

**SOAH DOCKET NO. 582-06-3321
TCEQ DOCKET NO. 2005-0337-MSW**

APPLICATION OF WILLIAMSON COUNTY FOR A PERMIT AMENDMENT TO EXPAND A TYPE I MUNICIPAL SOLID WASTE LANDFILL FACILITY; (PERMIT NO. MSW-1405B)	§ § § § § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS
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PROPOSAL FOR DECISION

I. INTRODUCTION AND OVERVIEW

Williamson County (Williamson County or Applicant) applied to the Texas Commission on Environmental Quality (TCEQ or the Commission) for Permit Amendment No. MSW-1405B (Application) to expand the Williamson County Recycling and Disposal Facility (Landfill or Facility). The Facility is a Type I municipal solid waste landfill in Williamson County, Texas. The Application seeks the authorization of a lateral and vertical expansion of the existing Landfill to accept municipal solid waste, industrial non-hazardous solid waste that is Class 1 waste only because of asbestos content; Class 2 and 3 non-hazardous industrial waste; and special waste. The Facility as proposed would be a 575-acre site located on the west side of FM 1660, approximately 1 mile north of the FM 1660 and CR 133 intersection (Site).¹ The Facility is currently 202 acres and the maximum permitted elevation is 766 feet above mean sea level (msl). The Application seeks to expand the Facility to 575 acres and increase its height by 74 feet to 840 feet above msl.

The following were designated as parties to this proceeding: Applicant; the Executive Director of the TCEQ (ED); the Office of Public Interest Counsel (OPIC); Jonah Water Special Utility District (Jonah); Texas Justice for All, L.P. (TJFA); Mount Hutto Aware Citizens (MHAC); Hutto Citizens Group; and the Heritage on the San Gabriel Homeowners Association. The last two groups were represented by the same counsel, submitted combined briefing, and are referred to

¹ ED Ex. 2 at Amended Notice of Hearing.

collectively as HCG.² All admitted parties participated in the hearing on the merits, which was conducted from August 20, 2007, through August 30, 2007.

Following the hearing on the merits, the parties submitted post-hearing briefing and the record was reopened twice to admit new evidence. The ED and OPIC support the approval of the Application. The remaining parties (Protestants) are unanimous in their opposition to the Application. After considering the issues and evidence presented, Administrative Law Judges Travis Vickery and Henry D. Card (ALJs) recommend that the Commission grant the Application, with modifications as discussed herein. The contested issues are set forth below.

II. PROCEDURAL HISTORY

On October 10, 2003, Williamson County filed Parts I and II of the Application, and requested that the Commission make a land use compatibility determination on the proposed permit amendment under 30 TEX. ADMIN. CODE (TAC) § 330.61. On April 7, 2004, the ED declared Parts I and II technically complete. On December 27, 2004, Williamson County decided to forgo the land use compatibility determination and instead filed Parts III and IV of the Application. On March 24, 2006, Parts III and IV were declared technically complete.

Public meetings regarding the Application were held in Hutto, Texas, on October 11, 2004, August 25, 2005, and July 26, 2006. The Notice of Application and Preliminary Decision was published on April 12, 13, and 16, 2006.

² A total of eight individuals were represented by HCG and MHAC, and were identified in Attachment A to Order No. 1.

On August 29, 2006, the Applicant filed a request for direct referral to the State Office of Administrative Hearings (SOAH). SOAH conducted a preliminary hearing on October 26, 2006, admitted parties,³ and took jurisdiction subject to objections by TJFA and HCG.

After the parties conducted limited discovery as outlined in Order No. 1, on November 17, 2006, the Applicant filed a Motion to Deny TJFA Party Status. It argued that TJFA was a competitor of the operator of the Landfill, Waste Management of Texas, Inc. (WMTX or Waste Management), and not a proper Protestant. Although the ALJs agreed that TJFA's motives were competitive, they also found that TJFA nevertheless possessed the same property rights as any landowner near a landfill, and granted it party status.⁴

Also on November 17, 2006, HCG, MHAC and TJFA filed pleas to the jurisdiction. MHAC argued that the Application was technically incomplete because the Capital Area Council of Governments (CAPCOG) had not submitted comments on the Application in accordance with the Commission's rules. HCG and TJFA argued that the Application and notices were confusing as to the proper identity of the Applicant, permittee, and operator and that the confusion warranted denial of the Application for lack of jurisdiction. The ED and the Applicant filed responses on November 27, 2006, taking the position that the Application and notices were in substantial compliance with the Commission's rules. The ALJs denied the jurisdictional challenges, ruling that these matters warranted further argument after an evidentiary hearing but did not raise jurisdictional issues. The ALJs also ordered Williamson County to file a clarification of the identity of the Applicant and of the role of WMTX.⁵

³ Order No. 1 admitted TJFA provisionally, pending a Motion to Strike.

⁴ See Order No. 4; The evidence established that TJFA purchases properties near landfills operated by WMTX and then seeks party status in landfill expansion proceedings. The ALJs agreed with WMTX that TJFA seeks party status for competitive purposes.

⁵ Order No. 4.

Thereafter, a procedural schedule was established and the hearing on the merits was held from August 20 through August 30, 2007. Post-hearing briefing was submitted, and on October 23, 2007, HCG filed a Motion to Reopen the Record for the admission of additional evidence. The Applicant did not oppose the motion. The ALJs granted it, admitted HCG Ex. 6, and left the record open until November 9, 2007, for related briefing.⁶ On January 4, 2008, Protestants HCG, Jonah, and MHAC filed a second Motion to Reopen the Record and in the alternative, Motion to Abate. The motion to reopen the record requested that the ALJs admit and consider HCG Ex. 7, a lawsuit filed by Williamson County seeking to have its contract with WMTX declared void (the Lawsuit).⁷ TJFA joined in the motion, and Williamson County opposed it.⁸ On January 11, 2008, the ALJs denied the motion to abate, granted the motion to reopen the record, and admitted HCG Ex. 7.⁹

III. JURISDICTION, BURDEN OF PROOF, AND COMPLIANCE HISTORY

A. Jurisdiction

The ALJs conclude that the Commission has jurisdiction to consider and act on Williamson County's Application under Texas Health & Safety Code (Health & Safety Code) § 361.061.¹⁰ SOAH ALJs have jurisdiction to conduct a hearing and prepare a PFD in a contested case referred to SOAH by the Commission.¹¹ As set forth above, jurisdictional challenges were made by HCG,

⁶ Order No. 11.

⁷ HCG's Motion to Reopen the Record filed on January 4, 2008; HCG Ex. 7.

⁸ TJFA's Response to Protestant's Motion to Reopen the Record, or in the alternative, Motion to Abate the Hearing; Applicant Williamson County's Response in Opposition to Protestant's Motion to Reopen the Record, or in the alternative, Motion to Abate the Hearing.

⁹ Order No. 13.

¹⁰ ED Ex. 1 and 2, admitted for the limited purpose of notice and jurisdiction on October 26, 2006; Order No. 1.

¹¹ TEX. GOV'T CODE § 2003.047.

MHAC, and TJFA. The ALJs denied the challenges, finding for the most part that such challenges were not jurisdictional and were better addressed in the hearing on the merits.¹²

B. Burden of Proof

Pursuant to 30 TAC §§ 55.210(b) and 80.17(a), the burden of proof is on the Applicant, to prove by a preponderance of the evidence that the Application complies with all applicable statutory and regulatory requirements.

C. Compliance History

The Commission must use compliance history when reviewing a permit amendment.¹³ The ED prepared a compliance summary for both Williamson County and WMTX. Williamson County's compliance history is classified as average with a rating of 3.17, and the Site classification is high. WMTX's compliance history is classified as average with a rating of 2.71. Based on these ratings and classifications, the ED determined that Williamson County and WMTX's compliance summaries represent "acceptable performance records."¹⁴ The ALJs agree and recommend that Williamson County and WMTX's compliance summaries are acceptable.

¹² Order No. 4.

¹³ 30 TAC § 60.1(a)(1)(A).

¹⁴ ED Ex. 5 at 6, ED Ex. 8.

IV. PRELIMINARY ISSUES

A. The Identity of the Owner, Operator, Applicant and Related Issues

In the ED's original draft of the permit (generally Draft Permit), Williamson County was identified as the "Permittee and Site Owner" and WMTX as the "Site Operator."¹⁵ This is exactly how the existing Permit No. 1405A identifies Williamson County and WMTX.¹⁶ Yet, as discussed below, it is inaccurate under 30 TAC ch. 330 to refer to WMTX as the "Site Operator." Other references to WMTX appear in the Application and notices.

Protestants argue that all of these references to WMTX create confusion as to whether it is a permittee or Applicant and create problems in the ownership and operation of the Landfill.¹⁷ Protestants warn that if the Application is granted with current references to WMTX, the Commission may not know which entity to pursue in enforcement proceedings and there may be problems in the future with control over permit amendments and revisions to the contract between WMTX and Williamson County.¹⁸ Arguments also suggest that WMTX seeks an ownership stake in the Facility. Finally, the Protestants contend that references to WMTX in the Application and Draft Permit are inconsistent with the recent Lawsuit filed by Williamson County seeking to have

¹⁵ ED Ex. 9.

¹⁶ TJFA Ex. 23.

¹⁷ *See generally*, TJFA Initial Brief at 3-8, TJFA Reply Brief at 2-3, and TJFA's Additional Briefing at 1-6.

¹⁸ TJFA Additional Briefing at 2

its contract with WMTX declared void.¹⁹ The Protestants seek denial of the Application altogether, or at a minimum, the removal of all references to WMTX from the issued permit and Application, so that no confusion exists over the identity of the operator, permittee, or Applicant.²⁰

In response, the ED proposed several practical resolutions of the matter, but concludes that the Application should be granted.²¹ For its part, Williamson County contends that there is no real confusion as to the identities of the owner/permittee, or the operator, and that the Health & Safety Code requires that WMTX be identified as the Facility's operator on the face of the permit.²² In closing briefing, OPIC took no position on this matter, but supports the granting of the Application. Consistent with the analysis below, the ALJs recommend that, with proper clarifications, references to WMTX in the Application and notices do not warrant denial of the Application. They conclude that WMTX should appear on the final issued permit as the operator of the Facility.

It would be counterproductive to specifically retrace the numerous arguments of Protestants, because many are based on confusion. From the initial preliminary hearing through post-hearing briefing and the two reopenings of the record, the Protestants have argued that confusion exists over the identity of the Applicant, permittee, and operator. Sources of confusion include the Health & Safety Code, the Commission's rules, hours of testimony, numerous exhibits, and references to WMTX in the Application, notices, and various drafts of the permit. The ED and Williamson County made numerous efforts to clarify the identity of the Applicant and WMTX's role, which only resulted in additional grounds for confusion.

¹⁹ HCG's Motion to Reopen the Record filed on January 4, 2008; HCG Ex. 7.

²⁰ TJFA Initial Brief at 7-8; Jonah Initial Brief at 5.

²¹ ED Initial Brief at 1, 5, 12.

²² Applicant Reply Brief at 8.

At the outset, it should be noted that Williamson County made clear at the hearing on the merits and through evidence that WMTX is not an Applicant in this proceeding. Williamson County is the only Applicant for Permit Amendment MSW-1405B.²³ Williamson County is the owner of the Landfill and has entered into a contract with WMTX as the operator of the Facility.²⁴ This is a simple and common relationship between owners and operators as seen in various applications and enforcement proceedings before the Commission. There is nothing sinister or unusual about this case, and the ALJs have suffered no confusion as to the distinction between WMTX as the contractual operator of the Facility and Williamson County as the owner and sole Applicant in this proceeding. Nevertheless, as the ALJs discuss below, some clarification is required because the Commission's definitions found in 30 TAC § 330.2 were not so clearly understood at the time the Application was filed.

1. Submission of the Application

The first issue raised by Protestants is whether WMTX or Williamson County was required to submit the Application. This issue is governed by 30 TAC § 305.43(b).²⁵

For solid waste and hazardous waste permit applications, it is the duty of the owner of a facility to submit an application for a permit . . . *unless* a facility is owned by one person and operated by another, in which case it is the duty of the *operator* to submit an application for permit . . . [Emphasis added.]

Although “submit” is a somewhat vague term, “Owner” and “Operator” are defined in 30 TAC § 305.2:

²³ Tr. 40 and 51; Ex. HCG 6, admitted after the hearing ended, for which TJFA provided additional closing argument.

²⁴ Tr. 35; TJFA Ex. 27 at 3; HCG Ex. 6.

²⁵ Tr. 1524. Staff witness for the ED, Pladej Prompungtagnorn, stated that 30 TAC § 305.43(b) applies to the Application.

- (24) Operator – The person responsible for the overall operation of the facility.
- (25) Owner – The person who owns a facility or part of a facility.

Based on the 30 TAC § 305.43(b) definitions of owner and operator, it appears that WMTX was required to “submit” the Application on behalf of Williamson County.

But there is another set of similar definitions found in 30 TAC ch. 330, a chapter specific to applications for municipal solid waste facilities and promulgated under Health & Safety Code chapter 361.²⁶ While the ALJs have determined that the relevant definitions in Chapters 305 and 330 are consistent, to the extent that there is any conflict between them, the ALJs find that the Chapter 330 definitions apply because that chapter is specific to municipal solid waste applications, unlike Chapter 305, which is entitled “Consolidated Permits.”

The Chapter 330 definitions further clarify the role between contractual operators and owners. Relevant definitions in 30 TAC § 330.2 are:

- (88) Operate – To conduct, work, run, manage, or control.
- (91) Operator – The person(s) responsible for operating the facility or part of a facility.
- (94) Owner – The person who owns a facility or part of a facility.
- (132) Site Operator – The holder of, or the applicant for, a permit (or license) for a municipal solid waste site.²⁷

²⁶ 30 TAC § 330.1(a).

²⁷ 30 TAC §330.2 (88, 91, 94, and 132).

Based on a comparison of definitions 91 and 132, the ALJs conclude that an “Operator” is an entity that “operates” a facility on behalf of an “Owner” pursuant to a contract, thus WMTX is the “Operator.” The ED’s primary witness, Pladej Prompungtorn, a general engineering specialist in the Municipal Solid Waste Section, explained that this definition of “Operator” is essentially the same as what is generally referred to as a “contract operator” of a landfill.²⁸ The definition of “Site Operator,” however, applies to Williamson County, because the County is the “holder of” the permit for the Facility, as clearly stated by Williamson County Judge Dan Gattis under cross-examination.²⁹ As Mr. Prompungtorn explained, while Williamson County may contract with an entity to “operate” the Landfill, it still retains ultimate responsibility for operation of the Facility as “Site Operator.”³⁰

The distinction between “Site Operator” and “Operator” in 30 TAC § 330.2 is consistent with Judge Gattis’ testimony that Williamson County is both the owner and the Site Operator of the Landfill, retaining ultimate responsibility for operations even though it contracted with WMTX to conduct these duties.³¹ Under cross-examination regarding the requirements of 30 TAC § 305.43(b), Judge Gattis related his understanding of this relationship:

- A. I may be the only nonattorney in the room today, but it’s my belief, again, and our intent, that we are the owners and operators of this landfill. The citizens of the Hutto area, in particular, have really requested that we be that. We intend to be that.

