mitigation efforts included in the SOP's listing of equipment. The SOP's required inspections do not identify the bird observation or bird radar required by the MOU, and the training in the SOP does not identify the required bird control training identified in the MOU. Similarly, the SOP's access control measures identify a 4-foot barbed wire fence, yet even Post Oak's own expert indicated that such a fence would be insufficient to meet the MOU requirement for a perimeter fence designed to keep medium to large mammals out of the site and disturbing daily cover.⁴⁵ Given these discrepancies, the opposing parties assert that the MOU cannot be adopted by the Commission in a manner consistent with the current draft permit.

⁴⁵ Tr. at 2062; Post Oak Ex. 57 at 3, paragraph 4.k.

Moreover, even if they could be adopted, these parties argue that the MOU's provisions are not specific enough to be considered enforceable permit conditions. Many of the provisions identified are subjective, based on being deemed "needed" by site personnel or the biologist employed by Post Oak. Or the provisions are ambiguous, such as the requirement to report when there is a "large number" of birds, or the requirement to use perimeter fencing without any specificity as to the type or height of such fencing. Alternately, the provisions allegedly lack detail, such as the requirement to install bird radar, which lacks any specific additional requirements for how it will be operated or used.

Further, these parties point out that the MOU requires Post Oak to "avoid" disposal operations during peak USAF flight training hours, but there is nothing that would make this a mandatory operational requirement. Post Oak has indicated that it does not construe this language as being a ban on operating during the USAF peak flight training hours. Thus, the opposing parties argue, this creates a situation whereby the USAF may believe that Post Oak intends to operate primarily during off-peak flight hours, while Post Oak believes it can operate at any time. Given these discrepancies, the opposing parties contend that the MOU cannot be incorporated into the permit in any meaningful way.

E. The ED's Position

The ED acknowledges the bird strike concerns presented by the record, finding that the opposing parties presented persuasive evidence demonstrating the existence of bird strike hazards from the landfill if it is permitted. Specifically, in closing arguments, the ED states that the opposing parties' evidence provides "substantial support to find that the landfill would cause a significant bird hazard risk to low flying aircraft using the USAF Seguin Auxiliary Airfield."⁴⁶ However, the ED asserts that it is appropriate to rely on the expertise of the USAF in assessing the bird strike risk to its aircraft and, to that end, the USAF has withdrawn its opposition to the landfill if the MOU

⁴⁶ ED's *Closing Arguments on Remand* at 2.

provisions are included in the permit.⁴⁷ Thus, the ED concludes that, if the MOU is incorporated into the permit, then the landfill will not cause a significant bird strike hazard to low flying aircraft.⁴⁸

In closing arguments, the ED did not take a position on the reconciliation of inconsistencies between the MOU and the TPWD recommendations that Post Oak had previously agreed to implement. Nor did the ED address whether the MOU contains enforceable provisions that are compatible with the existing proposed SOP. Rather, the ED simply proposes that the MOU be incorporated into the permit per the USAF's recommendation.

F. OPIC's Position

Like the ED, OPIC contends that the record evidence demonstrates that the landfill would cause a significant bird hazard risk to low flying aircraft using the Seguin Airfield. OPIC concedes that the MOU may mitigate these concerns. However, because the MOU has not currently been incorporated into the permit, the bird strike concerns have not been addressed sufficiently. Thus, OPIC contends the application must be denied in the absence of incorporation of the MOU into the permit.

G. The ALJ's Analysis

1. The Landfill's Location Will Cause a Bird Strike Hazard

Given the USAF's documented concerns regarding its flight training paths, along with the other record evidence, the ALJ finds that the landfill is located in an area where it could present a significant bird strike hazard. It is well-known that landfills generally attract birds and other vectors

⁴⁷ ED's *Closing Arguments on Remand* at 2.

⁴⁸ ED's *Closing Arguments on Remand* at 4.

(and the evidence in this case supports that well-known truth).⁴⁹ Thus, placing the landfill in a location where it will be in direct proximity to thousands of USAF training flights per year raises serious concerns for bird strike hazards. The ALJ disagrees with Post Oak that the fact that the landfill site is outside the 5- and 6-mile radii in the rules or the BASH relevancy area in the JLUS definitively resolves the issue. Moreover, the ALJ finds that Post Oak's reliance on the Commission's order in the Tessman Road landfill case and Post Oak's assertion that the first sentence of 30 Texas Administrative Code § 330.545(d) has never been read as a stand-alone provision are misplaced.

This ALJ co-wrote the PFD in the Tessman Road landfill permitting case. There, the ALJs concluded that the 5-mile-relevancy area noted in the Commission's rule created an "inference" that a facility located beyond five miles would not cause a bird strike hazard. Namely, if the facility was outside the distance limit in the rule and there was no evidence raising a legitimate bird strike concern, the applicant had no affirmative duty to do a site-specific demonstration regarding bird hazards. But, the ALJs also noted that this inference could be overcome with sufficient evidence showing the existence of a bird strike hazard, despite the landfill being beyond the 5-mile distance.⁵⁰ That conclusion demonstrated that the ALJs evaluated the first sentence of 30 Texas Administrative Code § 330.545(d)⁵¹ as being a stand-alone provision, consistent with the recommendation by the ALJs in this case.

Here, as every party except Post Oak concedes, the evidence has raised a legitimate bird strike concern. Therefore, there is a duty on Post Oak to demonstrate, beyond just a citation to the distance limits in the rule or the BASH relevancy area from the JLUS, that the landfill will not cause a significant bird hazard to low-flying aircraft. To demonstrate this, Post Oak has presented evidence

⁴⁹ Tr. at 1951, 2325.

⁵⁰ See PFD at 42, SOAH Docket No. 582-99-0784 (June 12, 2000).

⁵¹ The rule at that time was found at 30 Texas Administrative Code § 330.300.

attempting to show that the bird strike concerns are not actually significant and, even if they were, it has agreed to implement mitigation efforts sufficient to eliminate or minimize those risks.

The ALJ concludes that Post Oak's evidence does not demonstrate that the bird strike risks are insignificant. Rather, the ALJ finds that, unless Post Oak implements specific additional measures beyond what are set out in the current application, the landfill would create a significant bird hazard to low-flying aircraft. The USAF flies approximately 13,000 training flights per year, and those training flight paths come very close to the proposed landfill site, possibly even directly over it at times.⁵² Those flights occur at heights of approximately 1,500 feet above ground level. Post Oak's own expert conceded that turkey vultures would regularly be expected to be found in the area between 1,000 and 2,000 feet above ground level. The training planes used by the USAF are particularly susceptible to a catastrophic event from a bird strike. Although it is true that USAF data reflects that 85% of bird strikes between 1995 and 2015 were at heights less than 1,000 feet above ground level, this still leaves 15% of such strikes above that height. That is a significant percentage—especially given the number of flights that will occur in the relevant area. In fact, past bird strikes have been recorded in this general area at heights above 1,000 feet above ground level. Given all of this information, the ALJ concludes that, absent efforts by Post Oak to mitigate the bird strike risk, the landfill would cause a significant bird hazard to low-flying aircraft, in violation of 30 Texas Administrative Code § 330.545(d).

The ALJ disagrees with the opposing parties that this ends the analysis and the landfill must be prohibited under 30 Texas Administrative Code § 330.545(d). Again, that rule states that “[l]andfills disposing of putrescible waste shall not be located in areas where the attraction of birds can cause a significant bird hazard to low-flying aircraft.” The opposing parties' position is based on the assumption that this rule requires solely a “location” evaluation, not an actual operational evaluation. Namely, they read the rule as stating that, if the location is one where *if birds were attracted* there would be a significant bird hazard to low-flying aircraft, then a landfill may not be

⁵² Tr. at 1931-34, 1952; SSLGC Exs. 9 and 11.

situated there. Under the opposing parties' reading, this involves simply an evaluation of the logistics of the location alone—and no analysis of the actual anticipated bird hazard based upon expected operations, including mitigation efforts. If the Commission agrees with such an interpretation—and it certainly may—then the landfill would be prohibited at this location, because absent mitigation efforts the landfill would be expected to cause a significant bird hazard to low-flying aircraft.

However, the ALJ does not read the rule that way. Rather, the ALJ reads the rule as addressing not a hypothetical analysis based solely upon the location, but rather an analysis based upon the actual expected operations of the landfill at the location. Namely, the ALJ reads the phrase “can cause” in the rule as being the equivalent of “is expected to cause.” Thus, the question is not ‘Is the location one where, *if* birds are attracted, a significant bird hazard will be created?’

Rather, the question is more appropriately phrased as ‘Is a bird attraction expected to be created that will cause a significant bird strike hazard?’ Read that way, the ALJ construes the rule as encompassing not just an analysis of the location, but also an analysis of the expected operations of the landfill and its impact upon the attraction of birds and the potential creation of a significant bird hazard. Thus, the ALJ concludes that the analysis must go further to see whether the actual operation of the landfill is expected to cause a significant bird strike hazard.

2. The MOU's Impact on the Bird Strike Hazard

Having concluded that a landfill at this location would be likely to create a significant bird strike hazard, the question then becomes whether that hazard is sufficiently mitigated by Post Oak's efforts outlined in the MOU. This question has two parts: (1) may the MOU be incorporated into the permit? If so, (2) do the MOU's provisions adequately minimize the bird strike hazard so that the landfill would not violate 30 Texas Administrative Code § 330.545(d)?

a. May the MOU be Incorporated into the Permit?

As noted previously, the opposing parties argue that the MOU may not be incorporated into the permit for a number of reasons: (1) its incorporation would be a major amendment, requiring that the matter be remanded back to the ED for additional processing; (2) the MOU conflicts with existing provisions in the permit, thus creating irreconcilable conflicts in the permit if the MOU is incorporated into it; and (3) the MOU contains many unenforceable terms, thus making it untenable to incorporate it into the permit. The ALJ disagrees with the opposing parties on the first two reasons, but recognizes the validity of the third point—namely, the difficulty of incorporating the MOU in its entirety into the permit in an enforceable manner.

First, the ALJ finds that the Commission's adoption of the MOU would not be a major amendment requiring additional notice or remand of the permit to the ED. While it is true that an applicant may not make significant changes in a permit prior to its issuance without such being considered an amendment requiring additional notice and review by the ED,⁵³ this limitation does not apply to the Commission's inclusion of additional provisions through the contested case hearing process. In regard to permitting proceedings, Commission Rule 50.17 provides that the Commission "may grant or deny an application in whole or in part, suspend the authority to conduct an activity or dispose of waste for a specified period of time, dismiss proceedings, *amend or modify a permit or order*, or take any other appropriate action."⁵⁴ This rule gives the Commission the power to implement special provisions, make changes to a draft permit, or impose additional requirements on an applicant.

While there could be situations where the Commission's modification of a permit is so extreme that it affects private parties without them having adequate notice of and an opportunity to protest such modification, this is not such a case. The application and current draft permit already

⁵³ 30 Tex. Admin. Code §§ 281.23(a) and 305.62(a).

⁵⁴ 30 Tex. Admin. Code § 50.17(a) (emphasis added).

require Post Oak “to assure that the attraction of birds does not cause a significant hazard to low-flying aircraft.”⁵⁵ The MOU just provides more specific detail to that obligation already contained in the draft permit.

Further, the ALJ disagrees that the TPWD must be given an opportunity to weigh in on the MOU provisions before the permit is issued. Commission Rule 330.23(h) provides that the ED “will solicit comments from, and consider information provided by, TPWD.”⁵⁶ Neither this rule, nor any other statute or rule, gives TPWD final authority to approve all permit conditions nor the right to offer additional input before the Commission implements additional provisions that might impact matters TPWD previously commented on. The rule simply requires the ED to solicit TPWD’s comments and “consider” information provided by it. The ED did that in this case and Post Oak’s commitments regarding TPWD’s recommendations have been incorporated into the draft permit. The ALJ does not construe this rule as granting TPWD the right to provide additional input on any additional requirements the Commission might choose to impose through the permitting process. Such is not required by the plain language of the rule and, further, its requirement would be unwieldy and would improperly limit the Commission’s rightful authority to include special provisions or modifications to permits in the contested case hearing process.

Therefore, the ALJ finds that the Commission may choose to incorporate some or all of the provisions of the MOU into the permit in this case without triggering any requirement to remand the matter for additional review by the ED or TPWD. So, now the ALJ turns to whether incorporation of some or all of those provisions would create an irreconcilable conflict in the permit.

The ED’s expert, Mr. Odil, testified that there are some potential conflicts between the TPWD’s recommendations for the landfill site and the MOU’s terms.⁵⁷ However, when questioned

⁵⁵ Post Oak Ex. 11 at 9.

⁵⁶ 30 Texas Administrative Code § 330.23(h).

⁵⁷ Tr. at 2539.

further by Post Oak's counsel, Mr. Odil backed off his earlier testimony somewhat, conceding that some of the potential conflicts he had identified might not actually be inconsistent with each other.⁵⁸ After considering the MOU provisions, and the current obligations contained in the draft permit, the ALJ concludes that the MOU provisions are not irreconcilable with the application or current draft permit, particularly Post Oak's commitments in response to the TPWD's recommendations. Rather, the ALJ believes that such provisions may be reconciled.

For example, the opposing parties point to TPWD recommendations that "clearing of mature, native trees be avoided," and that if tree removal is necessary then the tree should either be transplanted or replaced at a ratio of three saplings for every tree lost.⁵⁹ In contrast, the MOU requires that Post Oak, "will not plant trees or shrubs that attract or accommodate bird nesting or roosting, and will maintain or *remove* existing trees or shrubs, as needed, to limit nesting or roosting sites as allowed by any applicable state or federal regulatory limitations."⁶⁰ These provisions are not directly contradictory.

The MOU provision does not require Post Oak to remove trees—rather it allows Post Oak to remove *or* "maintain" them. It also is not an absolute prohibition on the planting of any trees—only those trees which "attract or accommodate bird nesting or roosting." Further, the MOU obligation regarding trees is subject to "applicable state or federal regulatory limitations." Thus, it does not impose an absolute obligation on Post Oak to remove trees and/or not plant trees. Post Oak could comply with the TPWD's recommendations and the MOU at the same time, for example by not removing trees, but by simply maintaining them so as to limit roosting of birds (which satisfies the TPWD requirement and the MOU provision). Similarly, if Post Oak deems it necessary to plant saplings consistent with the TPWD's recommendation, it could choose trees that are not as accommodating to bird roosting or nesting.

⁵⁸ Tr. at 2565-67.

⁵⁹ Post Oak Ex. 1 at 395.

⁶⁰ Post Oak Ex. 57 at 3, paragraph 4.f.

The ALJ finds that the other allegedly inconsistent provisions between the MOU and the draft permit may be reconciled as well. For example, the TPWD's recommendations regarding raptor nests relate to the construction of the landfill and apply only during certain parts of the year, whereas the methods to eliminate birds are general and relate to removing the attractiveness of the site to birds overall. Post Oak can be both sensitive to the potential destruction of existing raptor nests when constructing the landfill, while at the same time developing methods designed to make the general area of the landfill less attractive to them once disposal operations begin. Such an approach essentially protects the birds from harm during construction, but encourages voluntary relocation of the birds after construction. These are not mutually exclusive concepts. The same can be said for the other allegedly conflicting provisions.⁶¹ So, the ALJ finds that the MOU may be adopted by the Commission and incorporated into the permit without creating irreconcilable conflicts.

However, the ALJ agrees with the opposing parties that many of the MOU provisions are ambiguous or otherwise lack enough specificity to make them clearly enforceable. Whether this is a sufficient basis to deny the permit is a matter left to the Commission's discretion. It is not unusual for permit provisions to be somewhat ambiguous or vague, making their enforcement difficult at times. The same is true here, except perhaps to a greater extent than usual.

For example, the MOU requires Post Oak to install and maintain a perimeter fence around the site designed to keep out medium to large mammals.⁶² The current proposed perimeter fence (4-foot high barbed wire) is insufficient to meet that goal—as even Post Oak's own expert conceded. Thus, Post Oak will need to implement some higher level of fencing to meet the MOU requirement, but the MOU does not specify what this will be. Similarly, Post Oak is to incorporate anti-perching devices

⁶¹ Rather than going through each of the allegedly conflicting provisions, the ALJ provides only the two examples above, so as not to unnecessarily add to the Remand PFD's length. But, the ALJ concludes that all purported conflicts may be reconciled in some manner.

⁶² Post Oak Ex. 57 at 3, paragraph 4.k.

and bird harassment measures into all on-site structures, “where practical.”⁶³ This leaves it to Post Oak to determine when and where installation of such measures should occur, as well as what types of devices should be used. Another MOU provision requires Post Oak to notify the USAF if “a large number of birds” are observed on or within 500 yards of the landfill waste placement footprint.⁶⁴ What is considered a “large number of birds” is not defined, thus making it difficult to enforce. Further, Post Oak is to “work with” nearby property owners to “attempt to minimize the synergistic effects [that may increase the bird strike threat] of the identified land uses” and is to “maintain or remove existing trees or shrubs, as needed, to limit roosting or nesting sites.”⁶⁵ Both of these requirements do not detail specific actions that must be taken and leave much ambiguity and vagueness in their enforcement. The same can be said for many of the other MOU provisions.

Perhaps the most troubling ambiguity relates to the operating hours of the landfill. The MOU requires Post Oak to seek 24/7 Operating Hours “to allow landfill operations the ability to avoid the USAF’s peak flight training hours (9 am to 4 pm, Monday – Friday).”⁶⁶ This MOU provision does not require Post Oak to conduct disposal operations outside of the USAF peak flight training hours, and Post Oak has been very clear in its position that this MOU provision does not require it to conduct disposal operations at certain times or prohibit it from conducting disposal operations during USAF peak flight training times. Thus, the MOU provision places no burden on Post Oak to limit its operations in any meaningful way, nor does it prescribe operations in any meaningful way. However, the USAF clearly deemed it important for Post Oak to attempt to minimize disposal operations during peak flight training hours, as demonstrated by the wording of the provision. Regardless of the USAF’s intent, the provision does not provide an enforceable requirement on Post Oak to limit its operations to nighttime.⁶⁷

⁶³ Post Oak Ex. 57 at 3, paragraph 4.j.

⁶⁴ Post Oak Ex. 57 at 3, paragraph 4.c.

⁶⁵ Post Oak Ex. 57, paragraphs 4.d. and 4.f.

⁶⁶ Post Oak Ex. 57, paragraph 4.l.

⁶⁷ The opposing parties argue this is a separate reason the MOU does not mitigate the bird hazard—namely, the USAF deemed it important to avoid daytime disposal operations, yet Post Oak has indicated that it is not required to do so. The

So, the ALJ agrees with the opposing parties that many provisions of the MOU are inherently unenforceable from a regulatory standpoint. The MOU's ambiguous provisions often provide "concepts" or "purposes" without establishing measurable requirements. This can be said of many permit conditions, though. For example, the permit currently requires Post Oak to "assure that the attraction of birds does not cause a significant hazard to low-flying aircraft."⁶⁸ This is a general requirement, with no specific measurable methods identified. But, it is still a standard permit provision. The same is true for other standard permit provisions. There is always some degree of ambiguity in permit conditions. Thus, this reason is not a sufficient ground for not incorporating the MOU into the permit. In fact, the USAF has requested that such incorporation occur, and the ED supports this. The ALJ agrees, despite recognizing that the MOU still contains provisions that may be difficult to enforce.

b. Will the MOU Sufficiently Reduce the Bird Strike Hazard?

Now, the ALJ turns to whether the MOU's provisions would be adequate to eliminate or minimize the bird strike risk that would be created by the landfill. If it is not, then incorporation of the MOU's provisions and reconciliation with other portions of the draft permit becomes moot.

The USAF appears to believe that the MOU's obligations eliminate or minimize the bird strike risk to an acceptable level, dropping its opposition to the landfill if the MOU's provisions are incorporated into the permit. The ALJ generally agrees with that conclusion. While the ALJ recognizes that the MOU's provisions often may be difficult to enforce, that does not mean the MOU is without benefit.

ALJ disagrees with the opposing parties on this point. The USAF did not require that Post Oak be limited to nighttime disposal activities. The fact that the USAF has requested Post Oak to seek 24/7 Operating Hours (which includes daytime), rather than nighttime operating hours only, demonstrates that the USAF was not mandating nighttime operations only.

⁶⁸ Post Oak Ex. 11 at 9.

The MOU contains a number of significant requirements that clearly will be beneficial in reducing the bird strike risk. The MOU requires Post Oak to spend \$600,000 on the installation of a bird radar system, and provides for communications between Post Oak personnel and USAF personnel regarding the bird data from such radar and the presence of birds near the landfill.⁶⁹ Similarly, the MOU requires Post Oak to retain the services of a USDA wildlife hazard management biologist whose job will be to “undertake or direct actions to keep large numbers of birds away from the landfill site, track bird trends, and conduct predictive bird modeling”⁷⁰ These are significant measures. Coupled with the other requirements of the MOU (such as planting and maintaining bird-deterrent grasses, eliminating standing water, reducing raptor nesting and roosting sites, and using bird harassment measures),⁷¹ these measures have satisfied the USAF to the point that it has dropped its objection to the landfill being permitted. The USAF knows better than anyone else the potential risks to its personnel and flight training missions.

The USAF’s withdrawal of its opposition, coupled with the testimony from Post Oak’s expert that the distance and the mitigation measures will result in the landfill not causing a significant bird strike hazard, lead the ALJ to conclude that incorporation of the MOU eliminates or minimizes the bird strike risk to a point that the landfill will not cause a significant bird hazard to low-flying aircraft. Thus, with inclusion of the MOU in the permit, the ALJ finds that the landfill will not violate 30 Texas Administrative Code § 330.545(d).

H. Incorporation of the MOU’s Provisions

Having found that the mitigation efforts required by the MOU adequately reduce the bird strike hazard to a point that the landfill would not violate 30 Texas Administrative Code § 330.545(d), the ALJ now turns to how those provisions may be incorporated into the draft permit.

⁶⁹ Post Oak Ex. 57 at 3, paragraphs 4.m. and 4.c.

⁷⁰ Post Oak Ex. 57 at 2, paragraph 4.a.

⁷¹ The opposing parties’ expert, Mr. Merritt, testified that the bird harassment techniques set out in the MOU are appropriate controls that still “should” be effective today. Tr. at 2204-2206, 2308.

The MOU contains 14 identified “responsibilities,” labeled “a” through “n.”⁷² In addition, the MOU imposes record-keeping and educational requirements on Post Oak.⁷³ Most of these obligations may be incorporated directly into the permit without modification or clarification.

However, the Commission should clarify that, in the event there is a conflict between the SOP and the MOU provisions, the MOU provisions govern. For example, the SOP currently calls for Post Oak to install a 4-foot high barbed wire fence around the perimeter of the site,⁷⁴ but the evidence establishes that such a fence will not comply with the MOU requirement for a perimeter fence designed to keep out medium to large mammals. Thus, the Commission should require Post Oak to install a fence consistent with the MOU, rather than the 4-foot fence currently identified in the SOP. To the extent there are other inconsistencies, the Commission’s final order should make it clear that the MOU provisions should be read as supplementing or, if inconsistent, modifying the existing SOP provisions.

V. SUBSURFACE CHARACTERIZATION, INCLUDING GROUNDWATER CHARACTERIZATION

In the Initial PFD, the ALJs found that Post Oak had properly characterized the subsurface, including the groundwater, at the proposed site. However, the ALJs expressed concern with the fact that the boring logs in the application were prepared before a record drought year, while the monitoring well data supporting the application was developed after or during a record drought year. To address this concern, the ALJs proposed a permit condition be added “requiring Post Oak to present additional water monitoring data to the Executive Director prior to commencing construction

⁷² Post Oak Ex. 57, Section 4 of the MOU.

⁷³ Post Oak Ex. 57, Sections 3 and 5 of the MOU.

⁷⁴ Post Oak Ex. 1 at 2058.

to demonstrate that the groundwater conditions reflected in the application accurately reflect the conditions at the site prior to construction.”⁷⁵

At the open meeting when the Commission considered the Initial PFD, the ALJ suggested that if the Commission intended to remand the case on other issues, it could also allow Post Oak to obtain updated monitoring well data to address the ALJs’ concerns that the record drought year might have impacted the data. The Commissioners appeared to agree with this and, in the Interim Order remanding the case back to SOAH, the Commission included taking additional evidence on subsurface characterization, including characterization of the groundwater, as one of the four specific issues to be addressed in the remand hearing.

At the remand hearing, the opposing parties attempted to construe this issue broadly—to include any subsurface characterization issues, including challenges unrelated to the additional groundwater data Post Oak was to obtain. The ALJ construed the issue narrowly, advising the parties the issue was limited to subsequent monitoring evidence and whether or not it was consistent with the Application’s characterization of the site’s subsurface and groundwater. Therefore, in addressing this issue now, the ALJ limits his discussion to that narrow construction of the issue.⁷⁶

Post Oak collected additional data from the monitoring wells at the site on April 14, 2017, and October 20, 2017. Post Oak submitted the data obtained as part of Mr. Hughes’ pre-filed testimony.⁷⁷ In addition, Mr. Hughes updated Table 4-9 from the application to reflect the data

⁷⁵ Initial PFD at 7.

⁷⁶ In closing arguments, the opposing parties seek to expand the discussion of the groundwater issue in numerous ways, including whether the Commission’s interpretation of an “aquifer” in another recent case has an impact upon the analysis in this case. See the opposing parties’ *Closing Arguments on Remand* at 25-26; also GCGCD Ex. 4. The ALJ declines to address any of those additional issues, limiting the analysis of the remanded groundwater issue very narrowly, as noted above. As discussed in the Initial PFD, the question of whether a perched water formation might meet the definition of an aquifer is a legal question left to the determination of the Commission. The evidence and issues on remand do not provide any additional clarification on this legal issue.

⁷⁷ Post Oak Exs. 59, 61.

collected in April and October 2017,⁷⁸ and he testified that the subsequent data collected in 2017 did not represent a material change in groundwater measurements from those previously obtained at the site.⁷⁹ Thus, his opinion did not change as to whether the Groundwater Sampling and Analysis Plan complies with the Commission's applicable rules. He testified that he continues to believe that the Groundwater Sampling and Analysis Plan complies with all applicable regulatory requirements set forth in 30 Texas Administrative Code chapter 330.

The ED's witness, Arten Avakian, agreed with Post Oak's conclusions and found that the updated data was very similar to the measurements taken previously and included in the application.⁸⁰ Similarly, William Klemt, one of the opposing parties' experts, testified that the updated water level measurements were very close to those reflected in the application and that he did not see a "significant difference between the water levels."⁸¹ In fact, no witnesses disputed Mr. Hughes' conclusion that the updated water level data essentially validated the information in the application used to characterize the subsurface and groundwater. Thus, the ALJs' concerns that the record drought might have resulted in skewed groundwater data in the Initial PFD have been adequately addressed and shown to not be an issue.

However, the opposing parties take issue with Post Oak's failure to adopt in full the ALJs' recommendations from the Initial PFD regarding updated groundwater data. Specifically, in the Initial PFD, the ALJs recommended that the Commission require additional groundwater data, including updated information from the locations of monitoring wells MW-6S and MW-15S before excavation of the landfill site. To compile the information required by the proposed special condition, the ALJs recommended that Post Oak be required to either (1) install nested wells that were screened at the levels of 435-445 feet above mean sea level (msl) at the locations of MW-6S

⁷⁸ Post Oak Ex. 62.

⁷⁹ Post Oak Ex. 58 at 8.

⁸⁰ ED Ex. ED-AA-5 at 7; Tr. at 2711-12.

⁸¹ Tr. at 2450-51.

and MW-15S, in addition to the existing screening levels at those locations, or (2) install two additional monitoring wells that were screened at the level of 435-445 feet msl, within close proximity to monitoring wells MW-6S and MW-15S.⁸²

Although Post Oak collected updated groundwater measurements, it did not implement either of the ALJs' recommendations for additional screening at 435-445 feet msl at the locations of monitoring wells MW-6S and MW-15S. Because of this, the opposing parties argue that Post Oak has not sufficiently addressed the groundwater concerns expressed by the ALJs in the Initial PFD. The ALJ disagrees.

In the Initial PFD, the ALJs found that Post Oak's groundwater analysis and subsurface characterization was properly done, met the Commission's rules, and was accurate.⁸³ However, out of an abundance of caution and to address the possible impact the record drought might have had upon groundwater measurements, the ALJs recommended that updated groundwater data be obtained. While the ALJs recommended the inclusion of additional screening at the locations of monitoring wells MW-6S and MW-15S, the screening levels used by Post Oak were not the primary concern expressed by the ALJs. Rather, it was the impact of the record drought. In obtaining updated data, Post Oak has addressed this primary concern, despite the fact that it did not utilize the additional screening levels recommended by the ALJs at monitoring wells MW-6S and MW-15S. While the additional screening levels might have been helpful, the ALJ does not find that their absence is fatal to Post Oak's efforts to assuage the concerns raised by the ALJs in the Initial PFD. On the contrary, the ALJ finds that the updated groundwater data obtained by Post Oak adequately addresses and satisfies the ALJs' concerns.

⁸² Initial PFD at 16.

⁸³ Initial PFD at 14-17. In regard to the borings in issue, the ALJs further found, "Post Oak took reasonable steps to attempt to reconcile all available data and reasonably concluded that the notations of groundwater at 442 feet msl on boring logs B-6 and B-15 did not represent an actual aquifer that needed to be addressed. The ALJs agree with that determination, given the totality of the evidence." Initial PFD at 15.

Therefore, consistent with the determination in the Initial PFD, the ALJ concludes that Post Oak's groundwater analysis contained in the application accurately reflects the conditions at the site and that Post Oak properly characterized the subsurface geology and hydrology of the site consistent with the Commission's rules.

VI. 24/7 OPERATING HOURS

Under 30 Texas Administrative Code § 330.135, "Facility Operating Hours," the SOP must specify the waste acceptance hours and the facility operating hours. The waste acceptance hours may be any time between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and transportation of materials and heavy equipment operation must not be conducted between the hours of 9:00 p.m. to 5:00 a.m. Operating hours for other activities do not require specific approval. In addition, under the rule, a permit may include alternative operating hours for up to five days in a calendar-year period to accommodate special circumstances. The Commission's regional offices may allow additional temporary waste acceptance or operating hours when emergency situations or other unforeseen circumstances could disrupt waste management services in the area.

In authorizing a permit, the operating limitations noted above may be modified by the Commission. When it adopted the operating hours rule, the Commission responded to requests for the rule to provide more specificity about when modifications could be made to operating hours by providing the following comment:

The [C]ommission believes that it needs to retain flexibility to continue authorizing operating hours on a case-by-case basis considering the potential impact on surrounding communities.⁸⁴

Thus, the Commission looks at the facts of each case when determining to allow modifications to the default operating hours in the rule.

⁸⁴ 31 Tex. Reg. 2565 (Mar. 24, 2006).

In this case, Post Oak seeks authorization to conduct waste acceptance and landfill operations 24 hours a day, seven days a week (24/7 Operating Hours).⁸⁵ The Draft Permit approved by the ED allows this. At the open meeting at which the Initial PFD was considered, the Commission expressed concern that the record did not demonstrate sufficient evidence related to Post Oak's request for these extended operating hours. Therefore, it remanded that issue.

A. The Parties' Arguments and Evidence on Remand

On remand, Post Oak presented the testimony of Wade Wheatley, who was the Director of Facility Operations and Development for Texas Disposal Systems (TDS) from 2005 to 2012. In that position, he had extensive authority and experience with the overall operations of TDS facilities, including those related to its operating hours.⁸⁶ Mr. Wheatley testified that 24/7 Operating Hours are appropriate because the Post Oak landfill will primarily service urban areas that use night time pick-ups and transportation.⁸⁷ Mr. Wheatley explained that waste collection in populated metropolitan areas during times of heavy traffic presents a safety issue; early morning collection times address this issue and meet the needs of businesses, which prefer to have trash collected while they are not operating. He testified that daytime pickups result in lack of access to parking lots, vehicles blocking dumpsters, and traffic congestion. He noted that the City of San Antonio requires waste to be collected from businesses in the central business district daily in the early morning hours.⁸⁸ Mr. Wheatley opined that the Commission's default operating hours would prevent Post Oak from serving customers that required pick-ups at night or early in the morning.

Mr. Wheatley further testified that 24/7 Operating Hours also allow for citizen drop-off service on weekends, when residential customers will be better able to utilize these landfill

⁸⁵ ED Ex. 3 at 4.

⁸⁶ Post Oak Ex. 49 at 3.

⁸⁷ Post Oak Ex. 49 at 5.

⁸⁸ Post Oak Ex. 49 at 6-7; Post Oak Ex. 50.

services.⁸⁹ Such operating hours would allow large collection vehicles to be scheduled for deliveries at times separate from when private citizens are disposing of trash at the landfill. Mr. Wheatley noted that long-haul waste hauling companies often need flexibility for their drivers, to allow them to drop waste during pre-dawn hours.