We, in turn, have contracted with Waste Management to be “the operator.” So I guess you can blend those two terms and confuse it a little bit, but I don’t

²⁸ Tr. 1534-37; ED Ex. 5 at 1.

²⁹ Tr. 40.

³⁰ Tr. 1522 and 1529. In that regard, the 30 TAC § 330.2 (88) definition of “operate” includes working, managing, and controlling the site.

³¹ Tr. 44.

think that's your intent, but it confuses me a little bit. So if you take it that we are the operator, we will have a contractor; they are on the site, are a representative of us that will do the day-to-day operations.³²

Though he found the question a bit confusing, Judge Gattis' description is consistent with the roles of "Owner," "Site Operator," and "Operator" as defined in Chapter 330, even though he referred to both WMTX and Williamson County as the operator.³³ Judge Gattis' understanding of the relationship between Williamson County and WMTX is important, because his responses about specific legal definitions were a bit confused.

For instance, despite his understanding of the roles of Williamson County and WMTX, under cross-examination, Judge Gattis erroneously identified Williamson County as the "Operator" as defined in 30 TAC § 330.2(91).³⁴ Judge Gattis' confusion over legal definitions was also shared by Williamson County's witness who sponsored the Application, Roy Murray, when discussing 30 TAC § 305.43(b):

- Q. Okay. So my question to you sir, in this -- in accordance with that rule is, Williamson County the operator or is Waste Management of Texas the operator?
- A. In accordance with that rule, I would say Williamson County is the owner and operator.³⁵

This was an understandable misunderstanding of legal definitions. But such confusion over legal terminology is irrelevant, because Judge Gattis accurately described the relationship between Williamson County and WMTX – the County is the "Owner" and "Site Operator" and WMTX is the "Operator" under 30 TAC § 330.2.

³² Tr. 42-44.

³³ 30 TAC § 330.2 (91, 94, and 132).

³⁴ Tr. 40-41.

³⁵ Tr. 175.

Based on the Chapter 330 distinctions discussed above, the ALJs find that Williamson County has met 30 TAC § 305.43(b)'s requirement that the "Operator" "submit" an application on behalf of the "Owner." Judge Gattis testified that "Williamson County directed and requested" WMTX to prepare and submit the Application, and that WMTX is not an applicant in this proceeding.³⁶ Judge Gattis testified that to the best of his knowledge, Williamson County employees did not take part in preparing the Application. Instead, WMTX contracted with consultants and engineering firms to assist in preparing the Application.³⁷ Thus, the ALJs conclude that WMTX "submitted" the Application on behalf of Williamson County in accordance with 30 TAC § 305.43(b).

2. The Draft Permit

Next is the issue of whether references to WMTX should be removed from the Draft Permit altogether. This matter is governed by the Health & Safety Code, which requires a permit to identify the property owner and the operator:

§ 361.087. CONTENTS OF PERMIT. A permit issued under this subchapter must include:

- (1) the name and address of each person who owns the land on which the solid waste facility is located and the person who is or will be the operator or person in charge of the facility . . .

A "Permit" is defined as:

- (97) Permit – A written permit issued by the Commission that, by its conditions, may authorize the owner or operator to construct, install, modify, or operate a specified municipal solid waste storage, processing, or disposal facility in accordance with specific limitations.³⁸

³⁶ Tr. 50-51.

³⁷ Tr. 50-51, and 55.

³⁸ 30 TAC § 330.2(97). While this definition contemplates an operator as a potential permittee, Williamson County is the sole Applicant here, so that the definition of "Site Operator" still applies only to Williamson County.

On its face, the requirements of Health & Safety Code § 361.087(1) are fairly simple. Williamson County owns the land at the Facility, and WMTX has entered into a contract to operate the Facility on behalf of the County; so both entities must be identified in the permit.

There was, however, some initial confusion over the language of the Draft Permit, which stemmed from two mistakes that can be easily corrected consistent with 30 TAC ch. 330 and Health & Safety Code § 361.087(1). The ED's initial Draft Permit erroneously listed both Williamson County and WMTX as permittees. When the ED forwarded the Draft Permit to Williamson County, the County caught the error and requested that the ED correct it to list Williamson County as the owner and permittee and WMTX as the operator. The ED corrected the Draft Permit by using the language of existing Permit No. MSW-1405A. Unfortunately, Permit No. MSW-1405A had incorrectly listed WMTX as "Site Operator" instead of "Operator."³⁹ At the time that the ED drafted the original Draft Permit, Chapter 330's distinction between an "Operator" and a "Site Operator" was not so clearly understood.⁴⁰ As a result, when the ED returned the Draft Permit for MSW-1405B to Williamson County, it was accepted as accurate.⁴¹

In an attempt to remedy this matter, both Williamson County and the ED have suggested a number of revisions to the Draft Permit. Protestants, led by TJFA,⁴² argue that the permit must

³⁹ Tr. 1418-1419, 1524-1529, 1541-1543, and 1545-1548; TJFA Ex. 25.

⁴⁰ Tr. 1524-1529 and 1545-1548.

⁴¹ ED Ex. 9; Tr. 1419.

⁴² *See generally*, Order No. 4. The ALJs are aware that removing all references to WMTX from the Draft Permit may serve TJFA's interests as an entity competitive with WMTX. As discussed in Order No. 4, the ALJs have determined that TJFA is a company designed to intervene in proceedings involving landfills operated by competitors of its sister companies. Texas Disposal Systems Landfill, Inc. (TDSL), Texas Disposal Systems, Inc. (TDS), and Texas Landfill Management, Inc. (TLM) are all involved in landfill operations in Texas, and are direct competitors of WMTX. TDSL, TDS, TLM, and TJFA are all owned by Bobby Gregory. At the time Order No. 4 was issued, all ten properties owned by TJFA were located within one mile of a central Texas landfill. Mr. Gregory first purchased property within one mile of the Facility, approximately six months after notice of the Application was published. Mr. Gregory has lobbied Williamson County officials to drop WMTX and retain TDSL as Operator of the Landfill. Although TJFA argued that it invests in properties near landfills for appreciation in value, the ALJs declined to be so persuaded and

exclude any reference to WMTX. But the ALJs reject this argument, because it ignores the very definitions in 30 TAC ch. 330, which bring clarity to the distinction between WMTX as “Operator” and Williamson County as “Owner” and “Site Operator.” For instance, TJFA argues that if “Williamson County wants to be the ‘Sole Applicant,’ then it also has to be the ‘operator.’”⁴³ For a party that is complaining of confusion, TJFA failed to use the proper legal terminology. Furthermore, the very language of Health & Safety Code § 361.087(1) distinguishes between the land owner and “the operator or person in charge of the facility.” If § 361.087(1) recognizes this distinction, then the Draft Permit must as well, and state the name of the “Owner” and the “Operator” as defined in 30 TAC § 330.2(91) and (94). Using the definitions in 30 TAC ch. 330 is appropriate, because that chapter deals specifically with municipal solid waste facilities, and that rule was promulgated under Health & Safety Code chapter 361.⁴⁴ The ALJs conclude that the Legislature intended the identity of an operator to be disclosed on an MSW permit, if different from the land owner. This is consistent with 30 TAC § 305.43(b)’s recognition of the same distinction, and there is no way to give effect to the plain language of Health & Safety Code § 361.087(1) without requiring the Draft Permit to identify the operator.

Protestants also point out that there is evidence in the record which obviates any need to disclose WMTX on the Draft Permit. Judge Gattis testified that Williamson County is not opposed to removing the reference to WMTX from the permit, and that the County looks to the ED for guidance as to its proper form.⁴⁵ There was testimony that the Commission’s rules do not require that a contract operator be disclosed on a permit, and that the ED takes no position on whether WMTX appears on the Draft Permit and leaves it is up to the Applicant to decide.⁴⁶ But regardless

instead found that TJFA’s purposes are competitive to WMTX.

⁴³ TJFA Additional Briefing at 3.

⁴⁴ 30 TAC §330.1(a).

⁴⁵ Tr. 10-11, 57, and 103.

⁴⁶ Tr. 1525, 1529-1530, and 1535.

of whether the Commission's rules speak to permit requirements, the ALJs have found that Health & Safety Code § 361.087(1) requires that the contract "Operator" be disclosed on the permit.

The ALJs also believe that it is prudent to identify the operator of the Facility in the Draft Permit. This does not mean that Williamson County will not retain ultimate responsibility for operations at the Facility as the Site Operator; Mr. Gattis testified that Williamson County understands that it is the owner and has ultimate responsibility for the operation of the Facility.⁴⁷ Nor does it mean that WMTX will bear no responsibility for its actions. Instead, it simply discloses the identity of the entity operating the Facility on behalf of Williamson County. When a landfill is operated by an entity other than the permit holder, the Commission wants to know the identity of the operator.⁴⁸ As pointed out by Williamson County, the Commission's rules require the Applicant to demonstrate that the operator of the Facility possesses the experience and competence to manage the site.⁴⁹ The "Evidence of Competency" section of the Application naturally contains the identity of WMTX, a brief description of its role, and a list of key personnel. For emergency and enforcement purposes, this is necessary information. Even TJFA recognized the need to determine the identity of the operator, but argues that WMTX should nevertheless be deleted from the Draft Permit and if anyone seeks the operator's identity, they can review the Commission's annual reports.⁵⁰ For the ALJs, this would lead to more confusion and the inability to quickly identify the operator of a major landfill. The simple disclosure on the permit itself that WMTX is the "Operator" is clearer.

⁴⁷ Tr. 36-37.

⁴⁸ Tr. 1608-1609.

⁴⁹ 30 TAC § 330.52(b)(9)(E).

⁵⁰ TJFA Initial Brief at 7.

On January 4, 2008, HCG, MHAC, and Jonah filed a Motion to Reopen the Record or in the Alternative to Abate this proceeding pending the outcome of the Lawsuit.⁵¹ The Lawsuit seeks to have the contract between WMTX and Williamson County declared void for a number of reasons.⁵² The ALJs denied the Motion to Abate because Williamson County is the Applicant in this matter, not WMTX.⁵³ If this proceeding were abated, it could be years before trial and appeals are final, and as it stands, WMTX is the current operator of the Facility.

Protestants also argue that the Lawsuit justifies removing WMTX from the Draft Permit, because if the County succeeds in voiding the contract, WMTX will no longer be the operator, rendering the issued permit inaccurate and undermining the basis of Judge Gattis' testimony that WMTX is the County's contractual operator of the Landfill.⁵⁴ As stated above, until there is some form of resolution of the Lawsuit, WMTX is still the operator of the Facility. The ALJs also agree with Williamson County that 30 TAC § 305.70 provides a mechanism for altering issued permits.⁵⁵ And as discussed herein, the Health & Safety Code requires the issued permit include the name of the operator of the Landfill, if different from the owner.

Having found that Health & Safety Code § 361.087(1) requires that the contract "Operator" be disclosed on the Draft Permit, the ALJs now turn to appropriate language. In response to Protestants' arguments, the ED presented a Second Revised Draft Permit at the hearing, redesignating WMTX as the Facility's "Operator" instead of "Site Operator."⁵⁶ The ALJs' agree

⁵¹ TJFA joined in the motion.

⁵² HCG Ex. 7.

⁵³ Order No. 13.

⁵⁴ HCG's Motion to Reopen the Record at 2.

⁵⁵ Williamson County's Response to Motion to Reopen Record at 4.

⁵⁶ ED Ex.10; Tr. 1418-1419.

with this proposal, but disagree with the ED's recommendation in briefing that the Draft Permit also be changed to state that Williamson County is the "Site Operator," "Permittee, and Site Owner."⁵⁷ Williamson County objects to the latter two designations, because neither "Permittee" nor "Site Owner" are defined in 30 TAC § 330.2. The County's concern is that any terminology on the Draft Permit that differs from 30 TAC ch. 330 definitions may provide grounds for appeal.⁵⁸ As a result, the ALJs recommend that the Draft Permit be revised to identify Williamson County as the "Owner" and "Site Operator" and WMTX as the "Operator." The Applicant also suggested that the Permit identify WMTX as the "Operator as defined by 30 TAC § 330."⁵⁹ But the Draft Permit already identifies 30 TAC ch. 330 as the applicable set of rules, so it should not be necessary to note that the terms the "Owner," "Site Operator," and "Operator" are defined in 30 TAC § 330.2.

3. The Application

As for references to WMTX in the Application itself, the Protestants contend that such references warrant denial of the Application due to confusion created over the identity of the Applicant. For example, page one of Part A of the Application identifies both Williamson County and WMTX in a section requiring the name of the Applicant. Furthermore, Williamson County is identified as the "Site Owner" and WMTX as the "Site Operator."⁶⁰ 30 TAC § 330.52 requires that the title page name the Applicant, so Mr. Murray listed both Williamson County and WMTX on the

⁵⁷ ED Initial Brief at 5.

⁵⁸ Williamson County Reply Brief at 8.

⁵⁹ APP 705.

⁶⁰ APP 202 at 5; TJFA Initial Brief at 4.

title pages of the Application. He now admits that this may confuse someone as to the identity of the Applicant.⁶¹ The Protestants also complain that Mr. Murray provided sworn Applicant's Statements and Certifications from representatives of both Williamson County and WMTX.⁶²

The ALJs agree that the inclusion of such references to and statements by WMTX could be confusing, but there is no evidence that Mr. Murray's intent was to confuse. Using the wrong term, WMTX is identified in Part A as a "Site Operator," but as explained above, the rules' distinction between a "Site Operator" and an "Operator" was not so clearly understood at the time. Furthermore, the upper right hand corner of pages twelve through fifteen of Part A clearly identify Williamson County as the Applicant.⁶³ Nevertheless, the ALJs recommend that references to WMTX in the "Name of the Applicant" section should be deleted to accurately identify Williamson County as the sole Applicant and to comply with the Commission's definitions in 30 TAC § 330.2. The ALJs do not, however, recommend denial of the Application on these grounds.