Mr. Wheatley opined that, based on his experience at TDS, the impact on nearby residents would be minimal because landfills can take actions to mitigate noise and lights.⁹⁰ He stated 24/7 Operating Hours are safer because a landfill can spread out the operations over a greater length of time, leading to fewer people at the landfill at any given time. He also stated that expanded hours allow the landfill to utilize a smaller working face, which minimizes issues with birds and vectors. Finally, Mr. Wheatley pointed to the MOU entered into between the USAF and Post Oak, which requires Post Oak to seek 24/7 Operating Hours.⁹¹

The ED contends that Post Oak's proffered justification for extended operating hours, established through Mr. Wheatley's testimony, is adequate to justify 24/7 Operating Hours.

OPIC acknowledges that Post Oak has provided numerous reasons to justify the need for 24/7 Operating Hours. OPIC does not oppose allowing Post Oak to operate beyond the default hours within the Commission's rules, but asserts that unless the Draft Permit is changed to *require* Post Oak to operate, if necessary, outside of the USAF's peak flight training hours of 9:00 a.m. to 4:00 p.m., then OPIC opposes any change to the default operating hours.

The opposing parties dispute that Post Oak's evidence establishes justification for 24/7 Operating Hours. They note that comparison to the TDS landfill is not relevant, as (1) that landfill does not operate seven days a week, (2) the evidence does not demonstrate which version of

⁸⁹ Post Oak Ex. 49 at 5-6.

⁹⁰ Tr. at 1734-36, 1748-49.

⁹¹ Post Oak Ex. 49 at 8; Post Oak Ex. 57 at 3, paragraph 4.1.

the Commission's rules that landfill was permitted under, and (3) the evidence does not demonstrate the manner or circumstances under which the TDS landfill operates. Thus, the opposing parties argue it is neither precedential nor persuasive for determining whether Post Oak should be granted 24/7 Operating Hours.

The opposing parties also note that the Commission is required to consider "the potential impact on surrounding communities" in determining whether to allow expanded operating hours. In this case, the opposing parties contend that Post Oak will likely accept most of its waste during evening, overnight, and early morning hours. This is, in part, because the Post Oak facility is proposed to be sited in an allegedly unsuitable location, namely in close proximity to the USAF flight training facility. Thus, the opposing parties argue, this puts Post Oak in an unusual situation: if it operates during daytime hours, it creates potential bird strike risks that could adversely affect USAF training flights; but, if it operates at night, this adversely impacts the surrounding community. Thus, the opposing parties argue this shows the particular unsuitability of this specific location.

Moreover, the opposing parties argue that Post Oak has not addressed the impact on surrounding property owners at all. They allege that Mr. Wheatley could point to nothing in the permit, permit application, or even commitments from Post Oak representatives that would ensure that appropriate measures would be taken to minimize impacts on the neighboring community. They argue that Mr. Wheatley's opinion—that because TDS has been able to operate at night without causing significant complaints from neighbors, then Post Oak will be able to do the same—is nothing more than speculation. According to the opposing parties, Post Oak has provided no evidence addressing the community impact other than this speculative testimony from Mr. Wheatley.

B. The ALJ's Analysis

This is an unusual case. Because of flight training patterns, the USAF has sought to have Post Oak operate primarily outside of the peak flight training hours of 9:00 a.m. to 4:00 p.m.,⁹² which

⁹² Post Oak Ex. 57 at 3, paragraph 4.1.

are squarely in the middle of the Commission's default operating hours. Thus, to comply with its MOU with the USAF, Post Oak must seek operating hours that will allow it to operate at night. But, such nighttime operations may adversely impact the surrounding community, as noise, traffic, and lighting would all be increased at night—any of which could disturb those living near the landfill.

The issue of bird strike hazards has been discussed previously in this Remand PFD. As the ALJ concluded in that discussion, the bird strike hazard is significant. To mitigate this hazard, the USAF believes that giving Post Oak the flexibility to operate as much as possible outside of peak flight training hours is important. Given the significance of the bird hazard, the ALJ agrees. It will be important for Post Oak to have flexibility in its operations, so as to attempt to mitigate the bird strike hazard to USAF training flights. The experts have differed in their opinions about whether daytime or nighttime landfill operations present a greater risk of bird strike hazard during the USAF's peak flight training hours.⁹³ Post Oak should have flexibility to react, based upon which theory proves true, and adjust its waste acceptance operations so as to mitigate the bird strike hazard.

Moreover, Post Oak has proffered significant practical business reasons why nighttime operations are appropriate. These reasons are not just for Post Oak's benefit, but also for the benefit of the communities and waste haulers that would find it helpful to be able to dispose of waste at the landfill during nighttime hours. In fact, Post Oak has provided significant justification, as testified to by Mr. Wheatley, that the City of San Antonio and other waste haulers would find nighttime disposal hours beneficial.⁹⁴ Much like road maintenance and construction, in urban areas there are practical benefits to having waste collection occur at night—when traffic is minimized and waste collection activities and hauling may be less disruptive to businesses and individuals that need those services. While there is potential that nighttime waste disposal activities may negatively impact surrounding

⁹³ Dr. DeFusco testified that daytime operations tend to discourage foraging because the disturbance caused by operations scares the foraging birds away, and the main birds in issue do not forage at night. Tr. at 2098; 2619-2620. In contrast, Mr. Merritt disagreed that daytime operations discourage bird foraging. Tr. at 2296-97.

⁹⁴ The City of San Antonio requires, in the central business district, that all roll-out containers must be collected between 10:00 p.m. and 5:00 a.m., and dumpsters must be collected between 6:00 p.m. and 10:00 p.m., or between 3:00 a.m. and 7:30 a.m. See Post Oak Ex. 50, at 13-14, Section 14-41(f)(1)-(3).

property owners, the ALJ agrees with Mr. Wheatley's opinion that such negative impacts can be minimized or eliminated by mitigation efforts.

Finally, the ALJ disagrees with the opposing parties that Post Oak has offered no evidence or consideration of the "potential impact on the surrounding community." First, evidence at the Initial Hearing addressed surrounding land uses and the landfill's compatibility with them, even with 24/7 Operating Hours.⁹⁵ Moreover, the USAF and its pilots are part of that community, given their use of the

nearby airspace. Clearly, 24/7 Operating Hours will benefit them, as evidenced by the USAF's request for such hours. Further, the evidence demonstrates that 24/7 Operating Hours will allow the landfill working face to be smaller and the waste acceptance to be spread out—both of which are arguably beneficial to those in the nearby community. Namely, a smaller working face limits the attractiveness of the landfill to vectors and provides for smaller operations,⁹⁶ and accepting waste over a longer period of time is likely to reduce the amount of vehicles and people at the landfill at any one time—which also reduces the possibility of traffic congestion from waste-hauling vehicles.⁹⁷ Thus, the evidence does address some of the impacts on the surrounding community, showing some benefits from 24/7 Operating Hours.

For all of the reasons noted above, the ALJ recommends that if the Commission determines it appropriate to issue the recommended permit, then it also authorize 24/7 Operating Hours.

⁹⁵ See, e.g., Tr. at 298-99, 387, 1695-96, 1707-08.

⁹⁶ Tr. at 1761-62, 1779-81.

⁹⁷ Tr. at 1751-52.

VII. ASSESSMENT OF TRANSCRIPT COSTS

In this case, the ALJs ordered Post Oak to arrange for and pay the costs of having a court reporter attend the hearing and prepare a transcript, subject to allocation of such costs at the end of the proceeding. The TCEQ's rules prohibit the assessment of any cost to a statutory party who is precluded by law from appealing any ruling, decision, or other act of the Commission.⁹⁸ Therefore, no costs may be assessed against the ED or OPIC. However, the other parties may be assessed a portion of the transcript costs. The factors to be considered in assessing costs include: the party who requested the transcript; the financial ability of the party to pay the costs; the extent to which the party participated in the hearing; the relative benefits to the various parties of having a transcript; the budgetary constraints of a state or federal administrative agency participating in the proceeding; and any other factor which is relevant to a just and reasonable assessment of the costs.⁹⁹

After the initial hearing, Post Oak requested that transcript costs be split evenly between it and the opposing parties as a group, with the opposing parties then choosing how to allocate their 50% apportionment. The opposing parties argued that Post Oak was the only party that could benefit financially from having a transcript and asked the Commission to assess all transcript costs against Post Oak. Without explaining the reasoning, except to say that Post Oak did not oppose payment of transcript costs, the ED suggested that Post Oak bear all the transcript costs. In the Initial PFD, the ALJs acknowledged that Post Oak's method of apportionment was reasonable, but noted that Post Oak had provided no evidence of transcript costs to allow the ALJ to make a recommendation on apportionment. Therefore, the ALJs declined to recommend apportionment.

After the remand hearing, Post Oak made no specific request for apportionment of transcript costs. Moreover, Post Oak has provided no evidence of those costs, so as to allow their

⁹⁸ 30 Tex. Admin. Code § 80.23(d)(2).

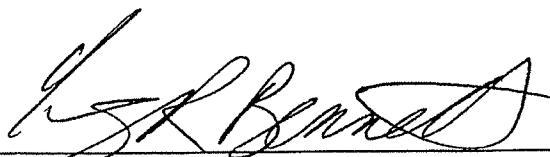
⁹⁹ 30 Tex. Admin. Code § 80.23(d)(1).

apportionment. In light of this, and the lack of evidence on the transcript costs, the ALJ recommends that the Commission require no apportionment of transcript costs.

VIII. CONCLUSION

In conclusion, the ALJ finds that, on remand, Post Oak has adequately addressed the concerns underlying the Commission's remand in regard to the four issues identified in the Commission's Interim Order. When combined with the evidence presented at the original hearing and the issues discussed in the Initial PFD, the ALJ finds that Post Oak has made the required demonstrations to enable it to be entitled to receive a permit to operate a Type I MSW facility, provided that the MOU between Post Oak and the USAF is incorporated into the permit. To assist the Commission in resolving this matter, the ALJ has prepared for the Commission's consideration a proposed order consistent with the determinations made in the Initial PFD, as supplemented by this Remand PFD. That proposed order is attached to this Remand PFD. In preparing the proposed order, the ALJ considered proposed findings of fact and conclusions of law submitted by the parties. Any proposed findings or conclusions not adopted in the attached proposed order are rejected by the ALJ.

SIGNED May 15, 2018.



CRAIG R. BENNETT
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN ORDER GRANTING THE APPLICATION BY POST OAK CLEAN GREEN, INC. FOR A NEW TYPE I MUNICIPAL SOLID WASTE LANDFILL IN GUADALUPE COUNTY, TEXAS; TCEQ Docket No. 2012-0905-MSW; SOAH Docket No. 582-15-2498

On _____, the Texas Commission on Environmental Quality (Commission or TCEQ) considered an application by Post Oak Clean Green, Inc. (Post Oak) for a new Type I Municipal Solid Waste Landfill in Guadalupe County, Texas. A proposal for decision (PFD), prepared in two parts (an initial PFD and a remand PFD), was presented by Craig R. Bennett, Administrative Law Judge (ALJ), with the State Office of Administrative Hearings (SOAH), who conducted an evidentiary hearing concerning the application on January 5-14, 2016, and January 17-19 and 22-23, 2018, in Austin, Texas.

After considering the ALJ's initial and remand PFDs, the Commission adopts the following Findings of Fact and Conclusions of Law:

I. FINDINGS OF FACT

Introduction and Procedural History

1. On December 28, 2011, Post Oak filed an application with the TCEQ seeking a land use compatibility determination on proposed Municipal Solid Waste (MSW) Permit No. 2378 (Parts I and II).
2. The proposed facility (Facility) is located at 7787 Farm to Market (FM) Road 1150, Guadalupe County, Texas 78155 (the Landfill).
3. On January 6, 2012, the Executive Director declared Parts I and II of the application administratively complete.
4. On January 18, 2012, the Notice of Receipt of Application for Land Use Compatibility Determination for a New Municipal Solid Waste Permit was published in the *Seguin Gazette*.
5. On April 4, 2012; April 11, 2012; and April 18, 2012, the Notice of Public Meeting regarding the application was published in the *Seguin Gazette*.

6. On April 24, 2012, the TCEQ conducted a public meeting on the permit application in Seguin, Texas.
7. On June 4, 2013, the Notice of Application and Preliminary Decision on Land Use Compatibility Determination for a Municipal Solid Waste Permit was published in English and Spanish in the *Seguin Gazette*.
8. On October 14, 2013, Post Oak filed Parts III and IV of the application for a permit to authorize a new Type I MSW Landfill that will accept MSW and certain special waste.
9. The Executive Director declared Parts III and IV administratively complete on October 23, 2013.
10. Per Post Oak's request, the TCEQ consolidated Parts I-IV into a single application (the Application).
11. On November 13, 2013, Post Oak filed an updated copy of the consolidated Application.
12. A Notice of Public Meeting was published in English and Spanish in the *Seguin Gazette* on February 12, 2014; February 19, 2014; and February 26, 2014.
13. A second public meeting was held on March 6, 2014, at the Seguin-Guadalupe County Coliseum in Seguin, Texas.
14. The Executive Director declared the Application technically complete and issued a Draft Permit (proposed Permit No. MSW-2378) on January 12, 2015.
15. The TCEQ held public meetings on the Application on April 24, 2012 (Parts I and II) and March 6, 2014 (Parts I-IV).
16. The TCEQ's Chief Clerk received public comments and hearing requests regarding the Application.
17. The Executive Director filed his Response to Comments (RTC) on June 30, 2015. The RTC was admitted into evidence at the contested case hearing held in this matter as ED Ex. SO-4.
18. On January 23, 2015, Post Oak requested that the matter be referred by the TCEQ directly to the State Office of Administrative Hearings (SOAH) for a contested case hearing.
19. On March 25, 2015, SOAH received the administrative record for this matter from the TCEQ.
20. Notice of the preliminary hearing was sent to interested parties, and then published in the *Seguin Gazette* on April 3, 2015. The notice included the time, date and place of the hearing, as well as the matters asserted, in accordance with the applicable statutes and rules.

21. On April 6, 2015, ALJs Craig R. Bennett and Sarah Ramos held a preliminary hearing in this matter in Austin, Texas. The following appeared, were admitted as parties, and participated in the preliminary hearing: (1) Post Oak; (2) the Executive Director; (3) the Office of Public Interest Counsel (OPIC); (4) Guadalupe County, Texas; (5) the City of Schertz, Texas (Schertz); (6) the City of Seguin, Texas (Seguin); (7) the Schertz/Seguin Local Government Corporation (SSLGC); (8) Guadalupe County Groundwater Conservation District (GCGCD); (9) Stop Post Oak Dump (SPOD); and (10) Kathryn Brady, individually (collectively, the Parties).
22. At the preliminary hearing, the ALJs found that notice had been adequately provided and that both the TCEQ and SOAH have proper jurisdiction over this matter.
23. The ALJs convened the initial hearing on the merits on January 5, 2016, at SOAH's offices at 300 W. 15th Street, Austin, Texas. The hearing continued from day to day and concluded on January 14, 2016. The record closed on April 29, 2016, but was reopened for receipt of additional evidence and finally closed on July 26, 2016.
24. The ALJs prepared a PFD which was presented to the Commission for its consideration on April 12, 2017.
25. Following consideration of the PFD, the Parties' Exceptions to the PFD, the Parties' Reply to Exceptions, ALJ Bennett's response to the Parties' Exceptions, and the oral arguments of the Parties, the Commission remanded the matter back to SOAH on four specific issues only: (1) to ensure that written certifications that all wells within the jurisdiction of the Railroad Commission of Texas are properly capped, plugged, and closed in the permit boundary are contained in the evidentiary record within a timeframe to be determined by the ALJ; 2) to allow additional evidence on the issue of bird hazards; 3) to allow additional evidence on the subsurface characterization, including characterization of the groundwater; and 4) to allow additional evidence on the need for 24 hour per day, 7 day per week operating hours.
26. On May 18, 2017, ALJ Bennett held a preliminary hearing in this matter in Austin, Texas. All of the Parties, with the exception of Guadalupe County, Texas, appeared and participated in the preliminary hearing.
27. ALJ Bennett convened the hearing on remand on January 17, 2018, at SOAH's offices at 300 W. 15th Street, Austin, Texas. The hearing continued from day to day, and concluded on January 23, 2018. All of the Parties appeared through counsel or by proxy and participated in the hearing on remand. The record closed on March 16, 2018.
28. The Facility would include a new Type I MSW landfill; a recyclables, used oil and lead battery storage area; a scrap tire storage area; a large items and white goods storage area; a reusable materials staging area; and a citizens' convenience area.
29. The Facility would serve a population equivalent of approximately 156,000 people in Guadalupe and Gonzales Counties, and surrounding areas.

30. The Facility would be located approximately 12 miles east of Seguin and 3.1 miles east-southeast of the intersection of Interstate Highway 10 (IH 10) and FM 1104 in Guadalupe County, Texas.
31. The Facility's proposed site would consist of approximately 1,003 acres, with a landfill footprint of approximately 331 acres.
32. Post Oak engaged in a site selection process.
33. The Facility would accept waste generated from both public and private entities. The primary classification of solid waste to be accepted at the Facility is MSW. Categories of waste will include household waste, vegetative waste, commercial waste, non-hazardous industrial waste, construction-demolition waste, and special wastes.
34. Post Oak estimates that the Facility will receive an estimated 300,000 tons of waste during the first year of operation. This rate is estimated to increase at 5.9% annually for the first 15 years and then remain at that level for the remaining life of the Facility.
35. Post Oak estimates that the operating life of the Facility will be 128 years.
36. The Application contains the information required of applicants under 30 Tex. Admin. Code ch. 330 and other regulations that apply to MSW applications in Texas.
37. There are no site-specific conditions that require special design considerations. With the conditions contained herein, the site is suited to the design, construction, operation, and, ultimately, closure and post-closure of a MSW landfill.
38. It is not unusual for an MSW landfill to be sited on the outcrop area of major or minor aquifers.
39. Post Oak (or consultants on its behalf) coordinated the Application with the Texas Parks and Wildlife Department (TPWD), the Federal Aviation Administration (FAA), the Texas Historical Commission (THC), the Texas Department of Transportation (TXDOT), the US Army Corps of Engineers (USACE), and the United States Air Force (USAF).
40. Post Oak's representations made in the Application are enforceable permit conditions.

Facility Design and Construction

41. The Application's Site Development Plan includes a General Facility Design Report, a Surface Water Drainage Report, a Landfill Waste Management Unit Design Report, a Geology Report, a Groundwater Sampling and Analysis Plan, a Landfill Gas Management Plan, a Closure Plan, and a Post-Closure Plan, as required by 30 Tex. Admin. Code § 330.63.
42. The General Facility Design Report addresses the following issues under the following sections of 30 Tex. Admin. Code ch. 330: Facility access in accordance with § 330.63(b)(1); waste movement in accordance with § 330.63(b)(2)(A) and (B);

ventilation and odor control in accordance with § 330.63(b)(2)(C); the landfill support area, landfill support area layout, and, citizen convenience area equipment, in accordance with § 330.63(b)(2)(D) and (E); sanitation and water pollution control in accordance with § 330.63(b)(3) and (4); and endangered species management in accordance with § 330.63(b)(5).

43. Attachment 3 of the Site Development Plan (the Landfill Waste Management Unit Design Report) depicts the location and characteristics of the Facility, including: the outline of the units; general locations of main interior Facility roadways and the general locations of main interior Facility roadway access to fill areas; locations of monitoring wells; locations of buildings; representations of the proposed construction sequence of the Facility; fencing; provisions for the maintenance of any natural windbreaks, such as greenbelts or appropriate screening; all site entrance roads from public access roads; sectors with appropriate notations to communicate the types of wastes to be disposed of in individual sectors; the general sequence of filling operations; the sequence of excavations and filling; dimensions of cells or trenches; and maximum waste elevations and final cover.
44. Post Oak's compliance with the requirements of 30 Tex. Admin. Code § 330.63(d)(4) is summarized in Attachment 3 of the Site Development Plan and each of the requirements is addressed in the Landfill Waste Management Unit Design Report.
45. Commission rule 30 Tex. Admin. Code § 330.63(b) requires information regarding generalized design and construction information. While this is addressed in detail in Attachment 3, Landfill Waste Management Unit Design, Attachment 1 provides an overview of the Site Plan.
46. The general operational and construction aspects of the Facility that must be considered in the design of a landfill are detailed in the Landfill Waste Management Unit Design, Part III, Attachment 3.
47. Attachment 3 contains the plans for the design and construction of the Facility, including: (1) general operational and construction aspects of the Facility that must be considered in the design of the Facility; (2) geotechnical analyses to demonstrate that the soils at the site are suitable for the proposed construction of the Facility; (3) plans for the design and construction of the Facility's liner and final cover systems; and (4) plans for the design and construction of the Facility's leachate and contaminated water management systems.
48. The Facility will provide for all-weather operation with either an asphalt or concrete site entrance road.
49. The Facility will utilize area fill methods, and when completed, the filled areas will range between a minimum elevation of 420 feet and maximum elevation of completed landfill 691.8 feet above mean sea level (msl).
50. A Cross-Section Location Map is provided, as are Cross Sections A-A' through D-D', found in Part III, Figures 3-3 through 3-7.

51. These cross sections represent a sufficient number of cross sections to depict the existing and proposed depths of all fill areas and show information from soil boring logs in profile.
52. The construction and design details of the perimeter of the waste disposal areas at the Facility are included on the Landfill Completion Plan and a Landfill Typical Perimeter Cross Section, found in Part III, Figures 3-1 and 3-8.
53. The specification for a liner quality control plan is in the Soils and Geosynthetics Construction Quality Assurance Plan (Quality Assurance Plan), found at Part III, Appendix 3D-1.
54. The Geotechnical Analysis in Part III, Appendix 3B relies upon the Geology Report in Part III, Attachment 4, which discusses the subsurface investigations, subsurface testing and sampling procedures, laboratory testing, and geotechnical test results in order to characterize the subsurface at the Facility in terms of soil water content, unit weight, classification, gradation, moisture/density relationship, permeability, consistency, shear strength, and compressibility.
55. Based on the information provided by the field investigations that were conducted at the Facility, and the laboratory testing of samples taken during those investigations, as reflected in the Geology Report, the Geotechnical Analysis analyzes the suitability of the area subsoils to support the foundation of the landfill and to be utilized in the construction of the compacted soil liner that will underlie the Facility and the infiltration layer component of the final cover system.
56. The engineering tests were conducted pursuant to standards developed and promulgated by the American Society for Testing and Materials (ASTM) and other recognized industry practices and procedures, as appropriate.
57. ASTM standards are internationally recognized and accepted and are the standards required by TCEQ for MSW geotechnical reports.
58. The subsurface soil samples were tested in independent soils laboratories including Burge-Martinez Consulting, Arias & Associates, and TRI Environmental, Inc.
59. The laboratory testing is provided in Boring Logs and Geophysical Logs; BMC-Arias Hydraulic Conductivity Reports; and CJI Geotechnical Laboratory Results, included in Part III, Appendices 4B, 4C and 4D.
60. The laboratory tests of the strata underneath the Facility are described in Section 4.3, Site Stratigraphy of the Geology Report, and laboratory reports are provided in Appendices 4B, 4C and 4D.
61. The strata and soil borings are illustrated in Cross Sections A-A' through G-G', and the soil stratum from which each soil sample was collected is identified, along with a cross-section location map, in Part III, Figures 4-9 through 4-16.

62. At least one sample from each non-sand or non-silt soil that will form the sidewalls and base of the landfill was tested in the laboratory to evaluate its soil characteristics.
63. The laboratory reports of each soil layer that is less than 30 feet below the lowest elevation of the Facility are described in Boring Logs and Geophysical Logs; BMC-Arias Hydraulic Conductivity Reports; and CJI Geotechnical Laboratory Results, found at Part III, Appendices 4B, 4C, and 4D.
64. Cross Sections A-A' through G-G' identify the soil stratum from which each soil sample was collected.
65. The results of testing performed on subsoil samples taken from beneath the area are generally consistent with the strata, soil classifications, and soil properties determined from the subsurface investigations. These findings were sufficient to characterize the geotechnical site conditions and properties of the soils beneath the area.
66. Tests were performed on clay samples obtained by Shelby tubes to characterize the in-situ conditions, and remolded samples were tested to identify suitability of the cohesive soils for use as compacted clay barrier layers in the liner and final cover.
67. Permeability tests were performed in accordance with ASTM D, Method F, where tap water is used as the permeant.
68. The Application contains a geotechnical report that describes and summarizes the geotechnical properties of the subsurface and discussed the suitability of the soils for the uses for which they are intended.
69. The geotechnical conclusions are discussed in Section 5.2 of the Geology Report.
70. Plans for the design and construction of the Facility's liner systems are provided in Landfill Liner System and Final Cover System Design and Construction, found in Part III, Appendix 3D.
71. Landfill cells will be lined with a compacted clay liner (CCL) or a geosynthetic clay liner (GCL) and overlain by a 60-mil high-density polyethylene (HDPE) geomembrane. The compacted soil liner will be a minimum of two-feet thick with a hydraulic conductivity no greater than 1×10^{-7} centimeters per second.
72. As designed, over 99% of the landfill is underlain by the composite drainage layer.
73. The sensitivity analysis conducted on Post Oak's behalf, demonstrated that the dilution factors remained high across the set of parameters.
74. A typical cross-section of the constructed liner is provided in Figures 3-9 through 3-12.
75. The liners are constructed on slopes designed to promote positive leachate drainage to perforated collection pipes, then to the cell sumps for removal.

76. The Application's Quality Assurance Plan, Part III, Exhibit 3d-1, includes soil and liner quality control testing procedures and sampling frequencies.
77. The Application's Quality Assurance Plan, Part III, Exhibit 3d-1, provides guidance on liner evaluation reporting in Section 14.0 Documentation of Liner and Final Cover System.
78. The Application's Quality Assurance Plan, Part III, Exhibit 3d-1, specifies the materials, equipment, and construction methods to be used for the construction of the Facility's compacted soil liner in Section 5.0.
79. The Application's Quality Assurance Plan, Part III, Exhibit 3d-1, specifies the installation methods and quality control testing and reporting for placement of the Facility's geomembrane liner in Section 7.0.
80. Seasonal High Water Levels (SHWL) are discussed in Exhibit 3D-2 to Attachment 3, which was prepared to address the requirements of 30 Tex. Admin. Code § 330.337. Exhibit 3D-2 to Attachment 3 discusses the construction of liners at depths below the SHWL, or in areas otherwise subject to hydrostatic head levels.
81. In the unexpected event that groundwater contact with the liner occurs, the analyses determined that the groundwater can be as much as 6.2 feet above the clay liner excavation and still maintain a factor of safety of 1.2.
82. The purpose, function, and engineering details of the leachate collection system are discussed in Leachate and Contaminated Water Management in Part III, Appendix 3C.
83. The material and construction specifications and construction quality assurance/quality control requirements for the leachate collection system components of the liner are included in Section 3.0 of the Leachate and Contaminated Water Management, and Sections 8.0, 9.0, and 10.0 of the Quality Assurance Plan. Further details are provided in Leachate Collection System Details in Part III, Figures 3-1.

Characterization of Subsurface Geology and Hydrology

84. The Application's General Geology and Soils Statement addresses the geology of the site of the Facility.
85. The Geology Report required by 30 Tex. Admin. Code § 330.63(e) is included in Part III of the Application as Attachment 4.
86. The regional geology of the area where the Facility is located is discussed in the Geology Report, including the regional physiography and topography of the area, and the stratigraphy and lithology of the subsurface in the vicinity of the Facility.
87. A regional geologic map is included in the Geology Report.

88. The Geology Report discusses regional structure influenced by the two major fault zones located in Guadalupe County, and whether there are any active geologic processes in the vicinity of the Facility, such as faulting, seismic impact zones, or unstable areas.
89. The requirements in 30 Tex. Admin. Code § 330.63(f), concerning the characterization and monitoring of groundwater below the Facility, are specifically addressed in the Groundwater Sampling and Analysis Plan, which is in Part III of the Application, Attachment 5.
90. Post Oak's Groundwater Sampling and Analysis Plan includes information about the following subjects: relevant groundwater monitoring data from onsite wells, the subsurface hydrogeology beneath the site, the groundwater monitoring system, identification of any contamination that has entered the groundwater from the site, the proposed groundwater monitoring program, and detection and identification of hazardous constituents in the groundwater.
91. Post Oak's subsurface investigation followed a soil boring plan consistent with the requirements of 30 Tex. Admin. Code § 330.63(e)(4).
92. Post Oak conducted 90 borings, with 41 of them being at least 30 feet below the elevation of the deepest proposed excavation at the site.
93. Groundwater analytical data from groundwater sampling at the Facility is included in the Application in Appendix G to the Geology Report.
94. Piezometer PZ-45 had a measured seasonal high water level of 434.09 feet msl, which was six inches above the lowest possible excavation of the landfill at that point. However, this low level of intrusion does not present hydrostatic uplift concerns.
95. There is no existing MSW management unit at the site, thus no historic groundwater monitoring data exists for a groundwater monitoring system.
96. Post Oak conducted additional data collection from the monitoring wells at the Post Oak site, first on April 14, 2017; and then again on October 20, 2017, as part of a site visit in which a representative of the protesting parties, William Klemt, participated.
97. Post Oak has updated Table 4-9 from the Application to reflect the data collected in April and October 2017.
98. The groundwater levels at the Post Oak site have not changed significantly from, and are consistent with, those reflected in Table 4-9 from the Application.
99. The groundwater data collected in April and October 2017 do not represent a material change in groundwater measurements from those previously measured at the Post Oak site.

100. No facts were presented in the remand hearing that warrant a reconsideration of the subsurface characterization, including groundwater characterization, included as part of the Application.
101. The location of the landfill is on the outcrop of the Upper Muddy Wilcox geologic structure, which is an aquitard.
102. Underlying the site are varying layers of clay and sandy soils. The clay layers are of low permeability generally and act as a buffer between the sandy layers, which are more permeable and allow groundwater movement.
103. There are three identified layers of relatively high permeability at the site, which have been characterized as the 425 Sand, the 395 Sand, and the 325 Sand. For the eastern part of the landfill site, the 425 Sand is the uppermost aquifer, as it is the highest water-bearing stratum.
104. There is a dry line generally running diagonally across the middle of the landfill site, and to the west side of that dry line, no water was found in the 425 Sand. Thus, on the western side of the site, the uppermost aquifer is the 395 Sand, as that is the highest water-bearing stratum.
105. The Geology Report contains information on the regional groundwater quality of the Carrizo-Wilcox Aquifer.
106. Groundwater samples were analyzed for general water quality parameters, total metals, and volatile organic compounds. The results of those sample events are tabulated in Table 4-11 of the Geology Report in Attachment 4 to Part III of the Application, and corresponding analytical reports are provided in Appendix G of the Geology Report.
107. The Groundwater Sampling and Analysis Plan provides an analysis of the most likely pathway for pollutant migration from the landfill in the event that the primary barrier liner underlying the landfill is penetrated.
108. In conducting site characterization, Post Oak considered all available and relevant information, including geologic and hydrogeologic information, as well as information obtained from geophysical methods, including geophysical logs and bore holes.
109. Under TCEQ's rules, the seasonal high water level is the highest measured water level in an aquifer.
110. An aquifer is defined in TCEQ's rules as a geological formation; group of formations, or portion of a formation capable of yielding significant quantities of groundwater to wells or springs.
111. Based on the site-specific geological, geotechnical, and hydrogeological data obtained from the subsurface investigations conducted at the site, the primary pollutant pathway in the north and northeastern part of the site would be a slow downward migration into the 425 Sand. Once in groundwater of the 425 Sand, the pollutant would move laterally

above the 425 Clay, in the direction of groundwater flow of that subunit, generally to the south.

112. In the south and southwestern part of the proposed landfill area, any leaking contaminants would move through the unsaturated zone into the groundwater in the 395 Sand. Once in the groundwater of the 395 Sand, a pollutant would move laterally above the 395 Lower Clay in the direction of groundwater flow, nominally to the west.
113. In each case, because the Lower Clay stratum is less permeable than the Sand stratum, in the event that contaminants penetrate the liner system, the pathway for pollutant migration would be laterally above the relevant Lower Clay unit.
114. If there is contamination in the groundwater below the Facility, it will be detected by Post Oak's monitoring wells before it would travel vertically to a lower stratum.
115. The groundwater gradient in the 425 Sand is primarily south; the groundwater gradient in the 395 Sand is primarily west; and the groundwater gradient in the 325 Sand is primarily north.
116. The direction of groundwater flow in the 425 Sand, the 395 Sand, and the 325 Sand is different from the regional groundwater flow direction.
117. The geology in the area of the Facility is suitable for the siting and operation of an MSW landfill, based on the physiography and topography of the area, and the stratigraphy and lithology of the subsurface in the vicinity of the Facility.
118. The geology and soil conditions are examined in the Geotechnical Analysis, including Appendix 3B. Drainage is examined in Sections 2.0 and 3.0 of the Surface Water Drainage Plan, included in Attachment 2 of the Site Development Plan.
119. The Application includes the required information regarding soils at and beneath the Facility.
120. The Application adequately describes the regional geology and hydrology in the vicinity of the Facility.
121. No limitations should be placed on the design, construction or operation of the Facility due to the geology in the area of the Facility.

Evaluation of Faults

122. The Faulting Study included a detailed survey of the area within a 1.25-mile radius of the permit boundary of roads and other geographic features for signs of damage, repairs to damage, visible depressions, surface lineations, and other such signs of active faulting or subsidence.
123. Site visits were made to search for similar signs of faulting or subsidence.