The ALJs are left with the sense that the consistent appearance of WMTX in Part A is the result of a belt-and-suspenders approach to filing the Application. For instance, Williamson County Judge John C. Doerfler executed an Applicant's Statement and Certification on behalf of the County.⁶⁴ But Steve Jacobs, identified as the "Area Landfill Manager," also executed an Applicant's Statement and Certification on behalf of WMTX.⁶⁵ There is no evidence that the inclusion of Mr. Jacobs' affidavit was designed to provide false information, or to confuse. Instead, the inclusion of a certification by Mr. Jacobs was likely necessary to insure that someone with personal knowledge

⁶¹ Tr. 196-197.

⁶² APP 202 at 12-15; Tr. 195-196.

⁶³ APP 202 at 5, and 12-15.

⁶⁴ APP 202 at 12, 14.

⁶⁵ APP 202 at 13, 15.

of conditions at the Facility executed the certification. As the Area Landfill Manager, Mr. Jacobs likely possessed more factual knowledge of the workings of the Landfill than County Judge Doerfler. As a result, Mr. Jacobs' certification may have avoided objections to the Applicant's Statement and Certification based on lack of personal knowledge – a matter raised by Protestants during the cross-examination of other witnesses. It is also possible that some uncertainty existed over 30 TAC § 305.43(b)'s requirement that the "Operator" "submit" an application on behalf of the "Owner," and perhaps explains the appearance of WMTX in the Application. The ALJs do not recommend alterations to the Applicant's Statement and Certifications. Should the Commission disagree, however, the ALJs do not believe the deletion of Mr. Jacobs' Statement and Certification would be fatal to the Application.

In the event that the Commission determines that Williamson County should clarify the Application, the ALJs recommend against the denial of the Application for any confusion that may have resulted from references to WMTX therein. The Protestants have cited no authority for the argument that such references are fatal to the Application, other than 30 TAC § 330.51(b)(2), which states that "... [s]ubmission of false information shall constitute grounds for denial of the permit."⁶⁶ In light of the testimony of Mr. Prompungorn, Mr. Murray, the numerous attempts by the ED and Williamson County to clarify this matter, and the initial confusion regarding definitions, the ALJs do not find that Williamson County or WMTX intentionally provided "false" information. Nor is there any evidence to suggest that WMTX is attempting to somehow "acquire" an ownership interest in the Facility, by working itself into the Application and Draft Permit. In fact, Williamson County, through WMTX, returned the initial Draft Permit to Staff and requested that it be corrected to reflect that WMTX is not a "Permittee." If anything, the appearance of WMTX in the notices, Application, and Draft Permit provides more information rather than less. It would have been very unusual and misleading had these documents lacked a single reference to WMTX, as requested by Protestants. To the extent that such references cause any confusion as to the identity of the Applicant and

⁶⁶ TJFA Reply Brief at 3.

Permittee, the final version of Permit No. MSW-1405 B, and the Commission's Findings of Fact and Conclusions of Law can clarify WMTX's role as the operator of the Landfill.

B. Land Ownership

Protestant MHAC contends that the Application should be denied because Williamson County lacks a sufficient interest in some of the property that forms the expanded Facility.⁶⁷ MHAC argues that a quitclaim deed executed in the mid-1990s failed to transfer title from WMTX to Williamson County. As a result, MHAC requests that Permit No. MSW 1405A be rescinded, that the Commission "remove" the subject tract from inclusion in the requested expansion under Permit No. 1405B, and that the Application be denied.⁶⁸

In response, Williamson County argues that the County possesses sufficient interest in the subject tract to justify granting the Application. Under 30 TAC § 330.62(a), an applicant need only "possess or acquire a sufficient interest in or right to use the property for which a permit is issued." Judge Gattis testified that Williamson County has title to the land, and the Application includes an affidavit swearing that "Williamson County is the record owner of a 100% interest in the site."⁶⁹ The ALJs agree with Williamson County's characterization of the evidence and conclude that under 30 TAC § 330.62(a), Williamson County possesses a sufficient interest in the property for which the permit is sought.

⁶⁷ MHAC Initial Brief at 14-15.

⁶⁸ MHAC Initial Brief at 15.

⁶⁹ Tr. 47-48; APP 202 at 50.

C. The Necessity of a CAPCOG Review

MHAC argues that the Application should be denied because it was not reviewed by the Capital Area Council of Governments (CAPCOG).⁷⁰ But the evidence established that at the time the Application was filed, CAPCOG was not required to review the Application and declined to do so.⁷¹ Whether or not to review the Application was CAPCOG's prerogative, because the Commission lacked the authority to compel CAPCOG to conduct a review. Moreover, CAPCOG's role is advisory, not determinative.⁷² There is no authority for MHAC's request that the Application be denied because CAPCOG declined to review it. Furthermore, Williamson County has established that it submitted a demonstration of compliance with the regional solid waste plan as required under 30 TAC § 330.51(b)(10).⁷³ While CAPCOG's review of the Application would have been helpful, its decision to forgo a review does not require denial of the Application.

V. LAND USE COMPATIBILITY

A. A Description of the Surrounding Land Uses

The Facility is located in the central part of Williamson County, between seven and ten miles from Georgetown, Round Rock, Taylor, and Granger. The Facility is 1.6 miles north of the municipal limits of Hutto, the nearest community. Land use around the Facility is a mix of pasture, agricultural, and residential. Within one mile of the Site, the land use consists primarily of pasture and farm land. No zoning ordinances apply to the proposed Site, which is not within the corporate limits of any municipality. There are approximately 120-130 residences within one mile of the Site. Within the last ten years, the most significant development is a subdivision of approximately 60

⁷⁰ MHAC Initial Brief at 3-4.

⁷¹ ED Ex. 5 at 9-10; Tr. 1510-1511.

⁷² Tr. 1597.

⁷³ Ex. APP 202 at 21-23; Ex. APP 200 at 26-30.

residences located 1,700 feet southwest of the Facility. The nearest residence is roughly 225 feet west of the permit boundary and 600 feet from the edge of the fill. There is little growth elsewhere within a one mile radius.⁷⁴ The growth trends of Hutto, the nearest community, are dealt with below.

There are no hospitals, schools, churches, recreational areas, or springs within one mile of the Site. A cemetery is located roughly 2,500 feet southeast of the Facility. A law enforcement firing range is located approximately 500 feet south of the Site. There is a historical residential structure on the southeast corner of the Facility that is eligible for listing in the National Register of Historic Places under Criterion C at the local level of significance, and Williamson County must coordinate with the Texas Historical Commission before disturbing the structure. Based on this information, Mr. Prompungorn concluded that the Applicant provided information regarding the surrounding land uses in compliance with 30 TAC § 330.53(b)(7)(8), and that the Application is compatible with surrounding land uses.⁷⁵

B. Williamson County's Burden on Land Use Compatibility

HCG contends that the Applicant fails to appreciate the significance of land use compatibility as contemplated in the Health & Safety Code. HCG points to the Legislature's creation of a bifurcated hearing process as evidence of the importance of land use compatibility analysis in determining whether the Application should be granted.⁷⁶ While it is true that the Health & Safety Code allows for a separate hearing to be conducted regarding land use compatibility, bifurcation is not required:

The Commission in its discretion may, in processing a permit application, make a separate determination on the question of land use compatibility, and, if the site location is acceptable, may at other times consider other technical matters concerning

⁷⁴ ED Ex. 5 at 8-9; APP 801 at 2-3.

⁷⁵ ED Ex. 5 at 8-9.

⁷⁶ HCG Initial Brief at 4.

the application. A public hearing may be held for each determination in accordance with Section 361.088. In making a determination on the question of land use compatibility, the commission shall not consider the position of a state or federal agency unless the position is fully supported by credible evidence from that agency during the public hearing.⁷⁷

Although Health & Safety Code § 361.069 does not require a bifurcated hearing, HCG and the other Protestants argue that Williamson County filed the Application in a bifurcated form, and that the County as a governmental body is in a unique position to provide substantial information and analysis to the Commission, and yet failed to do so. HCG contends that the Applicant must provide land use analysis, not just factual information.⁷⁸ Although HCG admits that Williamson County provided the “bare minimum” of information to satisfy requirements under the Commission’s rules, it contends that the Applicant failed to provide analysis of that information, or offer an expert witness on land use compatibility until its rebuttal case.⁷⁹ HCG points out that Mr. Murray, the sole witness on land use compatibility in the Application, admitted that he lacked the expertise to opine on land use analysis and that he has no personal knowledge of the information included in that portion of the Application.⁸⁰ Mr. Murray focused on including in the Application that information specifically enumerated in 30 TAC § 330.53(b)(8)(A)-(E). Williamson County did not offer an expert opinion on land use compatibility during its direct case, which leads HCG and other Protestants to argue that the County’s failure in this regard warrants denial of the Application.⁸¹

Williamson County argues that it met its burden regarding land use compatibility and that it took the analysis seriously. The County argues that an indication of its sincere public interest is reflected in the numerous public meetings it conducted regarding the Application, at Hutto

⁷⁷ TEX. HEALTH & SAFETY CODE § 361.069.

⁷⁸ HCG Initial Brief at 3.

⁷⁹ HCG Initial Brief at 4-5.

⁸⁰ Tr. 115, 417-418.

⁸¹ HCG Initial Brief at 6.

Independent School District (HISD) facilities. The County points out that no comments were received from HISD during those meetings.⁸² Williamson County also argues that, regardless of bifurcation, the Health & Safety Code and the Administrative Code only require the County to provide information to the ED for land use compatibility analysis and that it met this burden.⁸³ The ED and OPIC agree that Williamson County met its burden.

The Commission's rules at 30 TAC § 330.53(b)(8) provide a framework for the types of information an Applicant is required to provide to the ED for analysis:

Land use. A primary concern is that the use of any land for an MSW site not adversely impact human health or the environment. The impact of the site upon a city, community, group of property owners, or individuals must be considered in terms of compatibility of land use, zoning in the vicinity, community growth patterns, *and other factors associated with the public interest. To assist the executive director in evaluating the impact of the site on the surrounding area, the applicant shall provide the following:*

- (A) zoning at the site and in the vicinity. If the site requires approval as a nonconforming use or a special permit from the local government having jurisdiction, a copy of such approval shall be submitted;
- (B) character of surrounding land uses within one mile of the proposed facility;
- (C) growth trends of the nearest community with directions of major development;
- (D) the proximity to residences and other uses (e.g. schools, churches, cemeteries, historic structures and sites, archeologically significant sites, sites having exceptional aesthetic quality, etc.). Give the approximate number of residences and business establishments within one mile of the proposed facility including the distances and directions to the nearest residences and businesses; and

⁸² Applicant Reply Brief at 12.

⁸³ Applicant Reply Brief at 10-11.

- (E) description and discussion of all known wells within 500 feet of the proposed site.⁸⁴

While the Protestants are correct that 30 TAC § 330.53(b)(8)(A)-(E) is not an exclusive list,⁸⁵ the ALJs also agree that so long as the Applicant provided the required information to the ED, it met its burden. The rule contemplates that other information regarding the public interest may be provided, but it also clearly contemplates that *the ED* shall conduct analysis based on the information the Applicant provides.

Both the ED and OPIC concluded that the County provided information sufficient for the ED to determine that the proposed amendment is compatible with surrounding land use. But the Protestants are justified in their desire for more analysis. The Applicant submitted information to the ED regarding approximately 120 residential units within one mile of the Facility. The ED's analysis was limited to determining whether the residences are "too close to the landfill," and the simple conclusion was that they were not.⁸⁶ While the rules do not require it, it may have been helpful for the Applicant to include a land use compatibility expert's opinion in the Application. Nevertheless, as noted by OPIC:

. . . the Applicant provided the information necessary for the ED to determine that the proposed amendment is compatible with surrounding land use. It is not surprising that the ED concluded that the Amendment would be compatible with surrounding land use, especially since the landfill has been in operation since 1983 . . . OPIC agrees with the ED's conclusion regarding land use compatibility. As long as the information was provided by the Applicant for the ED to reach this conclusion, OPIC does not believe it was necessary for the Applicant to put on a land use expert to state the amendment is compatible with surrounding land use.⁸⁷

⁸⁴ 30 TAC § 330.53(b)(8)(A)-(E). [Emphasis added.]

⁸⁵ Tr. 1830.

⁸⁶ Tr. 1627-1628.

⁸⁷ OPIC Initial Brief at 6.

The information the County provided in the Application was sufficient for Mr. Prompungorn to conclude under 30 TAC § 330.53(b)(7)(8) that the proposed expansion is compatible with the surrounding land uses.⁸⁸ The ALJs find that so long as the County provided the factual information required under 30 TAC § 330.53(b)(8)(A)-(E), the Application is not deficient due to the lack of an expert opinion on the matter.

C. Analysis of Land Use Compatibility

Williamson County and the ED concluded that the proposed expansion of the Facility is a compatible land use under the Commission's rules.⁸⁹ OPIC agrees with the County and the ED's conclusion on land use compatibility.⁹⁰ Williamson County's rebuttal witness on land use, John Worrall, explained that:

. . . the expanded Williamson County Recycling and Disposal Facility represents a compatible land use . . . based on an examination of the zoning, existing land uses, growth trends of the nearest community, and proximity to residences and other uses, the expansion of the Williamson County Recycling and Disposal Facility will not adversely impact human health or the environment.⁹¹

Mr. Worrall testified that under the TCEQ's rules, his analysis focused on four primary areas: zoning impacts on the Facility, existing surrounding land uses, growth trends of the nearest community, and the proximity of the Landfill to various uses.⁹² Including the facts used by the ED in reaching his conclusion that the proposed expansion is compatible with surrounding land uses, Mr. Worrall based his opinion on the City of Hutto's growth trends and certain existing conditions:

⁸⁸ ED Ex. 5 at 8-9.

⁸⁹ Tr. 1788; ED Ex. 5 at 8-9; APP 801 at 4-5.

⁹⁰ OPIC Initial Brief at 8; OPIC Reply Brief at 4 and 6.

⁹¹ APP 801 at 4-5; *see also* Tr. 1788.

⁹² Tr. 1782-1783.

- The Landfill lies some 1.6 miles beyond Hutto's municipal limits, so the Facility is neither zoned nor within Hutto's extraterritorial jurisdiction;
- the Site requires neither approval as a nonconforming use, nor a special permit;
- predominant land use within one mile is agricultural on 4103 acres of the 4574 total acres, or almost 90% of the total land area;
- residential rural-large lot or homestead with agricultural activities comprise 339 acres within one mile of the Site, or 7.4% of the total land area;
- four commercial/industrial sites form 123 acres, or 2.7% of the total land area; and
- there are no schools,⁹³ day care centers, churches, archeologically significant sites, or sites of exceptional aesthetic value.⁹⁴

If the analysis were limited to existing conditions around the Landfill, then there would be little question that the proposed expansion is compatible with surrounding land uses. There is the simple fact that the Facility has been in operation at this location since 1983 and has an anticipated life of between 25 and 50 years without the expansion. The ALJs also find it particularly compelling that some 92% of the land within one mile of the Facility is either agricultural or commercial/industrial,⁹⁵ that there are no zoning restrictions, no churches, schools, or historical/aesthetic qualities incompatible with the existence of an expanded Landfill. But the Commission's rules also require that a land use compatibility analysis take into account growth trends of the nearest community. That is clearly the more difficult issue, because Hutto's tremendous growth and potential development near the Site must be considered.

⁹³ MHAC argues that the Application is inaccurate because it states that no schools are within one mile of the Facility, failing to account for HISD's recent purchase of property just south of the Site. But as noted by Williamson County and OPIC, HISD did not purchase the property until August of 2007. The ALJs find that the Application was and is accurate in representing that no schools exist within one mile of the Site.

⁹⁴ APP 801 at 2-4; Figures LU-1 and LU-2.

⁹⁵ There are four commercial/industrial establishments within one mile of the Facility, one of which is a quarry. Tr. 1786-1787.

Although the Facility has been in operation as a municipal solid waste landfill since 1983, the Protestants argue that the emphasis on the prior existence of the Landfill is too great. They argue that growth around Hutto has changed circumstances since the inception of the Landfill. The Protestants acknowledge that an expanded Landfill is not necessarily incompatible with *all* forms of development, rather that the sheer size of the expansion and the proposed operating conditions will necessarily limit many forms of development:

This does not mean . . . that development and landfills are of necessity incompatible. The faultiness of Applicant's argument lies in this unconscious assumption: the landfill predates the coming wave of development; therefore people have no right to complain of a doubling of the size of the landfill, or of its methods of operation, or of its intent to operate 24 hours a day 7 days a week. However, a well run landfill, limited in size and scope, with sufficient screening and other amenities, using best practices and technology, can co-exist with coming development.⁹⁶

In general then, the Protestants oppose the scale and operating conditions as a limit and deterrent to future development. Although the ALJs recommend against the 24 hour, 7 day-a-week operating hours requested by the County,⁹⁷ the scale of the expansion is not only fixed in the Application, it is the point of the Application. While Hutto's growth is only one of a number of factors, the ALJs consider it to be an important element in the analysis.

Mr. Worrall's conclusion was not based solely on existing conditions; he also considered Hutto's growth. It is undisputed that Hutto has experienced phenomenal growth since the Facility first opened.⁹⁸ Consistent with the testimony of Protestant witnesses such as Dr. Orlynn Evans and Dr. David Borrer, Mr. Worrall's report states:

Hutto is the fastest growing community in the State of Texas, according to the Texas State Data Center. The Center estimates that the city grew from 1250 persons in

⁹⁶ Jonah Reply Brief at 5; *see also* HCG Reply Brief at 7.

⁹⁷ *See*, PFD Section on Site Operating Plan, Sources of Waste, and Boundary Issues.

⁹⁸ Tr. 16-17; APP 801 at 2-3.

2000 to 7977 persons by January 1, 2006 – *an increase of 538%*. The city itself estimates the resident population to be 10,500 persons as of the end of 2005. The U.S. Bureau of Census estimates the resident population to be 9572 as of July 1, 2006.⁹⁹

Mr. Worrall attributes part of Hutto's growth to its annexation of "significant areas of land since 2000," its location on the edge of the rapidly growing Austin-Round Rock area, and the recent completion of State Highway 130.¹⁰⁰ But Mr. Worrall concluded that Hutto's growth is not incompatible with the expansion of the Facility. Although his rationale is not spelled out in the report, Mr. Worrall states that the Planning Manager for Hutto explained that growth is occurring in all sectors of the city, and that a recent HISD Demographic Report found that growth is roughly split between north and south of U.S. Highway 79, which bisects Hutto on an east/west axis.¹⁰¹ As discussed below, Mr. Worrall also reviewed the City of Hutto's 2006 Growth Guidance Plan (Growth Guidance Plan), which characterized future development of the area around the Facility as compatible with the location of a Landfill. Mr. Worrall concluded that while Hutto is growing to the north, it is growing in other directions as well.

The Protestants disagree and criticize Mr. Worrall's report as incomplete. While the ALJs found Mr. Worrall's research to be reliable and adequate, HCG and Jonah are correct in their criticism that the expert report, analysis, and rationale could have been more thorough.¹⁰² HCG argues that Mr. Worrall's report is superficial, that it was prepared just prior to his rebuttal testimony, that it was made on behalf of WMTX – not Williamson County, and that the factual information in the report was provided by counsel for WMTX.¹⁰³ The latter criticism is unwarranted, because Mr. Worrall testified that in addition to being given land use portions of the Application and

⁹⁹ APP 801 at 2. [Emphasis added].

¹⁰⁰ APP 801 at 2-3.

¹⁰¹ APP 801 at 3; LU-1.

¹⁰² HCG Reply Brief at 6; Tr. 1837.

¹⁰³ HCG Reply Brief at 6.

some of the Protestants' prefiled testimony, he conducted his own field research and spoke with officials at TXDOT and the City of Hutto.¹⁰⁴ And while the report was completed just before he testified, Mr. Worrall was offered as a rebuttal witness. The ALJs do not consider late additions to a rebuttal expert's report to automatically undermine its probative value. Nor do the underlying facts appear to have been inaccurate. As set out above, Mr. Worrall corroborated Protestants' evidence that Hutto has experienced tremendous growth.¹⁰⁵

But if Hutto's growth is undisputed, there is disagreement about its direction and extent. The Protestants disagree with Williamson County's conclusion that growth is omnidirectional, with no clear preferential growth path.¹⁰⁶ They argue that a number of factors evidence higher growth in a northerly direction, including an access point to SH 130 and HISD's plans and reasons for the construction of a high school just south of the Facility.

First, Protestants contend that Mr. Worrall failed to fully consider the impact of access points to SH 130 in his analysis.¹⁰⁷ This matter was developed through cross-examination, which established that Mr. Worrall was unaware that University Drive/Chandler Road, which terminates just south of, and within one mile of the Site, is the only access point to SH 130 between U.S. 79 and Highway 29.¹⁰⁸ Mr. Worrall testified that an access point to a highway such as SH 130 would spur growth in the vicinity of the intersection.¹⁰⁹ Although he may have been unaware of the University Drive access point to SH 130, he found SH 130 to be one of three primary reasons for Hutto's

¹⁰⁴ Tr. 1781-1782; APP 801.

¹⁰⁵ APP 801 at 2-3.

¹⁰⁶ Tr. 1792-1793.

¹⁰⁷ HCG Reply Brief at 6; Jonah Initial Brief at 2-3.

¹⁰⁸ Tr. 1823, 1885-1887; APP 801, LU-1, LU-2; *see also* HCG Ex. 1-C at 4, lower right-hand column.

¹⁰⁹ Tr. 1822-1823.

growth.¹¹⁰ So while he did not review “comprehensive data” on the impact of SH 130, he clearly captured its significance and impact on growth trends.¹¹¹ Nevertheless, the proximity of the University Drive access point to the Facility indicates that growth will occur in that area. Although this is consistent with Protestants’ argument that growth is occurring north of Hutto, it does not necessarily mean that such growth will be incompatible with the Facility’s expansion.

As for types of growth north of Hutto, Protestants argue that HISD’s recent purchase of 100 acres less than 1 mile from the Site will encourage residential growth near the Landfill.¹¹² Although he did not include HISD’s future plans in his analysis, Mr. Worrall acknowledged that the existence of a school tends to encourage residential development.¹¹³ Dr. David Borrer, the Superintendent of HISD, testified on behalf of HCG and opposes the Application.¹¹⁴ He explained that the primary reason for the land purchase was Hutto’s rapid expansion to the north. Based on his review of a March, 2007 Demographic Report (Demographic Report), much of the growth in the Hutto area “is the result of significant home building within certain planning zones,” and that north HISD (but still south of the Facility) has seen the highest such increase among all the zones.¹¹⁵ In addition to his reliance on the Demographic Report, Dr. Borrer’ opinion that Hutto’s growth is in a northerly direction is also based on the 2006 Growth Guidance Plan.¹¹⁶

¹¹⁰ APP 801 at 2-3; APP 801, LU-2.

¹¹¹ Tr. 1887.

¹¹² HCG EX. 1 at 4.

¹¹³ Tr. 1847; APP 801.

¹¹⁴ Tr. 984; HCG Ex.1.

¹¹⁵ HCG EX. 1 at 2-4; Ex. 1B at 44, 47.

¹¹⁶ HCG Ex. 1 at 3; HCG Ex. 1B and 1C. The Growth Guidance Plan is dated 2005, but was adopted in 2006. Tr. 1805.

In rebuttal testimony, Mr. Worrall testified that the Demographic Report and Growth Guidance Plan contradict Dr. Borrer's northerly residential growth conclusion on a number of points.¹¹⁷ At the time of the issuance of the Demographic Report there were approximately 9200 residential units remaining to be built in the Hutto area, and the distribution of those units was almost equally split north and south of U.S. Highway 79.¹¹⁸ The Demographic Report also states:

There are no new housing developments in northern or eastern HISD. The majority are in central HISD, with several near the western border with Round Rock ISD and along the southern border with Pflugerville ISD.¹¹⁹

Mr. Worrall explained that such growth between metropolitan areas is consistent with Hutto's location northeast of the growing Austin/Round Rock metropolitan area, so that growth is expected to be greatest southwest of Hutto, not to the north.¹²⁰ Mr. Worrall also noted that the Demographic Report reflected slowing growth in Hutto in 2006, undermining Dr. Borrer's conclusion that all indicators suggest continued high growth in the Hutto area.¹²¹

As for the type of growth occurring north of Hutto, the Growth Guidance Plan characterizes future growth around the Landfill as "institutional."¹²² The Growth Guidance Plan reflects the City of Hutto's long term plans for the city and the surrounding areas, including land beyond the city's current ETJ.¹²³ "Institutional" areas include uses by "government, school, church, and other tax-

¹¹⁷ See generally, Tr. 1797 -1812.

¹¹⁸ HCG Ex. 1B at 62-63, Tr. 1801.

¹¹⁹ HCG Ex. 1B at 64, Tr. 1802.

¹²⁰ Tr. 1802-1803.

¹²¹ Tr. 1803-1804.

¹²² Tr. 1808-1812.

¹²³ Tr. 1805-1807.

exempt” entities. Mr. Worrall testified that a high school and a landfill are uses that are compatible with an “institutional” land use designation.¹²⁴ The plan also includes four residential designations: “low-density residential,” “mid-density residential,” “mixed-use residential,” and “mixed-use retail.”¹²⁵ A review of the Growth Guidance Plan maps reveals the city’s characterization of the area west of the Landfill as “business park” and the area east of the Facility as “commercial.” Areas further south and west received residential classifications, including “mid-density residential,” and “mixed-use residential.”¹²⁶ Of the nine types of land uses, the city’s target ratio for institutional is the very lowest at a projected 3%.¹²⁷ This indicates to the ALJs that Hutto anticipates very little of its future land use will fall into that category. The conclusion being that the institutional zone comprising the Landfill will eventually be surrounded by other compatible uses such as business parks, commercial, and then beyond that, some form of residential.¹²⁸ So, while the location of a new high school just south of the Facility may spur residential growth north of Hutto, the Growth Guidance Plan, which also considered the impact of the University Drive access point to SH 130,¹²⁹ reflects the city’s assessment of growth trends in the immediate vicinity of the Landfill as “institutional,” a compatible designation.

Beyond the issue of growth, however, Dr. Borrer argues that the proposed expansion of the Facility will be incompatible with HISD’s plans to build a new high school because: (1) he expects the expanded Landfill to be unsightly, distracting to students, and a disincentive for families interested in moving to the area; (2) the expanded Landfill will be a source of unpleasant odors that

¹²⁴ Tr. 1807-1812.

¹²⁵ HCG Ex.1-C at 9. The pages in this exhibit are not numbered.

¹²⁶ Tr. 1808-1812; HCG Ex. 1-C at 8, 12-14, 17, and 19.

¹²⁷ HCG Ex.1-C at 9.

¹²⁸ *See generally*, HCG Ex. 1-C at 8, 9, 12-14, 17, and 19.

¹²⁹ HCG Ex.1-C at 4.

will disrupt outdoor activities; (3) there are concerns over school busses, students, and pedestrians sharing the roadway with waste vehicles and increased vehicular traffic associated with the expanded Landfill; and (4) the Landfill may attract scavengers, a further distraction for students.¹³⁰ In addition, Dr. Borrer shares the concerns of Protestants that the expanded Landfill will be incompatible with the residential growth that a new high school is expected to spur near the Facility.¹³¹

In spite of this opposition to the expansion of the Facility, in August of 2007, HISD purchased the tract with full knowledge of the existing Landfill and the Application.¹³² Negotiations for the purchase of the tract began in March or April of 2007, and at that time, HISD was aware that the current Landfill, under Permit No. 1405A, had a life of between 25 and 50 years.¹³³ Significantly, Dr. Borrer testified that HISD considered these matters and was and is comfortable with the existing Landfill.¹³⁴ The purchase was approved by the school board at an open meeting, without opposition.¹³⁵ Dr. Borrer explained the factors HISD considered in determining where to purchase land:

- A. Well, of course, the most significant factor we have is our demographic study that shows that growth in our school district is growing north of Highway 79, and so that is a predominant factor involved with our purchase of any land, is where our demographic studies show us our students are going to be. And then, of course, we want to look at . . . *the land use . . . if it's going to work for what we need for school campuses*, and certainly we want to get the best buy for our money.¹³⁶

¹³⁰ HCG EX. 1 at 5.

¹³¹ Tr. 995-996.

¹³² Tr. 984-985.

¹³³ Tr. 938.

¹³⁴ Tr. 984-985, 987, and 994-995.

¹³⁵ Tr. 940.

¹³⁶ Tr. 990. [Emphasis added.]

So, in addition to projected residential growth north of Hutto, the school board considered and accepted the existing Facility as a compatible land use.¹³⁷ As for the purchase price, HISD also considered that the land was relatively cheap.¹³⁸ This indicates to the ALJs that the district conducted a cost/benefit analysis and accepted any downside to placing a high school near the Landfill in exchange for the benefit of lower-priced land.