124. No signs of faulting or subsidence were observed.
125. TXDOT reported that based on its maintenance records for the last four years, there was no indication of any structural damage to any TXDOT roads, bridges or facilities due to faulting or creep within a 2 to 3-mile radius of the crossroads of FM 1104 and FM 1150.
126. There are no faults or surface expressions of faults within a mile of the Facility.
127. The lack of faults or surface expressions of faults is supported by published geologic maps and information on the structural and seismic history of the area in the vicinity of the Facility.
128. No evidence of displacement of surficial deposits was found during the field investigations or in the review of boring logs from the subsurface investigations that have been conducted for the Facility.
129. The aerial photographs and topographic maps of the area do not show lineaments or other surface expressions indicating the presence of a potential fault.
130. The Holocene Epoch extends from the end of the Pleistocene Epoch to the present and represents the most recent 10,000 years of the Quaternary Period.
131. No faults occurring during the Holocene Epoch have been found to exist within 200 feet of the Facility.
132. The Facility is not located within a seismic impact zone.

Existing Water and Oil and Gas Wells

133. Sections 5.0 through 5.3 of the Application provide information pertaining to existing and abandoned water wells and oil wells, which relates to 30 Tex. Admin. Code § 330.61(c)(2), (h)(5), and (l).
134. Subsection 5.1 identifies known water wells within 500 feet of the permit boundary, with the state well numbering system designation for Texas Water Development Board "located wells." It includes a GeoSource report prepared in November 2011, as well as Banks Environmental Data report prepared in September 2013, which is attached as Attachment 4, Appendix 4A to Part III of the Application. It also includes a field investigation by RRW Consulting LLC and Cook-Joyce. Figure 8 displays the location of known water wells.
135. Subsection 5.2 provides the location of plugged, existing or abandoned oil wells within the permit boundary and in the 500-foot perimeter area, according to the Railroad Commission of Texas (RRC) database. Subsection 5.2 further identifies oil and gas wells under the jurisdiction of the RRC, and provides a commitment to plug any open oil and gas wells on site in accordance with RRC rules and guidelines. Figure 8 displays the location of oil wells.

136. Subsection 5.3 identifies the abandoned oil and water wells that are situated within the footprint of the proposed landfill. Figure 8 displays the location of abandoned oil and water wells.
137. The Application describes known water wells and oil and gas wells within the permit boundary, or within the limits of the waste disposal boundary, of the Facility, the locations of which are shown on Part II, Figure 8.
138. Post Oak identified 11 existing and abandoned water wells and 70 oil and gas wells under the RRC's jurisdiction that are within 500 feet of the proposed permit boundary and within the proposed permit boundary itself.
139. Of the 70 oil and gas wells, 42 were identified as being located within the proposed permit boundary and two of the wells were identified as being within the proposed limit of waste.
140. Within the permit boundary, 41 oil and gas-related wells were drilled, and each of these wells has been properly capped, plugged, and closed in accordance with RRC regulations.
141. The RRC had previously misidentified a 42nd well as having been drilled within the permit boundary, but the RRC has since corrected that information to reflect that this well location relates to a well that was permitted by the RRC, but never drilled.
142. All 41 of the known oil and gas-related wells located within the permit boundary have been properly identified, and properly capped, plugged, and closed in accordance with all applicable RRC rules.
143. An abandoned oil pipeline on the Post Oak property was not identified in the Application.

Transportation

144. In 2012, Post Oak gathered data on roadways that Post Oak intends to use to access the Facility.
145. The study analyzed traffic on two two-lane, asphalt-surfaced roads maintained by TXDOT: FM 1104 and FM 1150.
146. Local traffic is expected to increase 3% per year through 2080, and site-generated traffic is expected to increase at the same rate as waste projections, 5.9% per year.
147. By 2029, when Post Oak reaches its ultimate waste acceptance volume of 2,500 tons per day, Post Oak will have approximately 1,528 total trips per day.
148. Vehicles making trips to and from the landfill will include 87 compactor trucks, 26 transfer trucks, 230 small trucks, and 20 other vehicles per day.

149. Post Oak provided documentation establishing coordination with TXDOT regarding all designs of proposed public roadway improvements such as turning lanes, storage lanes, traffic and location restrictions, etc., associated with the proposed landfill.
150. Because traffic will increase because of the landfill, TXDOT requires and Post Oak has agreed to make certain improvements to maintain adequacy of the roadways.
151. TXDOT determined that once planned roadway improvements were made, access to the Facility should be adequate for expected traffic volumes for the expected life of the Facility.

Airport Safety

152. Post Oak has included in its Application an analysis of public use airports in the area and has provided airport and FAA coordination letters.
153. The Facility is not located within 10,000 feet of any airport runway end used by turbojet aircraft or within 5,000 feet of any airport runway end used by only piston-type aircraft.
154. One public-use airport is within six miles of the site, the Old Kingsbury Aerodrome Airport.
155. The Federal Aviation Administration (FAA) issued its final revised determinations on June 29, 2016. In those last determinations, the FAA found that the proposed landfill does not exceed obstruction standards and would not be a hazard to air navigation provided certain conditions are met.
156. The conditions in the FAA determinations require that:
 - a. obstructions will be marked and lighted;
 - b. the operator will give written notice of actual construction or alteration five days after construction reaches its greatest height; and
 - c. Post Oak contact the commander of the United States' Randolph Air Force Base to address potential issues the landfill may pose to pilots using the Seguin Auxiliary Airfield (the airfield) for military flying training.
157. On December 22, 2016, Post Oak and the USAF, as represented by the 12th Flying Training Wing and 502nd Air Base Wing, located at Joint Base San Antonio (JBSA), entered into a Memorandum of Understanding (MOU) detailing agreed-upon measures Post Oak will employ to mitigate the USAF's concerns regarding the permitting and operation of the Post Oak municipal solid waste landfill.
158. Also on December 22, 2016, Brigadier General Heather L. Pringle sent a letter withdrawing the USAF's objections and comments on this matter.
159. The Post Oak site is outside the five- and six-mile radii referred to in 30 Tex. Admin. Code § 330.545(b), (d).

160. The Post Oak site is outside the bird aircraft safety hazards (BASH) relevancy area set out in the Joint Land Use Study (JLUS) issued in July 2015, while the Post Oak Application was still pending technical review.
161. The JBSA-Seguin Auxiliary Airfield BASH relevancy area described in the JLUS coincides with current and prior FAA guidance.
162. The USAF is a signatory to the "Memorandum of Agreement Between the Federal Aviation Administration, the U.S. Air Force, the U.S. Army, the United States Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the U.S. Department of Agriculture to Address Aircraft-Wildlife Strikes," (Multi-Agency MOA) wherein the USAF has agreed to "encourage and advise owners and/or operators of non-airport facilities [such as landfills] to follow the siting criteria in Section 1-3 of AC 150/5200-33." According to AC 150/5200-33 for "Approach or Departure airspace [a] distance of 5 statute miles [between an airport's aircraft movement areas, loading ramps, or aircraft parking areas and the wildlife attractant] is recommended, if the wildlife attractant may cause hazardous wildlife movement into or across the approach or departure airspace."
163. The MOU was signed by both the installation commander, General Pringle, and the flying training wing commander who are responsible for the flying mission at Seguin Auxiliary Airfield.
164. The Facility will, absent implementation of the measures outlined in the MOU between Post Oak and the USAF, cause a significant bird hazard to low-flying aircraft.
165. Implementation of the measures outlined in the MOU between Post Oak and the USAF will reduce the bird hazard such that the Facility will not cause a significant bird hazard to low-flying aircraft.

Endangered and Threatened Species

166. Post Oak investigated whether the Facility was located in the range of threatened or endangered species.
167. TPWD is responsible for providing recommendations about protections for fish and wildlife resources to state agencies that approve permits or licenses. Tex. Parks & Wild. Code § 12.0011.
168. Post Oak submitted, as part of the Application, a species assessment prepared by qualified biologists in accordance with standard procedures of the United States Fish and Wildlife Services (USFWS) and TPWD.
169. The biological assessment was based on three site visits, including one site visit in November 2010 and two site visits in June 2012.

170. As part of the assessment, Post Oak considered both federal and state regulations regarding endangered and threatened species habitat, as applicable, and coordinated with the TPWD.
171. The assessment determined that no suitable habitat for federally-listed threatened or endangered species exists within the project area, or within 300 feet of the project area boundary.
172. No threatened or endangered species were observed during site visits on the 1003-acre area of the Facility.
173. No federally-designated critical habitat occurs at the Facility.
174. The area of the Facility has low potential to provide any suitable habitat for any state-listed species occurring in Guadalupe County.
175. Post Oak has agreed to implement TPWD's recommendations in relation to the construction and operation of the Facility.
176. The Facility will not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species.
177. Post Oak adequately evaluated the presence of any potential for adverse effects of the Facility on endangered or threatened species.

Wetlands and Floodplains

178. Post Oak provided a wetlands delineation survey.
179. Post Oak was required to include a wetlands determination under applicable federal, state, and local laws and discuss wetlands in accordance with 30 Tex. Admin. Code § 330.553. That demonstration can be made by providing evidence that the facility has a United States Army Corps of Engineers permit for the use of any wetlands area. 30 Tex. Admin. Code § 330.61(m)(2).
180. Post Oak identified wetlands and other jurisdictional waters of the United States located within the Facility boundary per applicable federal, state, and local laws and requirements.
181. Because the survey concluded that some impacts to wetlands/jurisdictional waters would occur, Post Oak applied to the USACE in December 2011 for an individual permit and is awaiting permit approval.
182. Post Oak has certified that the identified impacts to wetlands are to be mitigated with a USACE Individual Permit currently being pursued.

183. The Permit requires that Post Oak obtain the individual permit from USACE before construction of the Facility begins.
184. The Facility will result in impacts to 0.34 acre of wetlands and 11,628 linear feet of stream channel of wetlands/jurisdictional waters in the landfill operations area.
185. Because Post Oak has an application pending with USACE under Clean Water Act, § 404, it was not required to provide any of the demonstrations mentioned in 30 Tex. Admin. Code § 330.553(b) for those wetlands, such as whether wetland degradation could be avoided or whether ecological resources will be adequately protected.
186. A later survey identified additional wetland areas totaling 3.0 acres in the total 1,003 acre tract beyond the landfill operations area.
187. The landfill site is on a topographic ridge, and it slopes from 510 above msl near the northwest corner to approximately 450 above msl on the southeast side.
188. At least five intermittent tributaries connect to one tributary on the southeast side near County Road 215C.
189. That tributary connects with another unnamed tributary on the southeast before connecting with Nash Creek near the intersection of Nash Creek Road and County Road 215B.
190. Three ponded areas are in the northern part of the property, and one of them is located at the beginning of one of the tributaries.
191. These water features are most likely jurisdictional waters of the United States because they connect to Nash Creek, which drains into the Guadalupe River.
192. The Post Oak property contains at least two potential ephemeral drainage areas, indicated by slight topographic draws on the southwestern part of the property.
193. The § 404 permit application includes an "Alternatives Analysis," explaining why the landfill cannot be constructed without the destruction of wetlands, and asking for approval of alternatives to their destruction.
194. After a USACE permit is issued, Post Oak will be required to implement a mitigation plan.
195. Post Oak has asked USACE to approve its mitigation multiplier of 10, by which Post Oak intends to replace the impacted wetlands with 3.4 acres of wetlands, 12,024 linear feet of constructed ephemeral stream channel, and 5,876 linear feet of stream channel preservation enhancement, resulting in a net increase of 3.0 acres of wetlands and 6,000 linear feet of stream channel at the site.

196. Post Oak did not consider possible impacts to off-site wetlands. Instead, Post Oak chose to design the Facility to prevent the release and migration of any waste, contaminant, or pollutant beyond the point of compliance.
197. The Facility must be designed and operated so that it will not violate Texas Water Code § 26.121, the federal Clean Water Act, or the requirements of the § 404 permit.
198. Each receiving, storage, processing and disposal area must have a containment system to collect spills and thereby prevent the release of any contamination, runoff, spills, or precipitation.
199. Post Oak identified 3.0 acres of wetlands that were not included in its § 404 permit application. However, these acres are in the landfill's mitigation area, thus indicating that they will not be impacted during the landfill's construction and operation.
200. Post Oak must have stable disposal units. Each receiving, storage, processing, and disposal area will have a containment system to collect spills and thereby prevent the release of any contamination, runoff, spills, or precipitation. The containment units will prevent the release and migration of any waste, contaminant, or pollutant beyond the point of compliance; therefore, they will adequately protect the wetlands.
201. Post Oak did not present any evidence about the potential effects of catastrophic release of waste to the wetlands; however, there was no evidence that the engineering calculations are incorrect. Furthermore, water that comes in contact with waste will not be discharged into waters in the state or nation, including wetlands, in violation of any requirements of the Texas Water Code, the Clean Water Act or Texas Pollutant Discharge Elimination System (TPDES) requirements. 30 Tex. Admin. Code § 330.553(b)(1).
202. Post Oak will not violate state water quality standards or the Clean Water Act or jeopardize the continued existence of endangered or threatened species in the non-jurisdictional wetlands. 30 Tex. Admin. Code § 330.553(b)(2).
203. The Facility has been designed to avoid disturbing wetlands and jurisdictional waters, to the extent possible.
204. The Application includes adequate provisions to show that the Facility will not cause or contribute to significant degradation of wetlands, in compliance with TCEQ's rules.
205. The Application complies with TCEQ's requirements regarding wetlands, including 30 Tex. Admin. Code §§ 330.61(m) and 330.553.
206. No portion of the Facility will be constructed within the 100-year floodplains delineated in the Federal Emergency Management Agency (FEMA) floodplain map included as Figure 16 of the Application.

207. Construction and operation of the Facility will not cause a restriction of the flow of the 100-year flood, a reduction of the temporary water storage capacity of the floodplain, or a washout of solid waste.
208. The Facility will not require any levees or other improvements to provide protection from a 100-year flood.
209. No part of the waste disposal areas are within the 500-year floodplain delineated on the FEMA Floodplain Map.

Land Use-Zoning, Surrounding Uses, and Growth Trends

210. Sections 4.0 through 4.3 of Part II of the Application pertain to impact on surrounding area, which relates to 30 Tex. Admin. Code § 330.61(c), (g), and (h).
211. Land surrounding the Post Oak property is used for industrial (oil production) and agricultural purposes.
212. Use of the Post Oak site for a municipal solid waste Facility will not adversely impact human health or the environment.
213. The site is not located within the city limits or extraterritorial jurisdiction of any local government, and there is no zoned area within two miles.
214. Within a one-mile radius of the site, 1.6% of the land is used for residences, and the rest of the land is used for rangeland or oil and gas exploration.
215. A small, unmarked cemetery is 3,600 feet southwest of the landfill boundary.
216. The only ponds within one mile of the site are brine ponds, associated with petroleum production, and small stock ponds.
217. The largest stock pond, 3.75 acres, is 1/2 mile east of the site.
218. No known schools; licensed day care facilities; churches; hospitals; lakes; commercial, recreational, or industrial areas; historical structures; significant archeological sites; or sites with exceptional aesthetic quality are within one mile of the permit boundary.
219. Guadalupe County's population grew almost 50% from 2000-2010. The majority of growth in the future is expected to be around the metropolitan areas along the IH 35 corridor, particularly in the City of Schertz.
220. Eighteen residences or other structures are within one mile of the site, two of which are approximately 200 feet south of the permit boundary on Nixon Road (also referred to as County Road 215C). Two additional residences are approximately 1,200 feet farther southwest; and a cluster of five residences is located on Dix Road (also referred to as County Road 215C) beyond ½ mile south of the Facility. The other nine residences or structures are between ½ and one mile to the west, north, and east of the permit boundary.

221. The Facility's perimeter will have a buffer zone of at least 125 feet. The northwestern, southeastern, and southwestern perimeter will have a buffer zone of approximately ¼ mile along Nixon Road, Dix Road, and the northwest perimeter along FM 1150.
222. In the buffer zone, the Facility will use practices to preserve native species of flora, fauna, wooded canopy, and wetlands.
223. The northeastern portion of the site, adjacent to FM 1150, will have a 125-foot buffer.
224. At the waste disposal area, the Facility will have a buffer zone with a minimum six-foot high berm with additional screening provided by an eight-foot fence or vegetation.

Land Use-Water Wells

225. Eleven water wells are within 500 feet of the permit boundary.

Land Use-Groundwater Conservation District Rules

226. GCGCD Rule 8.1 states, "[i]n no event may waste or sludge be permitted to be applied in any manner in any outcrop area of any aquifer within [GCGCD]." GCGCD's rule was adopted before Post Oak's application was filed with TCEQ in October 2013.
227. Texas Health and Safety Code § 363.112(a) allows a municipality or county to adopt an ordinance or order that specifically designates an area in which municipal or industrial solid waste cannot be disposed, provided that the municipality or county specifically designates the area of the municipality or county in which the disposal of municipal or industrial solid waste will not be prohibited.
228. GCGCD is not a municipality or the governing body of Guadalupe County.