Furthermore, “[t]ransportation routes and accommodation of high growth areas in the District were among the District’s main priorities in identifying suitable property for a future school.”¹³⁹ On the issue of transportation, Dr. Borrer testified that a primary concern is the safety of the students, so he opposes an expanded Landfill due to an expected increase in traffic.¹⁴⁰ There is no evidence, however, of a causal relationship between a larger Landfill and increased traffic associated with waste transportation. But there is evidence that increased traffic to the Landfill will be driven by growth within Williamson County, which will occur regardless of the Landfill’s expansion.¹⁴¹ Dr. Borrer acknowledged that “[t]hese issues will be a byproduct of growth to an extent,” and that growth in the area will result in greater traffic to the Landfill.¹⁴² So even under Permit No. 1405A, HISD will have to contend with growth-driven increased traffic at the Facility for the next 25-50 years.¹⁴³ The expansion will result in a continuation of that traffic longer into the future, but it will not cause its increase. The ALJs do not doubt the sincerity of Dr. Borrer’s testimony that the safety of students is a top priority for him personally and for the school district. But the school

¹³⁷ Tr. 981-982, 984-985, 987, and 994-995.

¹³⁸ HCG Ex.1 at 4.

¹³⁹ HCG Ex.1 at 4.

¹⁴⁰ Tr. 972-973, 975-977, and 994-995.

¹⁴¹ Tr. 971, 977.

¹⁴² *See generally*, Tr. 971, 987-990; *and specifically* Tr. 990.

¹⁴³ Tr. 971, 977.

district is comfortable with traffic associated with the existing Landfill, and so is necessarily comfortable with growth-driven, increased traffic at the Facility for the next 25-50 years, regardless of the expansion.¹⁴⁴ As a result, the ALJs conclude that the proposed expansion does not present traffic-safety issues beyond those already considered acceptable by HISD.

Likewise, Dr. Borrer's concerns over odors, scavengers, and distractions for students does not appear to be warranted if HISD finds the current Landfill acceptable. In addition, during its cross-examination of Dr. Borrer, Williamson County established that many of his concerns were based on speculation.¹⁴⁵ Dr. Borrer also testified that he did not consider scavenging birds to be a "big issue" at the current Facility.¹⁴⁶ The expansion would not result in an exponentially enlarged open working face, because the Landfill would be filled in stages. So except for odors and scavengers associated with the working face, the remainder of the Landfill would be subject to requirements regarding cover, regardless of its size. Dr. Borrer also believes the size of the expanded Facility would distract students.¹⁴⁷ But even without the expansion, the Facility will likely be a visual distraction, which the school district found to be acceptable. The ALJs also anticipate that such a distraction would be temporary. In short, the ALJs view HISD's decision to purchase land for a high school so close to the existing Facility to be evidence that a high school *is* compatible with the Landfill and all of the associated issues for the next 25-50 years. As discussed above, any distractions of near proximity to the current Landfill will be similar, if not the same as proximity to the expanded Landfill, the primary difference being the geographic footprint and height of the Facility.

¹⁴⁴ Tr. 984-985, 987, and 994-995.

¹⁴⁵ Tr. 945-946, 966, 969, and 980-981.

¹⁴⁶ Tr. 979-980.

¹⁴⁷ Tr. 988.

D. Conclusion

As for existing land uses, there is substantial evidence that the expanded Facility is compatible. The Landfill has been in operation since 1983 and has an estimated life of 25-50 years without the expansion. Some 92% of the land is either farmland or commercial/industrial. As noted by OPIC, past and expected growth in the County and in Hutto emphasizes the need for either the expanded Landfill, or a landfill elsewhere in Williamson County.¹⁴⁸ Yet, the ALJs agree with HCG that whether the expansion is needed is a somewhat separate issue from the question of whether its presence north of Hutto is compatible with surrounding land uses.¹⁴⁹ To be sure, a rapidly growing community like Hutto contributes to the need for the Facility's expansion, but it is not as if Hutto is alone in contributing to the County's growth. And while such growth creates the need for an expanded Facility, the hard reality is that the Facility's current location will impact the northerly growth of Hutto. The ALJs note that a review of the map attached to Mr. Worrall's report reveals that Hutto has municipal neighbors to the south (Pflugerville), west (Round Rock), and to a lesser extent to the east (Taylor). While the proximity of neighboring communities may spur growth in the areas between the municipalities, they also act as a necessary limit to longer term growth; Hutto's ETJ already contacts Round Rock and Pflugerville's ETJ.¹⁵⁰ So even if Hutto's growth is currently omnidirectional, the ALJs find it reasonable to assume that long term growth may ultimately be directed north and east.

As for the types of development to be expected north of Hutto, there is evidence that residential development is evenly split north and south of US 79, and that residential development will continue to occur southwest of Hutto due to the proximity to the Austin-Round Rock area.

¹⁴⁸ OPIC Initial Brief at 7; OPIC Reply Brief at 6-7.

¹⁴⁹ HCG Reply Brief at 5.

¹⁵⁰ Tr. 1788-1789; APP 801, LU-1.

Although land around the Facility is largely undeveloped, there is some residential development now and the new high school will spur residential development south of the Landfill. The University Drive access point to SH 130 will also result in development, although it is unclear what types of development can be expected.

The ALJs believe Hutto's growth trends are compatible with the Facility's expansion. The northern municipal limits of Hutto are some 1.6 miles from the southern boundary of the Site, leaving a fair amount of time and room for Hutto to adjust to, and incorporate the Facility into its growth plans.¹⁵¹ As pointed out by OPIC, growth in the Hutto area will adapt to the expanded Facility and expansion of the current Site will avoid greater land use compatibility issues elsewhere in the County:

In his direct testimony on behalf of the Applicant, Judge Gattis recognized the substantial growth in Williamson County and, therefore, the need to increase the size of the landfill to meet the needs of the growing county . . . increasing the size of the existing landfill is most likely a better alternative to building a new landfill elsewhere . . . those who may be interested in moving to the Hutto area will be aware of the existence of the current landfill and take that fact into consideration when choosing where to live . . . it appears a better alternative than building a new landfill in some, as of yet undetermined, different area where the county is more likely to encounter land use compatibility issues. The uncertainty of where such a new landfill might be placed would have a chilling effect in the development of other areas in Williamson County.¹⁵²

In fact, with the exception of HISD's recent purchase of 100 acres within one mile of the Landfill, Hutto's plans for the area around the Landfill are still in the future, because Hutto's ETJ has yet to even reach the Facility. And as discussed above, the school district's comfort with the existing Facility is an indication of Hutto's ability to develop in a manner that is compatible with the Site. Finally, consistent with this idea, the Facility's current location offers certainty for future

¹⁵¹ APP 801 at 2.

¹⁵² OPIC Reply Brief at 6-7.

development north of Hutto and for Williamson County, which appears to have been already considered by the city in its designation of the area as “institutional” in the Growth Guidance Plan. When all of the factors are considered, and the fact that development has yet to occur near the Landfill, the ALJs conclude that the expanded Facility is compatible with surrounding land uses.

VI. TRANSPORTATION

In accordance with the Commission’s rules, the Applicant provided transportation information on road access to the Facility and any potential bird hazards to aircraft using nearby public use airports.¹⁵³ Williamson County provided the required information on Facility access roads and airport safety analysis in Section 3.2 of Part I/II of the Application. The ALJs recommend that the Applicant met its burden to provide information and analysis on transportation issues in the Application.

A. Traffic Analysis

As for roadways, the Applicant was required to provide data on “the availability and adequacy” of access roads, the “volume of vehicular traffic,” and to project total traffic volume on the access roads for the life of the expanded Facility, including projected traffic as a result of the Facility.¹⁵⁴ Mr. Murray testified that the Texas Department of Transportation (TXDOT) assisted Williamson County with traffic count data and in developing projections on traffic volume.¹⁵⁵ The Applicant used CAPCOG’s estimated population growth projections to calculate the Landfill traffic increase rates in proportion to the rate of population growth in the County.¹⁵⁶

¹⁵³ 30 TAC § 330.53(b)(9); APP 202 at 27-30.

¹⁵⁴ 30 TAC § 330.53(b)(9)(B)-(C).

¹⁵⁵ Tr. 116-117, 131-135, 220, 376, and 425; APP 200 at 24-25; APP 202 at 28-30, 209-212; APP 208.

¹⁵⁶ Tr. 136 and 375; APP 202 at 29-30; APP 210 at 8.

Once gathered, the information was submitted to the ED for a compliance review. The ED determined that the data and projections met the Commission's regulatory requirements. The ED, however, did not conduct a traffic analysis. Mr. Prompuntagorn explained that after the ED receives and reviews the information, it is provided to TXDOT for analysis, which is twofold: TXDOT determines whether the road is strong enough to sustain the extra weight of traffic and whether the road network can handle the traffic without undue congestion.¹⁵⁷ TXDOT analyzed the information and determined that:

The adequacy and design capacities of the adjacent and surrounding roadways are sufficient to safely accommodate any additional traffic generated by the proposed facility.¹⁵⁸

Because TXDOT is responsible for the determination of roadway adequacy, its decision is accepted by the ED and the Applicant without further analysis.¹⁵⁹

On behalf of MHAC, Dr. Evans challenged the Applicant's data and reliance on TXDOT's instructions. MHAC argues that Williamson County failed to provide data for CR 100, a road just south of the Facility.¹⁶⁰ But the Applicant points out that the Commission's rules only require analysis of traffic on Facility *access* roads, and CR 100 is not a Facility access road.¹⁶¹ Although CR 100 intersects with FM 1660 within one mile of the Facility, it is apparent that FM 1660 is the primary road, and forms the final segment of access to the Landfill.¹⁶² Furthermore, as explained above, the Applicant's data was gathered under the direction of and with the final review of the ED

¹⁵⁷ ED Ex. 5 at 13; Tr. 1439-1441, 1595, and 1628-1631.

¹⁵⁸ APP 213; Tr. 222-223, 361, 381-383, and 1595-1596.

¹⁵⁹ ED Ex. 5 at 13; Tr. 1439-1441, 1595-1596, and 1628-1631.

¹⁶⁰ MHAC Initial Brief at 10.

¹⁶¹ 30 TAC § 330.53(b)(9)(A)-(C); Tr. 132-133.

¹⁶² *See for instance*, APP 801, LU-2.

and TXDOT. Had TXDOT considered CR 100 to be an access road, it seems certain the department would have included it in their analysis. Based on the evidence, the ALJs accept the Applicant's claim that CR 100 is not a Facility access road.

MHAC also argues that the Applicant's estimate of a 3% annual rate of total traffic increase on FM 1660 is too low. The Application includes figures reflecting total traffic increases (both Landfill and non-Landfill related) on FM 1660 south of the Site.¹⁶³ MHAC contends that Williamson County should have used an annual rate of increase of 6%, instead of following TXDOT's instructions to use an annual rate of 3%.¹⁶⁴ Dr. Evans explained that he reached the rate of 6% by finding "the average increase over the time period of concern" based on a 12% increase of non-Landfill traffic on FM 1660 from 1999 through 2003.¹⁶⁵ Yet, it is unclear to the ALJs how Dr. Evans calculated an average of rate of 6%, or the evidentiary basis for his 1999 figures.¹⁶⁶ The ALJs do, however, accept Dr. Evans' point that roadways nearest Hutto should see higher increases in traffic than the rest of Williamson County, because Hutto's rate of growth is higher than Williamson County's.¹⁶⁷

TXDOT based its 3% annual rate of increase on the County's anticipated population increase rate of 3.4%. The Application explains that:

TXDOT estimates that the traffic volumes in the vicinity of the landfill will increase at a rate of 3.0 percent per year . . . Landfill traffic is anticipated to increase at

¹⁶³ APP 202 at 28-30.

¹⁶⁴ *See generally*, APP 202 at 28-30;MHAC Initial Brief at 10-11.

¹⁶⁵ MHAC Initial Brief at 10-11. Dr. Evans obtained his 1999 data from the "original Application."

¹⁶⁶ *See*, Applicant's Reply Brief at 2, fnt. 1.

¹⁶⁷ MHAC Initial Brief at 10.

approximately the same rate as the population growth which is projected in the CAPCO RSWMP to be approximately 95 percent for the 20 years from 2000 to 2020 which equates to an annual growth rate of approximately 3.4 percent.¹⁶⁸

Even though the details behind the 3.4% rate of population increase were not discussed, the ALJs find that it was necessary for the County to follow the instructions of TXDOT – the state agency charged with conducting the analysis. While the ALJs generally agree with Dr. Evans that the evidence established Hutto’s growth rate as exceeding Williamson County’s, the Application points out that the specific stretch of FM 1660 within one mile of the Facility has “. . . no significant roadways or other significant traffic sources . . .”¹⁶⁹ This supports the County’s argument that Hutto’s growth rate does not translate into a proportional increase of traffic on the final mile to the Facility.¹⁷⁰ The ALJs recommend that Williamson County’s traffic analysis meets the Commission’s requirements.

B. Airport Safety Analysis

Consistent with the Commission’s rules, the Applicant submitted an airport safety analysis in Section 3.2.4 of Part I/II of the Application, asserting that the expanded Landfill will comply with 30 TAC § 330.300.¹⁷¹ MHAC, however, argues that Williamson County’s certification was in error because the analysis failed to recognize a private airpark roughly 1.5 miles from the Facility.¹⁷² Williamson County notes that the private airpark was identified and discussed in the Application.¹⁷³

¹⁶⁸ APP 202 at 28-29.

¹⁶⁹ APP 202 at 28.

¹⁷⁰ Applicant’s Reply Brief at 14; APP 202 at 28; 30 TAC § 330.53(b)(9)(B)-(C).

¹⁷¹ APP 202 at 30, 220; 30 TAC §§ 330.53(b)(9)(D), and 330.300.

¹⁷² MHAC Ex. 1 at 8.

¹⁷³ APP 202 at 30.

Most important, however, is that the Commission's rules define an airport as a "public use airport open to the public without prior permission and without restriction."¹⁷⁴ Dr. Evans acknowledged at the hearing that the airpark in question does not meet that definition.¹⁷⁵ The ALJs recommend that the existence of the private airpark does not alter the Applicant's certification of compliance with the Commission's rules.

VII. GEOLOGY, HYDROGEOLOGY, AND DRAINAGE

A. Geology and Groundwater Protection

1. Overview

Under 30 TAC § 330.231(a),

A groundwater monitoring system must be installed that consists of a sufficient number of monitoring wells, installed at appropriate locations and depths, to yield representative groundwater samples from the uppermost aquifer as defined in § 330.2 of this title (relating to Definitions).

Section 330.2 (158) defines the "uppermost aquifer" as:

The geologic formation nearest the natural ground surface that is an aquifer; includes lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

TJFA contended the Application failed to meet the groundwater monitoring requirement for several reasons. It contended Williamson County provided inadequate information regarding the existing Landfill site. It argued that the borings and permeability tests performed by Williamson County did not clearly characterize the geology and hydrogeology of the expansion site. It contended

¹⁷⁴ 30 TAC § 330.2(5).

¹⁷⁵ Tr. 1284.

Williamson County's data were inadequate to determine the lower boundary of the uppermost aquifer, which is essential for determining the appropriate depth of monitoring wells. It argued Williamson County had not adequately tested for the existence of inactive geological faults that could offer a preferred path for groundwater flow and the proposed monitoring wells did not account for that possibility. TJFA argued Williamson County had not described the effect of landfill construction on the movement of groundwater. TJFA also contended that the monitoring well placement was inadequate, because the wells would not capture groundwater flow in the claystone itself above the claystone/limestone interface where the wells would be screened, because the base of the uppermost aquifer had not been clearly determined, and because Williamson County's proposed point of compliance did not extend along the western boundary of the facility. In TJFA's opinion, the data compiled by Williamson County did not rule out the possibility of groundwater movement across that western boundary, and even indicated a likelihood of groundwater movement in that direction.

The ALJs find Williamson County adequately analyzed data regarding the existing landfill. They find that the borings and permeability tests sufficiently characterized the geology and hydrogeology of the site and that Williamson County adequately determined the base of the uppermost aquifer. Williamson County's data and testimony proved that the claystone/limestone interface is a preferred path for groundwater flow. The groundwater monitoring wells would be appropriately screened at that level and need not be screened in the claystone itself or at some undetermined lower level in the limestone stratum.

The ALJs also find that Williamson County proved, by a preponderance of the evidence, that groundwater will not move across the western boundary of the existing landfill site. Therefore, the proposed groundwater monitoring plan is adequate under 30 TAC § 330.231(a). If the Commission desires monitoring wells to be added along that boundary, however, it may amend the Draft Permit to require the addition of such wells.

2. Evidence and Arguments

a. Williamson County

Katherine A. Gallup, a licensed professional geoscientist and geologist, testified for Williamson County on geological and hydrogeological issues. She directed, managed the preparation of, and sponsored the Geology Report and the Groundwater Characterization Report (Part III, Attachments 4 and 5) of Williamson County's application.

A geology report is a required component of a municipal solid waste application pursuant to 30 TAC § 330.56(d). Ms. Gallup testified that the Geology Report contained in Williamson County's application¹⁷⁶ included information about each of the following subjects, as mandated by that rule:

the regional physiography and topography in the vicinity of the facility, the regional geology of the area in which the facility is or will be located, the geologic processes active in the vicinity of the facility, the regional aquifers in the vicinity of the facility, the results of investigations of subsurface conditions at the facility, and the facility's existing or proposed groundwater monitoring system.

The regional physiography and topography were discussed in Section 2 of the Geology Report¹⁷⁷ and in Ms. Gallup's testimony. That information was required by 30 TAC § 330.56(d)(1). The Landfill site is in south-central Williamson County, in the Grand Prairie Physiographic Province (a.k.a. rolling prairie). Generally, the Report described that rolling prairie as an elongated area of grassland county underlain by thin, stony, gently sloping to sloping soils. Those soils were formed in limestone or limestone and marl of upper Cretaceous rocks, which outcrop in the region. The only river in the county is the San Gabriel, which is part of the Brazos River drainage basin.

¹⁷⁶ The Geology Report is APP. 202, Vol. 3, pages 279-1049.

¹⁷⁷ APP. 202 at 287-289.

More specifically, the topography of the area surrounding the site is gently sloping valleys trending from a topographical high on the western permit boundary near the northwest corner of the original 122-acre landfill. The surface water features closest to the site are Mustang Creek, an intermittent tributary of Brushy Creek that flows from northwest to southeast along the southern portion of the permitted landfill, and an unnamed tributary of the San Gabriel River, located in the northern portion of the permitted landfill. Approximately three-fourths of the site drains southwest toward Mustang Creek; the remainder drains to the north, toward the unnamed tributary.

Ms. Gallup testified that there is no unfavorable topography in the area that would limit the Landfill's design, construction, or operation.

Section 3 of the Geology Report discussed the regional geology. The Report included a geologic map of the region and a description of the generalized stratigraphic column in the area from the base of the lowermost aquifer capable of providing usable groundwater. That aquifer is the Edwards aquifer. The approximate depth of the top of the Edwards aquifer is 600 to 700 feet below the ground surface (bgs), or 550 feet below the lowest excavation proposed for the Landfill. Ms. Gallup testified that the regional geology should not require any limits to be placed on the design, construction, or operation of the proposed Landfill.

The rule also requires an applicant to provide a description of the geologic processes active in the vicinity of the facility, including any faults and subsidence in the area of the facility. That topic was discussed in Section 4 of the Geology Report.

Under TCEQ's rules, an "active" fault is defined as one that has had displacement in Holocene time, which is approximately the most recent 11,000 years.¹⁷⁸ The rules prohibit the siting of a landfill within 200 feet of an active fault. Ms. Gallup testified there were no active faults at or near the Williamson County landfill site. No one disputed that testimony.

¹⁷⁸ 30 TAC §§ 330.56(d)(3)(A), 300.303(a) and (b), and 330.302(56); APP. 400 (Gallup test.) at 15 and 16.

Ms. Gallup also discussed the possible existence of an inactive fault or faults in the area. Although the rules do not prohibit the siting of a landfill over an inactive fault, the existence of such a fault could be significant because it could provide a path for groundwater flow. Ms. Gallup testified that there is a surface trace of an inactive fault—the Jonah fault—approximately 1,750 feet northwest of the northern boundary of the existing landfill. However, she stated there are no inactive faults in the immediate vicinity of the facility. Explaining further, Ms. Gallup stated the Austin sheet of the Geologic Atlas of Texas—a regional geologic map—shows the inactive Jonah fault extending through the southwest corner of the existing permitted landfill. Ms. Gallup stated, however, that a more detailed map of the Jonah quadrangle, in which the facility resides, does not show that fault. Ms. Gallup also stated that borehole data, field observations, and examinations of aerial photographs showed no evidence of faulting at the Landfill site.¹⁷⁹

During the hearing, Williamson County presented into evidence a 1997 Bureau of Economic Geology map on which Ms. Gallup had drawn, with dashed lines, two inactive fault lines through the Landfill site. She explained one of those lines was an extrapolated extension of a known fault line to the southwest; the other was totally inferred on her part, based on the spacing of fault lines on the map. Ms. Gallup testified she and her colleagues had conducted soil borings at the location of those lines. The borings showed no evidence of the existence of a fault or faults.¹⁸⁰

The possible existence of an inactive fault and its potential effect on groundwater flow was a contested issue that will be discussed in more detail below.

¹⁷⁹ APP. 202 at 295-296 and Figure III-4.5 (Geology Report), APP. 400 at 17 (Gallup test.) and App. Exs. 402 and 403.

¹⁸⁰ APP. 403 (map); Tr. 707-712.

Section 4 of the Geology Report and Ms. Gallup's testimony also examined possible seismic impact zones, subsidence, unstable areas, erosion, and wetlands. Ms. Gallup found none of those factors should cause any limitations to be placed on the design, construction, or operation of the proposed facility.

The subsurface stratigraphy and groundwater investigations were discussed in Ms. Gallup's testimony and in Sections 6 and 8 of the Geology Report. The subsurface stratigraphy investigation was conducted to determine the geological feasibility and soundness of constructing the facility in the area in question. The groundwater investigation was conducted to determine reliable aquifer characteristics and performance data. Data compiled from both investigations were used to design the groundwater monitoring network, the purpose of which is to detect any release of contaminants into the groundwater beneath the facility.

Ms. Gallup and others under her direction performed field activities for the subsurface investigations of the proposed Williamson County landfill expansion from April 13 through July 27, 2004. They also reviewed previous subsurface investigations conducted from 1989 through 1991. Data from soil borings and piezometers installed during those investigations were analyzed to determine the subsurface conditions. Ms. Gallup testified those previous investigations provided an adequate characterization of the subsurface conditions beneath the existing Landfill.

To investigate the subsurface conditions for the proposed expansion area, Ms. Gallup and her colleagues reviewed the earlier data for the existing Landfill, then examined aerial photographs and topographic maps covering five decades. They saw no features to indicate subsurface discontinuities. They then developed a drilling program, consisting of 44 borings at 35 different locations within the expansion area.

The relevant Commission rule, 30 TAC § 330.56(d)(5)(A)(ii), requires borings to be

sufficiently deep to allow identification of the uppermost aquifer and underlying hydraulically interconnected aquifers. Borings shall penetrate the uppermost aquifer and all deeper hydraulically interconnected aquifers and be deep enough to identify the aquiclude at the lower boundary. All the borings shall be at least five feet deeper than the elevation of the deepest excavation. In addition, at least the number of borings shown on the Table of Borings shall be drilled to a depth at least 30 feet below the deepest excavation planned at the waste management unit, unless the executive director approves a different depth

As described by the Geology Report, and as generally agreed by the parties, three major stratigraphic units underlie the expansion site down to approximately 592 feet above MSL. In general, those consist of (1) surficial clay, which generally occurs between 717 and 630 feet above MSL, with thickness ranging from 8.6 to 60 feet; (2) claystone, typically between 705 to 630 feet above MSL, with thickness ranging from 5 to 49 feet; and (3) limestone, encountered between 668 to 607 feet above MSL.¹⁸¹

In accordance with the drilling-depth requirements of the rule, and with the Executive Director's approval, Williamson County drilled 17 soil borings within the expansion area to a depth of at least 5 feet below the deepest planned excavation and 18 borings to a depth of at least 30 feet below the deepest planned excavation. Nine shallow borings were advanced and completed as piezometers adjacent to deeper, completed piezometers, to determine water-level elevations in the uppermost aquifer and in a potentially hydraulically, interconnected, underlying aquifer, and to perform a series of hydraulic conductivity tests as part of the groundwater investigation.

After the borings were completed and samples were collected, 22 of the borings were sealed. The remaining 22 were converted to piezometers, 13 of which monitor water elevations in the surficial clay and nine of which monitor the lower claystone/upper limestone unit. Ms. Gallup

¹⁸¹ APP. 202 at 317-340.

testified those layers are to be considered one hydrostatic unit, constituting the uppermost aquifer, which collectively act as an aquitard to the Edwards aquifer.¹⁸² An “aquitard” is a zone beneath the earth that restricts the flow of groundwater from one aquifer to another. Ms. Gallup further testified that there are “confining beds,¹⁸³” or completely impermeable aquitards, between the Williamson County expansion area and the Edwards aquifer.

Ms. Gallup stated that the borings conducted at the expansion site were sufficiently deep to identify the uppermost aquifer, including its lowest level. She testified that the first zone of the uppermost aquifer occurs in the surficial clay unit and extends into the upper zone of the claystone unit. A lower zone, hydraulically connected to the upper one and therefore considered part of the uppermost aquifer, occurs at the base of the claystone unit into the upper portion of the limestone.

Ms. Gallup testified that the surficial clay and claystone are the only units that will be in contact with the proposed landfill excavation. The majority of the base grades of the proposed facility will terminate in the claystone, approximately 10 to 15 feet above the limestone unit. However, some of the side slopes of the excavation will be in contact with coarser materials in the surficial clay, which would be the most likely path for the pollutant migration originating from the side slopes. According to Ms. Gallup, the less permeable claystone unit would be a barrier to pollutant migration.

According to the Geology Report, the surficial clay/calcareous claystone and potentially the weathered limestone, taken together, should be considered the uppermost water-bearing unit at the

¹⁸² APP. 202 at 317.

¹⁸³ Ms. Gallup testified that the term “confining beds” has replaced the term “aquiclude” in geologic terminology.

Landfill site. Although the claystone/limestone unit is not even moderately transmissive, it forms the lower boundary of the uppermost aquifer and is the only strata available to monitor subsurface water for the entire site.¹⁸⁴

Based on the geologic data from her own investigation and previous investigations, Ms. Gallup designed a groundwater monitoring system for the proposed expanded Williamson County landfill. That system is depicted in Figure III-4.28 and Figure IV-5.8 attached to the Geology Report.¹⁸⁵ As described in her testimony and the Geology Report, the groundwater monitoring system would consist of 35 monitoring wells located along the perimeters of the existing and proposed landfills. The wells would be spaced between 489 to 655 feet apart, with an average spacing of 595 feet. That spacing is similar to the 563-foot average spacing of the present monitoring wells. No monitoring wells were included along the western boundary of the original Landfill site, however, because, according to Ms. Gallup, the historic data show groundwater flow is toward the east from that boundary. Of the 35 wells, 25 would be screened in the lower claystone/upper limestone unit and 10 would be screened in the shallow, coarse-grained material of the surficial clay unit, along the eastern boundary of the expansion area. The screens for the wells would generally be 10.0 feet in length for the shallower wells in the surficial clay unit and 15.0 feet in length for the deeper wells at the claystone/limestone interface. Two wells, MW-11 and MW 12, are now and will be located at corners of the western boundary of the existing Landfill, where its boundary turns towards the east. Ms. Gallup described those as upgradient wells, meant to serve as background monitoring wells. Because groundwater passes through upgradient wells before reaching the facility, that water would not have been affected by any release from the facility.¹⁸⁶ As is discussed further below, TJFA contended MW-11 may be a downgradient, rather than an upgradient, well.

¹⁸⁴ APP. 202 at 1027.

¹⁸⁵ APP. 202 at 414 and 1057.

¹⁸⁶ APP. 400 (Gallup test.) at 36-38; APP. 202 at 348-355.

Ms. Gallup also provided descriptions of the current groundwater monitoring system and previous systems. The current system, approved in 1995 to obtain Williamson County's current Permit No. MSW-1405A, consists of eight wells, all screened in the lower claystone/upper limestone unit. The upgradient wells under that system are MW-11, MW-12, and MW-9A. However, MW-9A, which is along the eastern boundary of the current Landfill, would be decommissioned if the expansion is approved, because it would be in the middle of the expanded landfill. Two other downgradient wells would be decommissioned also, for the same reason.

The Geology Report describes the history of the groundwater monitoring system at the Landfill site in more detail. Originally, three monitoring wells (MW-01 through MW-03) were installed. In November 1991, four new monitoring wells (MW-04 through MW07) were installed. In January 1996, in connection with Permit No. 1405A, piezometer P-J was converted to MW-9 (later replaced by MW-9A due to damage) and monitoring wells MW-08 and MW-10 through MW-13 were installed. Three of the earlier monitoring wells, MW-01 through MW-03, were plugged and abandoned at that time. Two others, MW-4 and MW-5, remain at the site, but were removed from the monitoring detection system. MW-4 was removed because of anomalous water levels. MW-5, which was in the southern part of the western boundary of the existing facility, was removed because data from December 1991 to December 1994 showed it was not downgradient. Piezometers have been maintained at the MW-4 and MW-5 locations.¹⁸⁷

The Commission's rules at 30 TAC § 330.200 require that concentration values of specific pollutants not be exceeded in the uppermost aquifer at the point of compliance. The "point of compliance" itself is defined, under 30 TAC § 330.2(98), as:

A vertical surface located no more than 500 feet from the hydraulically downgradient limit of the waste management unit boundary, extending down through the uppermost aquifer underlying the regulated units, and located on land owned by the owner of the permitted facility.