Land Use-Operating Hours

229. The Post Oak landfill will primarily service urban areas that will necessitate nighttime pick-ups and transportation. Daytime pickups result in lack of access to parking lots, vehicles blocking dumpsters, and traffic congestion, and 24/7 operating hours allow for greater efficiency and safety for collection and transportation.
230. 24/7 operating hours allow for citizen drop-off service on weekends, when residential customers will be better able to utilize these landfill services.
231. Post Oak will be receiving waste from long-haul waste hauling companies, whose drivers require time flexibility to allow the vehicles to drop waste during pre-dawn hours.
232. Waste collection in populated metropolitan areas during times of heavy traffic presents a safety issue and early morning collection times address this issue and meet the needs of businesses that prefer to have trash collected while they are not operating.

233. The City of San Antonio is a municipality that requires putrescible waste to be collected from businesses daily in early morning hours.
234. The Commission's default operating hours could prevent Post Oak from serving customers that require pick-ups at night or in the early morning.
235. The growing population in the area of Post Oak's facility necessitates flexible waste acceptance hours.
236. The MOU entered into by the USAF and Post Oak requires Post Oak to pursue 24/7 operating hours.
237. 24/7 operating hours allow large collection vehicles to be scheduled for deliveries at times separate from when private citizens are disposing of trash at the landfill.
238. The impact on nearby residents would be minimal because Post Oak will take actions to mitigate noise and lights.
239. 24/7 operating hours are beneficial because Post Oak can spread out the operations over a greater length of time, providing for fewer people at the landfill at any given time.
240. The expanded hours allow Post Oak to utilize a smaller working face, which minimizes issues with birds and vectors.
241. Post Oak can better expand the time for landfill waste disposal operations outside the USAF's peak flight training hours with the flexibility of 24/7 operating hours.
242. Pyrotechnic devices would not be used at night.
243. Occupational Safety and Health Administration requirements allow facilities to lower the decibel levels on back-up alarms on vehicles while they are being used at night.
244. Post Oak has justified its need to operate 24 hours per day, seven days per week.

Land Use-Nuisance Conditions

245. Construction and operation of the Facility in compliance with the Application and the Permit will not result in pollution of the surrounding land.
246. Construction and operation of the Facility in compliance with the Application and the Permit will not result in contamination of groundwater and surface water.
247. Construction and operation of the Facility in compliance with the Application and the Permit will not result in breeding of insects or rodents.
248. Construction and operation of the Facility in compliance with the Application and the Permit will not result in the creation of odors adverse to human health, safety, or welfare.

- 249. Noise is not a component of the Commission's definition of nuisance.
- 250. Noise from the Facility will not rise to a level that would constitute a nuisance.
- 251. The Application proposes sufficient provisions to avoid causing a nuisance.

Competency and Compliance History

- 252. Post Oak has provided the information required in 30 Tex. Admin. Code § 330.59(f).
- 253. The Draft Permit requires Post Oak to employ a licensed solid waste facility supervisor and qualified equipment operators in compliance with TCEQ's rules before commencing operations.
- 254. Post Oak has an unclassified compliance history rating under TCEQ's rules because the Facility has not yet been constructed and operated.

Groundwater Protection and Groundwater Monitoring

- 255. The Geology Report describes the regional aquifers in the vicinity of the Facility, based upon published and open-file sources.
- 256. The Geology Report describes the regional aquifers beneath and in the vicinity of the Facility in terms of their associated geologic units, composition, hydrogeologic properties, confined or unconfined conditions, hydraulic connectivity with other units, potentiometric surfaces, groundwater flow rates and water quality, recharge zones, and general water quality.
- 257. The Geology Report provides information on the uses of groundwater and the locations of water wells in the vicinity of the facility.
- 258. The regional aquifers in the vicinity of the facility are isolated from each other.
- 259. A total of 90 borings were installed at the Facility.
- 260. Eleven of the deepest borings were geophysically logged to evaluate the stratigraphy of the deeper confining units.
- 261. Thirty-three borings were completed as site monitoring wells or piezometers to evaluate groundwater conditions.
- 262. Eighty-two borings extend at least five feet below the deepest proposed excavation.
- 263. Forty-one borings were installed deeper than 30 feet below the deepest proposed excavation.
- 264. Data obtained from soil borings and piezometers installed during all of these investigations were analyzed to determine the subsurface conditions.

265. A summary of site subsurface investigation activities is provided in Table 4-5 and discussed in Section 4.0 of the Geology Report.
266. Soil samples were collected from the borings for geotechnical testing and to characterize the soils and subsurface strata beneath the site.
267. Groundwater elevation data from the piezometers were used to determine the presence of groundwater and to characterize groundwater flow beneath the site.
268. A complete analysis of the site's stratigraphy is contained in Sections 4.2 and 4.3 of the Geology Report including the referenced tables and figures.
269. The lithology encountered during subsurface investigation of the site is typical of the Wilcox Group.
270. The Upper Muddy portion of the Wilcox Aquifer is approximately 500 feet thick at the location of the Facility.
271. The Upper Wilcox functions hydrogeologically as a low permeability aquitard.
272. Four sand units were encountered, each underlain by a corresponding confining clay unit.
273. Stratigraphic subunits encountered at the site from top to bottom were labeled: Upper Sand and Clay, the 425 Sand, the 425 Lower Clay, the 395 Sand, the 395 Lower Clay, the 325 Sand, and the 325 Lower Clay.
274. Correlations of stratigraphy were made based on lithologic descriptions on boring logs, interpretation of geophysical logs, and geotechnical laboratory data.
275. The interpretation of lithology from geophysical logs using natural gamma profiles is presented in Appendix 4H to Part III of the Application.
276. Once subunits were identified, analysis of site-specific groundwater gradient data established that the water-bearing sand units are isolated from each other.
277. The hydrogeologic isolation of the sands is discussed in detail in Section 4.3 of the Geology Report: including the referenced tables and figures, and Appendix 4I to Part III of the Application.
278. Waste disposed of in the landfill will be separated from groundwater at each location within the excavated footprint by a CCL, or a GCL, overlain by a 60-mil HDPE geomembrane.
279. The Application and Draft Permit include contingency plans in the event that the excavation encounters groundwater at any point in the excavated footprint.

280. The evidence sufficiently demonstrates that there are adequate provisions in the Application and the Draft Permit to protect groundwater in compliance with TCEQ's rules.
281. Section 2.0 of the Groundwater Sampling and Analysis Plan describes the groundwater monitoring system for the Facility.
282. The groundwater monitoring system has been designed for the Facility in accordance with the requirements of 30 Tex. Admin. Code § 330.403 based on site-specific technical information including identification of the uppermost aquifer and lower confining unit, and characterization of aquifer thickness and groundwater flow rate and direction. The design also considered thickness, stratigraphy, lithology, and hydraulic characteristics of the geologic units above the groundwater, the materials of the uppermost aquifer, and the materials and characteristics of the lower confining unit beneath the uppermost aquifer.
283. The groundwater monitoring system will consist of 96 monitoring wells in 38 well clusters that have been designed along a point of compliance on the site perimeter.
284. Monitoring wells are spaced every 600 feet around the perimeter of the landfill to monitor the up-gradient 425 Sand zone and both up-gradient and down-gradient 395 Sand and 325 Sand zones.
285. Down-gradient 425 Sand zone monitoring wells are spaced every 300 feet because of the higher groundwater velocity in that zone. At those nine locations, one well will be installed into the lower portion of the 425 Sand.
286. At all other proposed monitoring locations, three nested wells will be installed; one in the lower portion of the 425 Sand, one in the lower portion of the 395 Sand, and one in the lower portion of the 325 Sand.
287. Although the 395 Sand is the uppermost continuous water-bearing zone, Post Oak will monitor the 325 Sand as a conservative, extra, protective measure.
288. The wells associated with each cell will be installed prior to waste placement in those cells or prior to the placement of leachate in a leachate evaporation pond constructed in that cell's future location.
289. The Application includes adequate provisions for groundwater monitoring.

Waste Management Design-Leachate Recirculation

290. The Executive Director no longer supports Post Oak's use of leachate recirculation and Post Oak is no longer requesting approval of the use of leachate and methane gas condensate recirculation system as part of the Application.

Waste Management Design-Alternate Liner Demonstration

291. Post Oak's Alternate Liner Demonstration does not demonstrate the projected concentration levels of contaminants at the point of compliance, but simply provides dilution attenuation factors for the contaminants.
292. For purposes of the Alternate Liner Demonstration, Post Oak has not demonstrated that the maximum contaminant levels will not be exceeded at the point of compliance.

Waste Management Design-Stability Evaluations

293. Analyses were performed to assess the performance of the proposed landfill design with respect to global slope stability, sidewall liner stability, final cover stability, anchor trench design, and consolidation/heave of the landfill floor. These analyses evaluated the stability of the proposed interim and final landfill slopes and cover system.
294. Stability analyses conducted on behalf of Post Oak were credible, reliable, and thorough.
295. The Application includes adequate analysis to ensure slope stability.
296. Post Oak's stability evaluations, specifically as related to shear strength needs, have been adequately translated into design specifications that can be used by the contractors building the landfill.

Waste Management Design-Differential Settlement

297. Post Oak's preliminary foundation evaluation of the site concluded that, under the operation of the landfill, there could be differential settlement of up to 37 inches between the center point of the landfill and the edge of the landfill.
298. Even with a differential settlement of 37 inches, the leachate collection pipes in the landfill will still flow toward the sump.
299. A differential settlement of 37 inches will not compromise the integrity of the leachate collection system.

Waste Acceptance Plan

300. Section 2 of Part II of the Application pertains to the Waste Acceptance Plan required by 30 Tex. Admin. Code § 330.61(b).
301. Section 2 identifies the sources and characteristics of waste to be accepted, including a description of the general sources and generation areas contributing wastes, with respect to the Facility.
302. The Application provides that sufficient equipment will be available at the Facility to effectively manage and conduct operations in accordance with permit conditions and includes a table describing its minimum equipment requirements, equipment types,

number of respective equipment units required per waste acceptance rate, typical sizes, and functions.

303. Except in regard to radioactive waste, Post Oak's Waste Acceptance Plan satisfies all requirements of the Commission's rules.
304. Post Oak's Site Operating Plan (SOP) does not specifically address the detection of radioactive waste and does not provide adequate measures for inspecting for radioactive waste.
305. Post Oak should be required to identify with specificity the equipment and procedures it will use to attempt to ensure that no radioactive materials are accepted at the site. Such procedures should include the use of proper equipment that can detect radioactive material and posted signs advising incoming waste disposers that: (1) disposal of radioactive waste is prohibited by law, (2) Post Oak uses equipment to detect unlawful radioactive waste, and (3) Post Oak will notify the appropriate authorities if a waste disposer is found attempting to dispose of radioactive waste.

Site Operating Plan-General

306. Post Oak submitted Part IV of the Application, which constitutes the proposed SOP for the Facility.
307. The Application provides that the initial opening, preconstruction conference, preopening inspection, and information submittal activities will be conducted in accordance with 30 Tex. Admin. Code § 330.73(c)-(f).
308. The Application provides how an Operating Record will be maintained at the Facility, including a table describing the records to be maintained, the frequency of record maintenance, along with a reference to the specific rule that governs the maintenance of the particular record at issue.
309. The Application provides that the Facility will be staffed with qualified and experienced personnel and includes a table describing the key personnel, their respective qualifications, and their respective roles.
310. The Application addresses routine operational inspections and documentation, including a table describing routine site inspections to be conducted at the Facility, instructions for such inspections, and the frequency of them.
311. The Application describes the personnel training programs for the Facility, including a description of all minimum training requirements based on subject matter.
312. The Application describes which wastes will be prohibited and which wastes are not acceptable for disposal, but are acceptable for temporary storage at the Facility. It also provides the procedures for the detection and prevention of prohibited wastes.

313. The SOP includes provisions related to training employees, including training for record keeping, license requirements, detection and prevention of disposal of prohibited wastes, fire protection and response, site inspection, site safety, site access, and maintenance.
314. The landfill personnel would receive training through a combination of classroom instruction and on-the-job training in procedures relevant to the position for which they are employed.
315. The Application identifies the sources and characteristics of waste to be accepted, including a description of the general sources and generation areas contributing wastes, with respect to the Facility.
316. The landfill would have a program for the detection and prevention of the disposal of prohibited wastes, including regulated hazardous and PCB wastes.
317. Site personnel would receive site-specific safety training.
318. In order to enhance site safety, access to the active areas would be limited to authorized personnel and equipment would be kept well-maintained.
319. The SOP adequately provides for training of employees and guides the Facility's day-to-day operations.
320. The SOP outlined in the Application includes a screening program for the detection and prevention of the disposal of prohibited wastes.
321. All incoming loads would be visually monitored at the gatehouse and working face.
322. Site personnel would be properly trained to identify any prohibited wastes, perform random inspections, and know what to do in the event prohibited wastes are identified.
323. Detection of a prohibited waste would trigger an investigation and appropriate measures.
324. The SOP requires the maintenance of records of load inspection reports and regulated hazardous or PCB waste notifications.
325. Prohibited wastes would be properly segregated, protected against the elements, secured against unauthorized removal, isolated from other waste and activities, and returned to the hauler for proper disposition.
326. The SOP provides adequate controls for screening of prohibited wastes, except in regard to radioactive waste.
327. The Application describes the steps to be taken to prevent fires at the Facility, the procedures in the event of a fire, and the firefighting methods and procedures. It provides a description of earthen fire control, fire equipment, fire protection training and TCEQ notification. The Application describes how access will be controlled in terms of site security and traffic control procedures at the Facility.

328. The SOP would provide adequate controls for site access.
329. The only access point through the perimeter fence would be through a gated entrance to the main property, with a gate attendant, at the permit boundary.
330. Entry to the active portion of the site would be restricted to designated personnel, approved waste haulers, and properly identified persons whose entry is authorized by site management.
331. The Application describes procedures for unloading of wastes including information on specific collection areas at the Facility, and the related procedures.
332. The Application describes signage for the Facility.
333. The Application describes any existing or abandoned drainage or pipeline easements within or adjacent to the Facility and any associated buffer zones.
334. The Application describes the landfill markers and the permanent benchmark to be established at the Facility.
335. Post Oak plans to confine the unloading areas to a minimum size.
336. The SOP has measures to control odors such as prompt landfilling of waste, daily covering of freshly landfilled waste, controlling ponded water, and properly managing leachate and contaminated water.
337. The Application describes procedures to minimize waste materials along the route to the Facility.
338. The Application describes procedures for the disposal of large items at the Facility.
339. The Application describes procedures for compliance with the federal Clean Air Act and 30 Tex. Admin. Code § 330.15(d) to comply with prohibitions against burning waste. It also identifies potential sources of odor and describes methods to be employed at the Facility to control odor.
340. The Application describes disease vector control procedures designed to effectively control animals capable of mechanically or biologically transferring a pathogen from one organism to another, including daily cover, ponded water avoidance, and pest extermination alternatives, as appropriate.
341. The Application describes the nature of the access roads and internal roadways and explains the means by which tracking of materials and dust control will be managed at the Facility.
342. The Application describes how salvaging activities, if any, will be managed and how scavenging will be prohibited at the Facility.

343. The SOP provides adequate controls for vectors, salvaging, and scavenging.
344. The SOP adequately addresses the response to salvaging and scavenging.
345. The Application describes the mechanisms to be employed at the Facility to monitor and control methane gas emissions, including a detailed description of monitoring procedures in Attachment 6, the Landfill Gas Management Plan.
346. The Application describes means and methods of waste compaction at the Facility.
347. The Application addresses the daily cover that will be used at the Facility.
348. The SOP provides adequate controls for ponded water.
349. The Application describes how intermediate cover of soils, vegetative growth, or other suitable erosion control mechanisms will be used at the Facility for all areas that will receive additional waste but may be inactive for more than 180 days.
350. The Application explains that no alternative cover will be used absent temporary authorization and permit amendment or modification.
351. The Application describes the final cover for the landfill, including an explanation of the components of the final cover, slope range, and drainage control, with reference to Part III of the Application, Attachment 3, Figures 3-12; Part III of the Application, Attachment 2; and Part III of the Application, Attachment 3, Exhibit 3D-1.
352. The Application addresses erosion of the cover and explains the plan for repairs in the event of cover erosion.
353. The cover application record, with the required elements, will be maintained on site and available for appropriate inspection.
354. The Application includes adequate provisions for cover, in compliance with TCEQ's rules.
355. The Application describes surface water management procedures at the Facility designed to minimize water contact with waste through grading, containment berms, diversion and water pumping, if necessary, as well as other appropriate methods.
356. The Application describes how certain acceptable special wastes will be handled at the Facility and that no other special wastes will be accepted without written approval of the TCEQ.
357. The Application describes whether and how industrial solid wastes can be accepted at the Facility.