¹⁸⁷ APP. 202 at 333-335, and 1028.

For this facility, Ms. Gallup located the point of compliance around the entire northern, eastern, and southern boundaries of the facility, excluding the western boundary of the existing Landfill, which she determined to be upgradient.¹⁸⁸

In summary, Ms. Gallup testified that the groundwater monitoring system proposed in the Geology Report was conservatively designed to be protective of human health and the environment and to provide early detection of any release of contaminants from the facility.

b. TJFA

The Protestants, in particular TJFA, took issue with many aspects of Ms. Gallup's testimony, the Geology Report, and the design of the proposed groundwater monitoring system. They disagreed with her ultimate conclusion that Williamson County's proposed groundwater monitoring system would be protective of human health and the environment and would provide early detection of any release of contaminants.

Harold C. Clark, Ph.D., testified for TJFA concerning the Geology Report and the proposed groundwater monitoring system. Dr. Clark raised concerns about several aspects of Ms. Gallup's testimony and the Geology Report. First, he was concerned that the site geological study was inadequate, which led to a second concern that the hydrogeological characterization was inadequate as well. Third, he believed the information provided about the clay soils and slope stability was also inadequate—an issue that is discussed elsewhere in this Proposal for Decision. Fourth, he found the fault information to be insufficient to determine the presence or absence of inactive faulting that might affect the geology and hydrogeology.

¹⁸⁸ APP. 202, Figure III-4.28 at 414.

Dr. Clark raised two concerns about the adequacy of the geological study itself. He testified that the Application did not include an evaluation of the history and geology of the current landfill on which the expansion will be based. He also believed the Geology Report reached contradictory characterizations of what constitutes the uppermost aquifer.

Dr. Clark believed that 30 TAC § 330.231(e)(1) requires a thorough history of the existing Landfill to be included in the Application. In his opinion, Williamson County was in violation of the portions of that rule that require a characterization of the “. . . effect of site construction and operations on groundwater flow directions and rates . . .” and of the portion that requires characterization of various geologic units “. . . and fill materials overlying the uppermost aquifer . . .” Dr. Clark acknowledged that the Application discussed studies and borings done in the past and stated those had been reviewed in preparing this Application. He testified, however, that not all the studies were actually included in this Application. He believed they should be, under 30 TAC § 330.56(d)(5)(A).

Dr. Clark cited Ms. Gallup’s testimony as the starting point for his concerns about the description of the uppermost aquifer. Ms. Gallup stated, “The uppermost aquifer located beneath the Williamson County RDF occurs in the surficial clay unit and extends into the upper portion of the claystone unit. The next zone with the uppermost aquifer occurs at the base of the claystone unit into the upper portion of the limestone unit.” Dr. Clark pointed out that the surficial clay will be removed by the excavation, since the surficial clay/claystone contact is depicted as the base of the Landfill, so that surficial clay could not be part of the uppermost aquifer beneath the site. Second, he believed that description should not be limited to the expansion area, but should include the existing Landfill, too.

More technically, Dr. Clark considered the depiction of the hydraulic conductivity of the uppermost aquifer to be inadequate. He noted that the description of groundwater levels as

influenced by climatic variations suggested the piezometers at the site respond to recharge events, which would suggest preferential flowpaths or higher permeabilities than the values determined by laboratory methods and field methods. He believed those differences needed to be evaluated. Dr. Clark also believed Ms. Gallup and the Geology Report contradicted each other regarding whether the uppermost aquifer was confined or unconfined.

In Dr. Clark's view, the Application was overly concerned with discussing confining units above the Edwards Aquifer, instead of precisely identifying the base of the uppermost aquifer in order to design an effective groundwater monitoring system. He contended that the information provided did not adequately identify that base, which would in turn preclude the design of an adequate groundwater monitoring system. Dr. Clark concluded that the proposed groundwater monitor well system would not adequately consider and monitor the existing site and portions of the expansion site.

Dr. Clark pointed out that landfill groundwater monitoring is a means to evaluate the closest water-bearing unit that passes beneath the landfill and is tapped at the point of compliance. To be meaningful, he noted, the interception should consider the preferential pathway or pathways for groundwater flow. Dr. Clark pointed to the statement in the Geology Report, cited above in this Proposal, that "although the claystone/limestone unit is not even a moderately transmissive unit, it is the only strata available to monitor subsurface water for the entire Site."¹⁸⁹ Dr. Clark testified that, if the measured hydraulic conductivities were indeed very low, something else should be done to effectively monitor the site. He pointed out that 30 TAC § 330.231(c) allows the Executive Director to approve an alternative design for groundwater monitoring that uses other means in conjunctions with monitoring wells to ensure detection of groundwater contamination.

¹⁸⁹ TJFA Ex. 3 at 9, citing APP. 202 at 1027.

Finally, Dr. Clark considered whether an inactive fault exists beneath the site.¹⁹⁰ In his opinion, the Application wrongly failed to include earlier studies that addressed that matter and made summary conclusions about the absence of any faulting. Dr. Clark pointed out that an inactive fault, if present, could possibly form a barrier to or an enhanced pathway for groundwater flow. In his opinion, both boring data, which suggested offsets between borings, and groundwater elevation data suggested possible faulting.

TJFA elaborated on several of the issues raised by Dr. Clark in its cross-examination of Ms. Gallup and its written arguments. Ms. Gallup agreed it was possible that an inactive fault might lie in the limestone beneath the claystone at the site. She stated the borings did not show any evidence of that fault, however. She agreed an inactive fault theoretically could be a pathway for groundwater movement, but testified she saw no evidence of such movement in the data.¹⁹¹

Ms. Gallup agreed that borings showed that both the claystone and the limestone units have some fractures, which she described as narrow to extremely narrow and totally to moderately healed. In the limestone unit, some of those fractures extend below the level at which the monitoring wells would be screened.

TJFA argued that groundwater could move through the fractures in the claystone at an unmonitored level above the claystone/limestone interface. Ms. Gallup admitted such movement was possible, although she testified any leak of contaminants would nevertheless be captured by the monitoring well screens at the claystone/limestone interface. TJFA further argued that groundwater could move below the monitored level through the deeper fractures in the limestone, and thereby bypass the monitoring wells. Because fractures exist below the monitored level, TJFA contended Williamson County had failed to identify the base of the uppermost aquifer as required by TCEQ's

¹⁹⁰ He agreed there is no evidence of an active fault.

¹⁹¹ Tr. 510-512.

rules. Ms. Gallup agreed she could not give a specific depth within the Austin Chalk limestone for the bottom of the uppermost aquifer.¹⁹²

Ms. Gallup and her colleagues conducted permeability tests on the number of boring samples specified by the TCEQ rules. For the claystone and the limestone, the permeability was on the order of 10^{-9} , which is virtually impermeable. However, none of the claystone or limestone samples tested contained fractures. Therefore, TJFA argued, the true permeability of the fractured claystone and limestone beneath the site was unknown, and Williamson County's Application failed adequately to characterize the hydrogeology beneath the site. Therefore, in TJFA's view, that testing was not in compliance with the rule, which requires borings to reach a minimum depth, but also requires them to be:

sufficiently deep to allow identification of the uppermost aquifer and underlying hydraulically interconnected aquifers. Borings shall penetrate the uppermost aquifer and all deeper hydraulically interconnected aquifers and be deep enough to identify the aquiclude at the lower boundary¹⁹³

The proposed groundwater monitoring system does not include any wells along the western boundary of the original landfill. If groundwater flow were in that direction, the proposed groundwater monitoring system would not be adequate.

During her original cross-examination, Ms. Gallup was unable to confirm that groundwater would not flow across the western boundary of the original landfill. In response to questions from TJFA, she indicated that MW-11 might be downgradient and redrew the point of compliance along that western boundary. However, she indicated she would have to reexamine the historical

¹⁹² Tr. 571.

¹⁹³ 30 TAC § 330.56(d)(5)(B)(i)

groundwater data to make an accurate determination.¹⁹⁴ On rebuttal, after reexamining that data, she reasserted that groundwater did not flow across that boundary and that MW-11 is indeed upgradient.¹⁹⁵ TJFA suggested otherwise, however. It questioned the thoroughness of the data and the accuracy of her interpretation, and pointed out that her earlier indecision on the subject should itself raise questions about the reliability of her analysis. It pointed out that the groundwater data did not include information from monitoring wells along the western boundary of the original facility, which is in the southwestern portion of the site, because there are none. At the very least, TJFA argued, the data were inconclusive, which showed the information in the Application to be inadequate. Although she believed they were not necessary, Ms. Gallup stated she would not object to the inclusion of monitoring wells along that western boundary, if TCEQ so ordered.¹⁹⁶

Williamson County also addressed several disputed issues in its cross-examination of Dr. Clark. In that cross-examination, Dr. Clark agreed that the Application had referenced the earlier geological and groundwater studies and data and that referencing such material, instead of including it in an Application, was a common practice. He preferred to see the studies, however. He conceded he had not reviewed the historical information on which Ms. Gallup had relied for her characterization of the existing Landfill. Nor had he reviewed the historical boring logs for the existing site. He agreed that Williamson County should not be required to drill through existing waste to recharacterize the geology of that site.¹⁹⁷

Dr. Clark testified that in order for a geologic unit to qualify as an uppermost aquifer, it must be transmissive enough to get fluid to the monitor wells in a brief enough time. He agreed that a unit

¹⁹⁴ Tr. 629-646

¹⁹⁵ Tr. 1915-1918 and 1928-29.

¹⁹⁶ Tr. 685.

¹⁹⁷ Tr. 1299-1305 and 1412.

with a hydraulic conductivity of 10^{-9} cm/sec. could be an uppermost aquifer, although he would like to have it more permeable than that.¹⁹⁸

Dr. Clark was asked about a TDS landfill in Creedmoor, Texas, for which the Taylor claystone itself acts as the base, without a geomembrane liner. Dr. Clark stated that the claystone at that site was similar to the claystone at this site and throughout the area and that it contained fractures. According to documents associated with that Landfill application, the permeability of that claystone had been determined to be 10^{-9} . Dr. Clark agreed that the documents contained that information about permeability, but stated he couldn't vouch for the accuracy of the analysis without reviewing the boring logs and related information. He could not say the samples used for that analysis contained fractures any more than the ones used in this case. He pointed out that at the TDS site, although fractured claystone was used as a performance-based liner, data had shown no water was present in the fractures at that depth. At the Williamson County site, in contrast, water was present in the piezometers at the claystone/limestone interface.¹⁹⁹

Dr. Clark stated that fractures tend to close with increased depth. In this case, he believed fractures extended through the claystone, to the claystone/limestone interface and beyond. He reiterated that he did not believe Williamson County had established the base of the uppermost aquifer in the limestone, which might extend several tens of feet below the claystone/limestone interface where the monitoring wells are to be screened.²⁰⁰

¹⁹⁸ Tr. 1308-1309.

¹⁹⁹ Tr. 1314-1352, and 1405.

²⁰⁰ Tr. 1390-1401.

c. Executive Director

T. Wesley McCoy testified for the Executive Director on geological issues. Mr. McCoy's direct testimony was not a qualitative review, but was limited to discussion of whether Williamson County's Application met the technical requirements of 30 TAC Chapter 330 as they existed before March 27, 2006. He concluded the Application met those requirements.

On cross-examination, however, Mr. McCoy did discuss the substance of several of the issues raised in the testimonies and cross-examination of Ms. Gallup and Dr. Clark. Mr. McCoy stated he had not reached a conclusion about whether there were any inactive faults under the expansion site. He agreed that inactive faults can provide a pathway for the movement of groundwater. He stated, however, that he had spent quite a bit of time observing the surficial geology of the site. He had seen no evidence that faults were discharging into nearby streams. He also testified that the potentiometric maps in the Application contained no evidence of faults impeding groundwater flow. Therefore, in his professional opinion, an inactive fault, even if there was one, was not affecting groundwater movement at the site.²⁰¹

Mr. McCoy expressed the opinion that the bottom of the uppermost aquifer at the site is within 5 to 10 feet below the claystone/limestone interface, which is where Williamson County proposes to screen its monitoring wells. According to Mr. McCoy, the boring logs showed the first 5 to 10 feet below the interface to be fractured; below that level, the samples commonly were logged as unfractured. He agreed there were some fractured samples even lower down. Mr. McCoy testified that the base of the uppermost aquifer was within 5 to 10 feet of the interface, because the unfractured zone was consistently being reported between those shallower fractures and the deeper fractures, so there appeared to be no connection between them. He conceded it was possible that the fractures were connected elsewhere, but he still believed, to a reasonable degree of scientific

²⁰¹ Tr. 1643-1647.

certainty, that the uppermost aquifer did not extend down to the lowest fractures in the lowest borings in the limestone.²⁰²

Mr. McCoy agreed that, for groundwater monitoring purposes, the surficial clay through the upper portion of the limestone should be considered one hydrostatic unit. Practically speaking, however, he considered both the Austin Chalk limestone and the Taylor claystone to be aquitards, because they are low-flow units. Mr. McCoy agreed, however, that the claystone and limestone at the site contained fractures. He also conceded that he did not know what the permeability was of the claystone or the limestone containing fractures, because the permeability tests had been conducted on unfractured samples.²⁰³

Mr. McCoy originally testified, in response to a question from TJFA, that Williamson County had not identified the effect that the construction of the landfill would have on groundwater movement at the site, as required by 30 TAC § 330.231(e)(1). He later reconsidered that answer, however, on cross-examination by Williamson County, and stated that the Application had considered that issue.²⁰⁴

Mr. McCoy also testified that, in his opinion, MW-11 is an upgradient rather than a downgradient well. He based that testimony on a comparison of the higher groundwater level shown for MW-11 to the lower level shown for MW-10, which is on the eastern border of the existing facility.²⁰⁵

²⁰² Tr. 1651-1654.

²⁰³ Tr. 1648-165 and 1655-1656.

²⁰⁴ Tr. 1673-74 and 1684-86.

²⁰⁵ Tr. 1686-89.