358. The Application describes that yard wastes, and wood and brush not mixed with other waste may be diverted for recycling and mulch.
359. The Application describes collection, storage, and subsequent transport off-site of recyclables, used oil, and lead acid batteries by approved vendors.
360. The Application describes how a limited quantity of scrap tires will be accepted for subsequent transport off-site by approved vendors.
361. The Application describes the management of large items and white goods, which will be staged for off-site transport for recycling. It also describes that, if large/white goods are disposed of at the operating face of the landfill, placement will be protective of the liner protective cover and the chlorofluorocarbons will be managed in accordance with federal regulations.
362. The Application describes how inert materials such as asphalt, brick, and concrete will be utilized by the Facility for site operations such as road base and erosion control.
363. The Application describes how the Facility will manage containers located in the Citizen's Convenience Area (CCA), including a table summarizing waste stream processing in the CCA.
364. The Application describes how any contaminated water, incidental to waste and recyclable handling at the CCA, will be managed at the Facility to avoid water pollution.

Site Operating Plan-Windblown Waste

365. The Application describes how the Facility will be operated to minimize windblown material.
366. The Application describes the soil cover that will be used at the Facility at least once every 24 hours as a means to control disease vectors, fire, odor, windblown litter, and scavenging.
367. The SOP provides many details and means for how Post Oak will control windblown waste at the site.
368. The SOP does not specify how litter scattered throughout the site will be picked up once a day on days the Facility is in operation.

Closure/Post-Closure Plans

369. A Closure Plan is included in Part III, Attachment 7, of the Application.
370. The Closure Plan specifies the procedures that the Facility must follow for closure of any disposal unit of the landfill or final closure of the entire landfill.

371. Post Oak's Closure Plan includes a description of the steps that will be undertaken to close the disposal units, a general schedule for final closure, a description of the final cover system, and the methods used to install the final cover.
372. Section 2.0 of Attachment 7 sufficiently describes the design of the final cover.
373. A Post-Closure Plan concerning the ongoing monitoring and maintenance activities that will be conducted at the site following closure is also included as Attachment 8.
374. The Application includes adequate provisions for cover consistent with TCEQ's rules.
375. The Application provides adequate closure and post-closure plans consistent with TCEQ's rules.

Financial Assurance

376. Closure and post-closure costs are included in the Application's Cost Estimates as required by 30 Tex. Admin. Code § 330.63(j), including in Appendices 7A and 8A.
377. Post Oak submitted Appendix 7A as part of the Application to comply with the applicable regulatory requirements in 30 Tex. Admin. Code § 330.63(j) and the applicable landfill closure care cost estimate requirements in 30 Tex. Admin. Code ch. 330, subch. L.
378. Post Oak's closure cost estimates are based on the estimated cost of hiring a third party to close the largest waste fill area of the landfill that could potentially be open in the year to follow and those areas that have not received final cover.
379. Costs are estimated for performing the post-closure care maintenance requirements in 30 Tex. Admin. Code § 330.463 in accordance with the Facility's Post-Closure Plan in Attachment 8 to the Site Development Plan.
380. Post-closure care cost estimates in Attachment 8 of the Application are based on the estimated cost of hiring a third party to conduct post-closure care cost activities for the Facility during the 30-year post-closure care period.
381. Post Oak's post-closure cost estimates account for the total costs of conducting post-closure care for the largest area of the Facility that could possibly require post-closure care in the year to follow, including annual and periodic costs over the entire 30-year post-closure care period.
382. Post Oak has proposed adequate financial assurance.

Additional Findings

Unstable Areas

383. The Subsidence and Faulting Study was conducted in part because the Facility is located near the Darst Creek Field, an area of oil and gas extraction, which activities could potentially cause unstable areas.
384. There have been no induced seismic events at the Darst Creek Field, even during the years of the highest production there.
385. There are no indications of subsidence, and the literature indicates no reports of land subsidence issues in the footprint of the Carrizo-Wilcox Aquifer.
386. The Facility is not in the vicinity of an active fault.
387. Data from soil borings, field observations, and examination of aerial photographs also show no evidence of subsidence at the Facility.
388. An unstable area is an area susceptible to natural or human-induced events or forces that are capable of impairing the integrity of the landfill.
389. No fill materials or other subsurface conditions that may cause significant differential settling of the base grades of the proposed landfill were identified in the subsurface analysis.
390. The Facility is not located in an unstable area and subsidence is not expected to occur.

Historic Preservation

391. Post Oak conducted an historic conservation survey and determined that no historic properties will be affected by the Facility.
392. The THC concurred that no historic properties will be affected by the Facility.

Council of Government

393. Post Oak provided Parts I and II of the Application to Alamo Area Council of Government (AACOG) for its review of the Application for compliance with AACOG's regional plan.
394. On January 5, 2011, the Resource Recovery Committee of the AACOG voted to grant Post Oak's request for a letter of approval.
395. Although it later revised its position, AACOG determined that the Facility was consistent with the regional plan, and advised that the AACOG's letter of approval could be submitted to TCEQ with the Application.

Easements and Buffer Zones

396. There are no existing drainage or pipeline easements within or adjacent to the Facility.
397. An abandoned and unused pipeline easement crosses the southwestern portion of the site, but the pipeline is disconnected and vacated in accordance with Guadalupe County Records.
398. To the extent any portion of abandoned pipeline is encountered in the construction of the Facility, the pipeline will be removed and disposed of properly.
399. An abandoned electrical easement is depicted on Part II, Figures 7 and 8 of the Application.
400. The Application describes buffer zones around the perimeter of the Facility, which will include berms, native flora and fauna, and a wooded canopy, with wetland preservation practices.
401. The Application addresses the buffer zones and earthen and vegetation screens implemented to screen the view of waste, which is more specifically described in Part III, Attachment 3, Figure 3-1.

Surface Water Protection/Prevention of Erosion and Soil Loss

402. Commission rule 30 Tex. Admin. Code § 330.63(c) requires the Site Development Plan to include a surface water drainage report addressing the requirements of Subchapter G of Chapter 330 of the Commission's rules, entitled "Surface Water Drainage."
403. The Site Development Plan summarizes the Application's compliance with the requirements of Subchapter G, and each of the requirements is addressed in detail in the Facility Surface Water Drainage Report, included in Part III, Attachment 2.
404. The Facility Surface Water Drainage Report provides a detailed description of the hydrologic and hydraulic analyses performed for the Facility, including the results of those analyses.
405. The pre-development drainage areas, drainage area acreage, existing flow paths, and analysis points are depicted in Figure 2A-1.
406. Drainage calculations for the pre-development areas are presented in Exhibit 2A-1.
407. The post-development drainage areas, drainage area acreage, existing and developed flow paths, and analysis points are depicted in Figure 2A-2.
408. Drainage calculations for the post-development areas are presented in Exhibit 2A-2.
409. Additional drainage calculations for the proposed Facility drainage system design are presented in Appendix 2B.

410. Structural designs and hydraulic calculations for all proposed collection, drainage, and detention facilities are detailed in Part III, Appendix 2B of the Application.
411. A plan for the inspection, maintenance, repair, and restoration of the proposed stormwater management system is included in of Erosion, Sedimentation, and Drainage Control for Operating Areas of the Landfill, including Appendix 2C.
412. The pre- and post-development peak flow rates and runoff volumes are presented in Appendix 2A, Existing and Post Development Storm Water Runoff Comparison.
413. The hydrologic methods are discussed in Sections 1.0 and 2.0 of Existing and Post Development Storm Water Runoff Comparison. Drainage calculations, with a more detailed description of the hydrologic methods and assumptions employed, are also included in Appendix 2A.
414. The 25-year, 24-hour rainfall event used for design of the Facility is 8.16 inches, as indicated in Figure 6 of the Pre-Development Hydrologic Calculations.
415. The drainage system for the Facility is designed to collect and control runoff from a 24-hour, 25-year storm event.
416. The collection and diversion of stormwater run-on and the use of run-on diversion and containment berms to prevent flow onto the active portion of the landfill is discussed in Exhibit 3C-4, Working Face Containment and Berm Design.
417. An erosion and sedimentation control plan with interim controls for the phased development of the Facility is included in the portion of the Application, entitled Erosion, Sedimentation and Drainage Control for Operating Areas of the Landfill.
418. The top dome surfaces and external embankment slopes have been designed to minimize erosion and soil loss through the use of appropriate side slopes, vegetation, and other structural and nonstructural controls during operations and at closure.
419. The Application includes calculations of estimated peak velocities for top surfaces and external embankment slopes in Sheet Flow Velocities for Final Cover and for Intermediate Cover, found in Part III, Annex 2B-1B and Ex. 2C-2.
420. The proposed slopes and lengths of the top surfaces ensure that the velocity of stormwater flowing over these surfaces will not exceed the permissible non-erodible velocity.
421. For the external embankment slopes, diversion structures will be installed along the slopes to limit stormwater flow to velocities below the permissible non-erodible velocity.
422. The soil loss calculations for the Facility's top surfaces and external embankment slopes were calculated using the United States Department of Agriculture's Revised Universal Soil Loss Equation.

423. The analysis of pre- and post-development conditions is set forth and the resulting peak flow rates, maximum velocities, and volumes are presented in Existing and Post-Development Storm Water Runoff Comparison, Part III, Appendix 2A.
424. For all but one of the Facility's discharge points, post-development peak flow rates and maximum velocities will be maintained at or below the peak flow rates and maximum velocities for the pre-development conditions.
425. In the one instance in which the post-development 25-year storm total runoff volume is higher than the corresponding pre-development conditions, the volume is negligibly higher, at 0.01 inches, and will not significantly or adversely alter existing drainage patterns.
426. Stormwater runoff volumes from the Facility will be detained by the stormwater management system and released at rates that will not significantly or adversely alter existing drainage patterns.
427. The Application complies with TCEQ's rules regarding TPDES stormwater permitting requirements.
428. The Application includes a surface water protection and drainage plan that includes the location, details, and typical sections of the facilities that relate to the protection of surface water, and it shows the provisions for safe passage of all internal and externally adjacent floodwaters are adequate.
429. The Application accurately reflects the current drainage conditions and does not propose adverse alterations to the existing drainage patterns.
430. The erosion control methods identified in the Application are consistent with TCEQ's rules.
431. The Application proposes adequate protection of surface water.

Landfill Gas Management

432. Commission rule 30 Tex. Admin. Code § 330.63(g) concerns gas management requirements, and 30 Tex. Admin. Code § 330.371 requires routine methane monitoring. These requirements are addressed in detail in the Landfill Gas Management Plan (LGMP), which is in Part III, Attachment 6.
433. The LGMP describes how landfill gases will be managed and controlled and establishes a gas monitoring system and program to ensure that the methane limits in 30 Tex. Admin. Code § 330.371 (a) are not exceeded.
434. The LGMP also prescribes the actions that the Facility must take if methane levels are detected in excess of the prescribed limits.

435. The Application includes adequate provisions to manage landfill gas, in compliance with TCEQ's rules.

Miscellaneous

436. The Facility is not located over a recharge zone of the Edwards Aquifer.
437. The Facility is not in a national forest.

Transcript Costs

438. The ALJs ordered Post Oak to arrange for and pay the costs of having a court reporter attend the hearing and prepare a transcript, subject to allocation of such costs at the end of the proceeding.
439. Post Oak provided no evidence as to the amount of transcript costs or what they include.
440. Post Oak is the only party that could benefit financially from having a transcript.
441. All of the Parties participated in the proceedings and benefitted from having a transcript for use in preparing their respective briefs.

II. CONCLUSIONS OF LAW

1. The Commission has jurisdiction over the disposal of municipal solid waste and the authority to issue this permit under Tex. Health & Safety Code § 361.061.
2. Notice was provided in accordance with Tex. Health & Safety Code § 361.0665, 30 Tex. Admin. Code §§ 39.405 and 39.501, and Tex. Gov't Code §§ 2001.051-.052.
3. SOAH has jurisdiction to conduct a hearing and to prepare a PFD in contested cases referred by TCEQ under Tex. Gov't Code § 2003.047.
4. The ED determined that Post Oak submitted an administratively and technically complete permit application, as required by Tex. Health & Safety Code §§ 361.066 and 361.068, that demonstrated that it will comply with all relevant aspects of the Application and design requirements as provided in 30 Tex. Admin. Code §§ 330.71(a) and 330.57(d).
5. The Application was processed and the proceedings described in this Order were conducted in accordance with applicable law and rules of the TCEQ, specifically 30 Tex. Admin. Code § 80.1 *et seq.*; the State Office of Administrative Hearings, specifically 1 Tex. Admin. Code § 155.1 *et seq.*; and Tex. Health & Safety Code ch. 361, subch. C.
6. The burden of proof was on Post Oak, in accordance with 30 Tex. Admin. Code § 80.17(a). Unless otherwise noted herein, Post Oak met its burden with respect to all issues.

7. The evidence in the record is sufficient to meet the requirements of applicable law for issuance of the Draft Permit, as modified by this Order, including Tex. Health & Safety Code ch. 361 and 30 Tex. Admin. Code ch. 330.
8. The Post Oak Municipal Landfill, if constructed and operated in accordance with Tex. Health & Safety Code § 361.001, *et seq.* (the Solid Waste Disposal Act), 30 Tex. Admin. Code ch. 330, and the Draft Permit required by this Order, will not adversely affect public health or welfare or the environment.
9. The Draft Permit No. MSW-2378, as prepared by the Executive Director and modified by this order, includes all matters required by law.
10. The approval of the Application and issuance of Permit No. MSW-2378, as modified by this order, will not violate the policies of the State of Texas, as set forth in Texas Health & Safety Code § 361.002(a), to safeguard the health, welfare, and physical property of the people of Texas, and to protect the environment by controlling the management of solid waste.
11. The contents of the permit to be issued to the Facility meet the requirements of the Texas Solid Waste Disposal Act, Tex. Health & Safety Code §§ 361.086(b) and 361.087.
12. Post Oak provided the information required under TCEQ's rules to demonstrate competency under 30 Tex. Admin. Code § 330.59(f).
13. Post Oak's compliance history ranking was properly classified as "unclassified" under 30 Tex. Admin. Code ch. 60.
14. The TCEQ is not prohibited by Tex. Health & Safety Code § 361.122 from issuing Permit No. MSW-2378.
15. The Application adequately demonstrates compliance with the TPDES program under the Federal Clean Water Act Section 402, as amended, as required by 30 Tex. Admin. Code § 330.61(k)(3).
16. As required by 30 Tex. Admin. Code § 330.61(k)(3), (i)(4), and (i)(5), Post Oak has submitted documentation of coordination with TCEQ for compliance with the Federal Clean Water Act Section 402, the FAA for compliance with airport location restrictions, and TXDOT for traffic and location restrictions.
17. Post Oak has submitted wetland determinations required by applicable federal, state, and local laws as required by 30 Tex. Admin. Code § 330.61(m).
18. The Application conforms to the applicable requirements of the Texas Engineering Practice Act, Tex. Occ. Code ch. 1001, as provided in 30 Tex. Admin. Code § 330.57(f).
19. Part I of the Application meets the technical requirements of 30 Tex. Admin. Code §§ 281.5, 305.45, 330.57(c)(1) and 330.59.

20. Post Oak has plugged, capped, and closed all wells required to be plugged, capped, and closed under the requirements of 30 Tex. Admin. Code § 330.61(1)(2). Post Oak has now obtained and submitted the certification related to such plugging, capping, and closure required under 30 Tex. Admin. Code § 330.61(1)(2).
21. Part II of the Application meets the technical requirements of 30 Tex. Admin. Code §§ 305.45, 330.57(c)(2), and 330.61.
22. The Site Development Plan, which supports Parts I and II of the Application, meets the requirements of 30 Tex. Admin. Code §§ 330.63 and 330.61.
23. Unless otherwise noted in this order, Part III of the Application meets the requirements of 30 Tex. Admin. Code §§ 330.57(c)(3), 330.63, 330.545, 330.547, 330.551 and 330.553.
24. Unless otherwise noted in this order, Part IV of the Application, the SOP, meets the requirements of 30 Tex. Admin. Code §§ 330.57(c)(4), 330.65, and 330.121-330.179.
25. Post Oak has shown that it will comply with the operational prohibitions and requirements in 30 Tex. Admin. Code §§ 330.15 and 330.121-330.179.
26. The Application includes adequate provisions to prevent the ponding of water over waste in the landfill, in compliance with 30 Tex. Admin. Code § 330.167.
27. Post Oak submitted a geology report that complies with 30 Tex. Admin. Code § 330.63(e).
28. The Application contains the required information regarding the effect of Facility construction on groundwater flow required by 30 Tex. Admin. Code § 330.403(e)(1).
29. The Application adequately demonstrates that uplift forces will not compromise the integrity of the landfill and that the landfill can handle groundwater infiltration, in compliance with 30 Tex. Admin. Code § 330.337(b).
30. The Application does not adequately address the minimum requirements for approval of an alternate liner design, in compliance with 30 Tex. Admin. Code § 330.335, because Post Oak has not modeled the actual expected concentrations of contaminants at the point of compliance under operation of the landfill.
31. The Application meets the requirements of 30 Tex. Admin. Code §§ 330.63(f)(4), 330.401, 330.403, 330.405, and 330.407, concerning groundwater protection.
32. The groundwater sampling and analysis plan meets the requirements set forth in 30 Tex. Admin. Code § 330.63(f) and subchapter J of chapter 330.
33. Post Oak has demonstrated that existing drainage patterns will not be adversely altered as a result of the proposed landfill development, as required by 30 Tex. Admin. Code §§ 330.63(c)(1)(D)(iii) and 330.305(a).

34. The landfill gas monitoring system complies with 30 Tex. Admin. Code § 330.159.
35. Post Oak has demonstrated compliance with applicable TPDES stormwater permitting requirements.
36. Post Oak has demonstrated compliance with the location restrictions set forth in 30 Tex. Admin. Code §§ 330.545, 330.547, 330.553, 330.555, 330.557, and 330.559.
37. Post Oak has submitted information regarding closure and post-closure that demonstrates compliance with the requirements of 30 Tex. Admin. Code §§ 330.63(h)-(i), 330.457, 330.461, 330.463, and 330.465.
38. The Soils and Liner Quality Control Plan complies with 30 Tex. Admin. Code §§ 330.63(d)(4)(G) and 330.339.
39. Post Oak is not proposing to site a new MSW landfill or lateral expansion within five miles of an airport serving turbojet or piston-type aircraft, as confirmed in correspondence with the FAA and in compliance with 30 Tex. Admin. Code §§ 330.61(i)(5) and 330.545.
40. As required by Tex. Health & Safety Code § 361.069, the Facility is compatible with surrounding land uses.
41. The MOU entered into by Post Oak and the USAF adequately addresses the concerns raised by the USAF regarding flight safety issues.
42. With implementation of the measures required by the MOU between Post Oak and the USAF, the Facility will not present a significant bird hazard to low flying aircraft, and meets the requirements of 30 Tex. Admin. Code § 330.545(d).
43. GCGCD does not have authority under the Comprehensive Municipal Solid Waste Management, Resource Recovery and Conservation Act, Tex. Health & Safety Code § 363.001, *et seq.*, to prohibit the siting of a MSW landfill in any area of Guadalupe County.
44. Section 363.066 of the Tex. Health & Safety Code does not affect the Solid Waste Disposal Act, under which the Commission may supersede any authority granted to or exercised by the council of governments.
45. TCEQ's jurisdiction under 30 Tex. Admin. Code ch. 361 does not extend to preventing any alleged interference with mineral rights.
46. Solid waste management activities at the Facility conform with the applicable regional solid waste management plan, pursuant to Tex. Health & Safety Code § 363.066.
47. The methods specified in the SOP comply with the MSW rules to prevent the creation of any nuisance, as defined by 30 Tex. Admin. Code § 330.3(95).

48. The buffer zones established by Post Oak between the edge of fill and the Facility boundary are compliant with the MSW rules, including 30 Tex. Admin. Code §§ 330.141(b) and 330.543(b).
49. Post Oak has provided sufficiently detailed information regarding the operational methods to be utilized at the Facility when using daily cover and its preventative effect on vectors, fires, odors, windblown waste and litter, and scavenging, as required by 30 Tex. Admin. Code § 330.165(a).
50. Except in regard to the failure to specify how litter will be picked up daily, the methods specified in the SOP for the control of windblown waste and litter comply with the MSW rules, including 30 Tex. Admin. Code §§ 330.127 and 330.139.
51. Post Oak has provided adequate information related to transportation in compliance with 30 Tex. Admin. Code § 330.61(i).
52. The 24 hour a day, seven day a week waste acceptance hours and facility operating hours proposed in the Application, and supported by the USAF in the MOU, have been shown to be appropriate, necessary and justified.
53. The proposed groundwater monitoring system will adequately monitor the groundwater beneath the Facility and protect human health and the environment in compliance with 30 Tex. Admin. Code §§ 330.63(f)(4), 330.401, 330.403, 330.405, and 330.407.
54. Unless otherwise noted in this Order, Parts I and II of the Application comply with applicable regulatory requirements of 30 Tex. Admin. Code ch. 330.
55. Unless otherwise noted in this Order, Parts I and II of the Application comply with the requirements of 30 Tex. Admin. Code §§ 281.5, 330.59, and 330.61.
56. Unless otherwise noted in this Order, Section 2.0 of Part II of the Application complies with applicable requirements of 30 Tex. Admin. Code § 330.61(b).
57. Except in regard to radioactive waste, Post Oak's Waste Acceptance Plan satisfies all requirements of the Commission's rules.
58. Post Oak should be required to identify with specificity the equipment and procedures it will use to attempt to ensure that no radioactive materials are accepted at the site. Such procedures should include the use of proper equipment that can detect radioactive material and posted signs advising incoming waste disposers that: (1) disposal of radioactive waste is prohibited by law, (2) Post Oak uses equipment to detect unlawful radioactive waste, and (3) Post Oak will notify the appropriate authorities if a waste disposer is found attempting to dispose of radioactive waste.
59. Unless otherwise noted in this Order, Sections 3.0 through 3.3 of Part II of the Application comply with applicable regulatory requirements set forth in 30 Tex. Admin. Code § 330.61(c)-(f) and (l)(1).

60. Unless otherwise noted in this Order, Sections 4.0 through 4.3 of Part II of the Application comply with applicable regulatory requirements set forth in 30 Tex. Admin. Code § 330.61(c)-(h) and (1)(1).
61. The location, construction and operation of the Facility, as proposed in the Application and modified by this order, is compatible with the surrounding land uses, which are primarily agricultural and oil and gas exploration and development.
62. Unless otherwise noted in this Order, Sections 5.0 through 5.3 of Part II of the Application comply with applicable regulatory requirements set forth in 30 Tex. Admin. Code § 330.61(c)(2), (h)(5), and (l).
63. Section 6.0 of Part II of the Application complies with applicable regulatory requirements set forth in 30 Tex. Admin. Code § 330.61(i).
64. Sections 7.0 through 7.8 of Part II of the Application comply with applicable regulatory requirements set forth in 30 Tex. Admin. Code § 330.61(j).
65. Sections 8.0 through 8.3 of Part II of the Application comply with applicable regulatory requirements set forth in 30 Tex. Admin. Code § 330.61(k).
66. Section 9.0 and Attachment 8 of Part II of the Application comply with applicable regulatory requirements set forth in 30 Tex. Admin. Code §§ 330.61(m) and 330.547 as they relate to floodplains.
67. Section 9.0 and Attachment 5 of Part II of the Application comply with applicable regulatory requirements set forth in 30 Tex. Admin. Code §§ 330.61(m) and 330.553 as they relate to wetlands.
68. Section 10.0 and Attachments 6 and 8 of Part II of the Application comply with applicable regulatory requirements set forth in 30 Tex. Admin. Code §§ 330.61(n) and 330.551 as they relate to endangered and threatened species.
69. Section 11.0 and Attachment 4 of Part II of the Application comply with applicable regulatory requirements set forth in 30 Tex. Admin. Code § 330.61(o).
70. Section 12.0 of Part II of the Application complies with applicable regulatory requirements set forth in 30 Tex. Admin. Code § 330.61(p).
71. Section 13.0 of Part II of the Application complies with applicable regulatory requirements set forth in 30 Tex. Admin. Code § 330.543.
72. Section 14.0 of Part II of the Application complies with applicable regulatory requirements set forth in 30 Tex. Admin. Code ch. 330.

73. Unless otherwise noted in this Order, Section 14.0 and Attachment 8 of Part II of the Application comply with applicable regulatory requirements set forth in 30 Tex. Admin. Code § 330.545.
74. Commission rules 30 Tex. Admin. Code §§ 330.549 and 330.563 are not applicable to the Facility, based on its location.
75. Attachment 1 of the Site Development Plan complies with 30 Tex. Admin. Code § 330.63(b).
76. The Overview and Attachment 2 to the Site Development Plan comply with applicable regulatory requirements in 30 Tex. Admin. Code § 330.63(c) and subchapter G of chapter 330.
77. Attachment 3 to the Site Development Plan complies with the applicable regulatory requirements in 30 Tex. Admin. Code §§ 330.63(d)(4) and 330.305(g).
78. Appendix 3D-1 complies with all of the applicable liner requirements in 30 Tex. Admin. Code ch. 330, subch. H.
79. Together with the back-up provided in the Geology Report in Attachment 4, Appendix 3B of Attachment 3 to the Site Development Plan complies with applicable geotechnical regulatory requirements in 30 Tex. Admin. Code §§ 330.63(e)(5)(A)-(B) and 330.339(a) and (e).
80. Attachment 5 to the Site Development Plan, regarding the Groundwater Sampling and Analysis Plan, complies with the applicable regulatory requirements in 30 Tex. Admin. Code § 330.63(f).
81. Attachment 6 to the Site Development Plan, regarding Post Oak's LGMP, complies with applicable regulatory requirements in Subchapter I of Chapter 330.
82. Attachment 7 to the Site Development Plan, regarding Post Oak's Closure Plan, complies with the applicable regulatory requirements in 30 Tex. Admin. Code § 330.63(h) and applicable closure requirements in Subchapter K of Chapter 330.
83. The final cover systems proposed in Attachment 7 provide effective, long-term protection against infiltration and erosion.
84. The final cover designs proposed in Attachment 7 are protective of human health and the environment.
85. Appendix 7A to the Site Development Plan complies with applicable regulatory requirements in 30 Tex. Admin. Code § 330.63(j) and applicable landfill closure care cost estimate requirements in 30 Tex. Admin. Code ch. 330, subch. L.
86. Attachment 8 to the Site Development Plan complies with applicable post-closure requirements in 30 Tex. Admin. Code ch. 330, subch. K.

87. Attachment 8 to the Site Development Plan complies with applicable regulatory requirements in 30 Tex. Admin. Code § 330.63(j) and applicable landfill post-closure care cost estimate requirements in 30 Tex. Admin. Code ch. 330, subch. L.
88. Except as otherwise noted in this order, the SOPs included in Part IV of the Application comply with applicable regulatory requirements in 30 Tex. Admin. Code § 330.65, as well as 30 Tex. Admin. Code ch. 330, subch. D.
89. The SOPs included in Part IV of the Application are designed to make the Facility protective of human health, welfare, property and the environment.
90. Section 2.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.123.
91. Sections 3.0 through 3.5 of Part IV of the Application comply with applicable regulatory requirements of 30 Tex. Admin. Code §§ 330.125-.127 and 335.586(a) and (c).
92. Section 4.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.129.
93. Sections 5.0 through 5.2 of Part IV of the Application comply with applicable regulatory requirements of 30 Tex. Admin. Code § 330.131.
94. Section 6.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.133.
95. Section 7.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.135.
96. Section 8.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.137.
97. Section 9.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.139.
98. Section 10.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.141.
99. Section 11.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.143.
100. Section 12.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.145.
101. Section 13.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.147.

102. Section 14.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.149.
103. Section 15.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.151.
104. Section 16.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.153.
105. Section 17.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.155.
106. Section 18.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.157.
107. Section 19.0 of Part IV and Attachment 6 of Part III of the Application comply with applicable regulatory requirements of 30 Tex. Admin. Code § 330.159.
108. Sections 20.0 through 20.3 of Part IV and Figure 8 of Part II of the Application comply with applicable regulatory requirements of 30 Tex. Admin. Code § 330.161.
109. Section 21.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.163.
110. Sections 22.0 through 22.6 of Part IV of the Application comply with applicable regulatory requirements of 30 Tex. Admin. Code § 330.165.
111. Section 23.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.167.
112. Section 24.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.171.
113. Section 25.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.173.
114. Section 26.0 of Part IV of the Application complies with applicable regulatory requirements of 30 Tex. Admin. Code § 330.175.
115. Special Provisions 6 and 7 (Section IX, 6, 7) regarding leachate recirculation should be removed from the Draft Permit, as the leachate recirculation system is no longer supported by the Executive Director, and Post Oak is no longer pursuing the use of this system at the Facility as part of this matter.
116. Sections 28.0 through 28.7 of Part IV of the Application comply with applicable regulatory requirements of 30 Tex. Admin. Code § 330.63(d)(1)(A)-(C).

117. Post Oak should be required to take its shear strength calculations and incorporate them into specific design specifications to be included in the Soils and Geosynthetics Construction Quality Assurance Plan prior to construction.
118. The engineering, design, and operational plans and drawings in the Application ensure that the Facility is designed and operated in a manner protective of human health, welfare, property, and the environment.
119. The subsurface investigations of the Facility were conducted to ensure that the site is suitable for construction and operation of a landfill that will not adversely impact human health, welfare, property, or the environment.
120. Special Provision 2 (Section IX, 2) regarding the plugging of each of the known oil and gas-related wells should be removed from the Draft Permit, because each of the known oil and gas-related wells within the permit boundary that are within the RRC's jurisdiction has been plugged.
121. Special Provision 4 (Section IX, 4) regarding airport safety issues should be removed from the Draft Permit, because Post Oak has met the requirements of 30 Tex. Admin. Code § 330.545.
122. Pursuant to the authority of, and in accordance with, applicable laws and regulations, the requested permit should be granted, as modified by this order.
123. No transcript costs may be assessed against the Executive Director or OPIC because the TCEQ's rules prohibit the assessment of any cost to a statutory party who is precluded by law from appealing any ruling, decision, or other act of the Commission. 30 Tex. Admin. Code § 80.23(d)(2).
124. Factors to be considered in assessing transcript costs include: the party who requested the transcript; the financial ability of the party to pay the costs; the extent to which the party participated in the hearing; the relative benefits to the various parties of having a transcript; the budgetary constraints of a state or federal administrative agency participating in the proceeding; and any other factor which is relevant to a just and reasonable assessment of the costs. 30 Tex. Admin. Code § 80.23(d)(2).
125. Post Oak should pay all costs associated with preparation of the transcript.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

1. Post Oak's application is granted and the Municipal Solid Waste Landfill Type I permit is hereby issued to Post Oak, as set out in the attached Draft Permit, with the removal of Special Provisions 2, 4, 6, and 7 (Section IX, provisions 2, 4, 6, 7), and the inclusion of the following modifications:

- a. Before accepting waste, Post Oak shall place an asphalt overlay at the intersection of IH 10 and FM 1104, and an asphalt overlay at the intersection of FM 1104 and FM 1150; construct acceleration and deceleration lanes on FM 1150 at the entrance to the Facility; construct a right-turn deceleration lane at the intersection of US 80 and FM 1150, and place an asphalt overlay at the existing intersection.
 - b. The SOP shall be modified to identify with specificity the equipment and procedures Post Oak will use to attempt to ensure that no radioactive materials are accepted at the site. Such procedures shall include the use of proper equipment that can detect radioactive material and posted signs advising incoming waste disposers that: (1) disposal of radioactive waste is prohibited by law, (2) Post Oak uses equipment to detect unlawful radioactive waste, and (3) Post Oak will notify the appropriate authorities if a waste disposer is found attempting to dispose of radioactive waste.
 - c. The SOP shall be modified to specify the means Post Oak will use to comply with the requirement that litter scattered throughout the site will be picked up once a day on days the Facility is in operation.
 - d. Post Oak shall not be permitted to use an alternate liner.
 - e. The MOU between Post Oak and the USAF is incorporated into, and made an enforceable part, of Permit No. MSW-2378. In the event of a conflict between the MOU and the SOP, the MOU provisions shall supplement the SOP and control, except as otherwise required by law.
2. Post Oak shall pay all costs related to the preparation of the transcript.
 3. The effective date of this Order is the date the Order is final.
 4. All other motions, requests for entry of specific findings of fact or conclusions of law, and any other requests for general or specific relief not expressly granted herein, are hereby denied for want of merit.
 5. If any provision, sentence, clause, or phrase of this Order is held to be invalid, the invalidity of such shall not affect the validity of the remaining portions of the Order.
 6. The Chief Clerk of the Texas Commission on Environmental Quality shall forward a copy of this Order to the parties.

Issue Date:

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

Bryan W. Shaw, Ph.D., P.E., Chairman
For the Commission