3. Analysis

a. Analysis of Existing Landfill

The ALJs find Williamson County analyzed and presented adequate information regarding the existing Landfill site. The Geology Report included and summarized geological data, including boring logs, from previous investigations. It summarized and discussed historical groundwater monitoring data. Historical data that were not actually included in the filing were analyzed by Ms. Gallup and clearly referenced in the Application. Dr. Clark agreed it was common practice to reference such earlier materials. Although he did not review them, they could have been made available. Dr. Clark's criticism of Williamson County's review of the existing site was not credible.

b. Effect of Construction on Groundwater Movement

The ALJs find the Application adequately discussed the effect of construction on groundwater movement. As Mr. McCoy pointed out, that issue is discussed on page 348 of the Geology Report, which states,

It is anticipated that as cell construction progresses from west to east that groundwater flow may be impeded in an easterly direction; however, monitoring wells have been proposed to encompass the entire perimeter of the expansion acreage and would detect any release from WMUs that may occur.

In addition, data were included in the Application showing the effect of the existing Landfill on groundwater levels and movement.

c. Faulting

It is undisputed that there is no active faulting in the area of the site. The evidence is inconclusive as to whether there is an inactive fault or faults beneath the landfill, however.

Ms. Gallup testified that boring sites were chosen to attempt to find evidence of faulting; none was found. Both she and Mr. McCoy agreed an inactive fault might exist at the site, as Dr. Clark suggested.

Both Ms. Gallup and Mr. McCoy also agreed, however, that although inactive faults theoretically can provide a pathway for the movement of groundwater, there was no evidence of such movement at this site. Ms. Gallup cited the data from her investigations, which included attempts to find the extrapolated inactive fault lines. Mr. McCoy cited both his personal observations and the potentiometric maps. Although Dr. Clark stated that the data could be interpreted as showing faulting, he did not provide details to corroborate that interpretation.

The ALJs find Ms. Gallup and Mr. McCoy persuasive on this issue. Even if there is an inactive fault in the area of the site, it does not affect the movement of groundwater. Therefore, the groundwater monitoring system does not need to be revised to account for the possible presence of an inactive fault.

d. Groundwater Monitoring Well Depth and Location

The goal of a groundwater monitoring system, as expressed in 30 TAC § 330.231(a), is to provide

a sufficient number of monitoring wells, installed at appropriate locations and depths, to yield representative groundwater samples from the uppermost aquifer as defined in § 330.2

TJFA raised three issues regarding the adequacy of the proposed groundwater monitoring system, two related to depth and one related to location. It contended that Williamson County had not clearly established the base of the uppermost aquifer in the Austin Chalk limestone stratum, below the screened levels of the proposed monitoring wells. It also contended that Williamson County had not demonstrated that groundwater would not move horizontally off-site to the north or

south through the claystone stratum between the proposed screened levels. It also argued that Williamson County had not established that groundwater would not move across the western boundary of the existing Landfill, where no groundwater monitoring wells are located.

i. Base of Uppermost Aquifer

The parties agreed that Williamson County's borings were in compliance with the depth requirements contained in 30 TAC § 330.56(d)(5)(A)(ii). Both Ms. Gallup and Mr. McCoy testified the borings and information led them to the conclusion that the base of the uppermost aquifer is in the Austin Chalk limestone, within 0 to 10 feet below the claystone/limestone interface.²⁰⁶ That is also the level at which monitoring wells on the existing site are screened. Pointing to fractures deeper within the limestone shown on two boring logs and to Ms. Gallup's unwillingness to identify a specific numerical depth for the base of the uppermost aquifer, TJFA contended the borings were not sufficiently deep to allow identification of that base. Dr. Clark contended the bottom of the aquifer might extend to "several tens of feet" below the claystone/limestone interface.

Mr. McCoy testified that the boring data showed the bottom of the uppermost aquifer to be five to ten feet below that interface. Although some samples showed additional, deeper fractures, those fractures were "at depth," with an unfractured zone consistently reported between the shallower fractures and the deeper fractures. According to Mr. McCoy, there seemed to be no connection between the deeper fracturing and the shallower fracturing. Mr. McCoy testified, to a reasonable degree of scientific certainty, that the uppermost aquifer does not extend down to the lowest fractures in the lowest boring in the limestone.²⁰⁷

²⁰⁶ Tr. 550-554 and 1651-52.

²⁰⁷ Tr. 1651-1654.

The ALJs' own review of those boring logs substantiates Mr. McCoy's testimony. Most of the boring samples summarized in the Application²⁰⁸ show the limestone as unfractured below the 5-10 foot level below the top of the limestone. If there are fractures a few feet lower, they are almost all totally healed.²⁰⁹ Of the few that show deeper, unhealed fractures, only one, E-16,²¹⁰ shows that fracturing anywhere close to that upper level. Even in that sample, there are 24 feet of unfractured rock, or rock with totally healed fractures, between the upper and lower unhealed fractures. Ms. Gallup testified the borings showed no water in that lower portion of the limestone.²¹¹

TJFA's contentions that the data were inadequate and that the base of the uppermost aquifer may extend several tens of feet or further into the limestone stratum were not supported by the record. Williamson County established that the base of the uppermost aquifer is in the upper portion of that stratum, which is the level at which the groundwater monitoring wells will be screened. The screens themselves are to be placed to pull in any fractures at the well location.²¹² The ALJs find the proposed groundwater monitoring wells will be placed at appropriate depths at the base of the uppermost aquifer.

ii. Monitoring of Claystone

The preponderance of the evidence establishes that it is not necessary to monitor the claystone stratum itself other than at the levels anticipated in Williamson County's proposed groundwater monitoring system. As Ms. Gallup testified, groundwater monitoring is not designed

²⁰⁸ APP. 202 at 447-614

²⁰⁹ Dr. Clark himself testified that fractures tend to close with depth.

²¹⁰ Boring E-16 is in the western part of the expansion area, close to the original landfill. APP. 202 at 398.

²¹¹ Tr. 568.

²¹² Tr. 553.

to cover every remote possibility.²¹³ The testimony shows that the possibility of contaminants traveling through the claystone above the screens at the claystone/limestone interface is indeed remote.

Ms. Gallup testified that in the expansion area, the groundwater flow is generally to the east, with some flow to the north and south. Her testimony established that to the east the downgradient would ensure groundwater flow through the claystone to the interface.²¹⁴ To the north and south, it is possible that some groundwater could miss the screens at the interface, if unhealed horizontal fractures were aligned to allow it to do so. That is not the same as saying contaminants would be undetected, however. Ms. Gallup testified that leaks would spread radially and travel several pathways through the narrow fractures in the claystone. The most likely path would be downward to reach the claystone/limestone interface, not only because of gravity, but because of the prevalence of vertical and subvertical fractures shown in the boring samples. Ms. Gallup stated that vertical boring is more likely to discover horizontal fractures than vertical or subvertical ones, but in these samples the latter were predominant.

Experience supports the premise that contaminants will be detected at the claystone/limestone interface. Ms. Gallup testified on redirect examination that piezometers at the site show groundwater percolating through the surficial clay and claystone to that interface:

- Q Okay. And so even if Mr. Dunbar's example is occurring, connected all the dots and we're going horizontal, all of our fractures line up and we've got that one shot straight to the side, even if that is occurring, in your opinion, is this also occurring down --
- A Yes.
- Q -- to the contact?
- A Yes.
- Q Once it reaches this contact, the contact between the claystone and the limestone, is that water going to make its way to this well?
- A Yes; in my opinion, yes.

²¹³ Tr. 693.

²¹⁴ Tr. 595.

- Q And can you say that within a reasonable degree of scientific certainty?
- A Yes.
- Q Actually, Ms. Gallup, can you say that as a fact? In fact, Ms. Gallup, you're aware and said you have piezometers out in the eastern portion of the landfill. Correct?
- A Yes, that's correct.
- Q And how long have those piezometers been out there?
- A Since we installed them in not -- we started in April of -- let me look at the date -- 2004. Since 2004 another company has been going out on a quarterly basis and has produced information for me that shows that all of the wells or piezometers -- all the piezometers have had water in them since these wells -- piezometers were installed.
- Q So for the last two and a half years, all the piezometers you put in the eastern portion of the landfill for the expansion area have had water in them?
- A That's correct.
- Q And that water -- the primary source of that water I believe you told us before was from it percolating down from rain from the landfill?
- A Yes, that's correct.
- * * * *
- Q (By Mr. Moore) Ms. Gallup, before the objection,²¹⁵ we were talking about water getting down to this piezometer.
- A Yes.
- Q And you've told us that the last two and a half years since these piezometers have been installed, these piezometers -- and these piezometers I'm referring to are the piezometers at the claystone/limestone interface -- those piezometers have had water in them?
- A That's correct.
- Q And you've also told us that the primary way that water gets to this portion of the uppermost aquifer, that is, the claystone/limestone interface, is from rain falling on the surface of the ground. Is that correct?
- A That's correct.
- Q And you've also told us that the only way that water can flow through the claystone is through fractures, one. Correct?
- A Correct.
- Q Alignment of fractures, two. Correct?
- A Yes.
- Q And fractures that are somewhat less than totally healed?
- A Correct.

²¹⁵ An objection to this portion of Ms. Gallup's testimony was overruled.

Q So, Ms. Gallup, does that have to be occurring at the site?

A Yes.²¹⁶

Ms. Gallup agreed that it would be technically possible to screen the entire depth of the claystone at the monitoring well locations. She was not aware of any situation in which the Commission had ordered such screening, however, and she did not believe it necessary or advisable.²¹⁷ The ALJs agree.

iii. Point of Compliance/Monitoring of Western Boundary

The “point of compliance” is defined in 30 TAC § 330.2 (98)

A vertical surface located no more than 500 feet from the hydraulically downgradient limit of the waste management unit boundary, extending down through the uppermost aquifer underlying the regulated units, and located on land owned by the owner of the facility.

The preponderance of the evidence shows Williamson County correctly established the point of compliance along the northern, eastern, and southern boundaries of the proposed expanded facility. The point of compliance should not be extended to the western boundary as contended by TJFA.

The monitoring system proposed for the western boundary of the original Landfill is the same system that has been in place there since 1995, when Williamson County obtained its current permit. The system under that permit consists of eight monitoring wells screened at the lower claystone/upper limestone interface along the northern, eastern, southern, and part of the western

²¹⁶ Tr. 746-747 and 750-751.

²¹⁷ Tr. 663-664.

boundary of the landfill.²¹⁸ There are no monitoring wells currently on the western boundary of the original Landfill, which comprises roughly the lower two-thirds of the total existing site. From 1991 to 1995, however, there was a monitoring well, MW-5, on the lower part of that western boundary. It was abandoned as a monitoring well in 1995, because groundwater data showed it to be upgradient. There are also no monitoring wells on the upper portion of the western boundary of the existing site, between existing MW-11 and MW-14, the latter of which is on the northern boundary of the site.

There are two controversies concerning adequacy of the groundwater monitoring system on the western boundary of the existing site. One controversy is whether MW-11, which is located where the site boundary doglegs toward the west and is treated by Williamson County as an upgradient well, is really downgradient. The other is whether groundwater might travel across the western boundary of the site south of MW-12, which is on the northwestern corner of the original Landfill.

During cross-examination by TJFA regarding Figure III-4.25 of the Application, which shows claystone/limestone interface potentiometric surface data,²¹⁹ Ms. Gallup agreed it was possible that groundwater could travel westward along the depicted groundwater contours to MW-11 and across the western boundary of the facility. She tentatively redrew the point of compliance line southward along the western boundary to MW-11.²²⁰

Mr. McCoy disagreed with that revision. He concurred that the line should be redrawn if MW-11 were possibly downgradient. He testified, however, that the data show MW-11 is not

²¹⁸ Williamson County proposes to abandon the wells on the eastern boundary of the existing landfill, because they will be in the middle of the site if the expansion is approved.

²¹⁹ APP. 202 at 411.

²²⁰ Tr. 636-39.

downgradient. He pointed out that Figure III-4.25 shows a higher groundwater elevation for MW-11 than for MW-10 to its east.

- Q: Mr. McCoy, based upon what you've just told me, is MW-11 at a higher—excuse me. Is MW-11 at a higher water elevation—showing a higher water elevation than MW-10?
- A: The water level elevation in MW-11 is higher than that of the water level elevation in MW-10.
- Q: So, in your opinion, based upon that data, could water flow from MW-10 back the direction that you just came between those two 685 contours and through MW-11?
- A: No.²²¹

In her rebuttal testimony, Ms. Gallup agreed with Mr. McCoy. She stated the point of compliance should not, in fact, be redrawn southward to MW-11.²²²

The data on Figure III-4.25 support Mr. McCoy's and Ms. Gallup's determinations. That data, combined with their testimonies, establish that MW-11 is an upgradient, rather than a downgradient well. The point of compliance should not be redrawn down the northern part of the western boundary of the facility to MW-11.

TJFA also suggested during cross-examination of Ms. Gallup that groundwater could move along the depicted groundwater contours across the western boundary of the facility south of MW-12. Under cross-examination, during her original testimony, Ms. Gallup did not disagree with that assertion, but neither did she endorse it.

²²¹ Tr. 1680-82 and 1686-89.

²²² Tr. 1916-18.

Q: Okay. What about—since you refer to Page 413,²²³ let's look at the contour you've drawn on the south part of the west side of that site. Don't those contours show that groundwater is moving, actually, southwest from the high of Elevation 710 and leaving the site to the west?

A: No. Not to the west. It's going more south. I would say it's a dominant south flow.

* * * *

Q: (By Mr. Dunbar) Do you see this contour, 710? That's the high.

A: Right.

Q: And from that you've drawn a solid, black line from the edge of 710 almost straight south ending with an arrow right toward Mustang Creek at the lowest end. Correct?

A: Correct.

Q: That line intersects all the contour lines of 705, 700, 695, 690, perpendicular to those contours. Right?

A: Correct.

Q: Okay. If you move over to the left or towards the west and you would draw another line starting at 710 and intersecting at 705 and intersecting at 700 right at the western boundary of the site, would that be a fair direction to draw of groundwater movement based upon your groundwater contours on this exhibit?

A: Again, it's still going southwest.

Q: But leaving the site along the western boundary prior to leaving the permitted boundary to the south. Correct?

A: Correct

* * * *

Q: So according to this groundwater contour map, you've now identified the possibility that groundwater movement from this site can occur to the west, south of your one single upgradient monitoring well, Well No. 12, Correct?

A: On that particular date, yes.

Q: All right. Do you think it's, therefore, appropriate that the point of compliance that you've drawn on Page 414 should continue on from the southwest corner of the site along that western boundary towards Monitoring Well No. 12 to reflect that downgradient condition you just drew with that red arrow?

²²³ APP. 202 at 413 (Figure III-4.27).

- A: I'm not going to make a 100 percent commitment on that, because, as I said, I want to look at the recent data on that to make a determination.
- Q: Okay. But at least based upon the data that we have in the Application today, that would be probably an appropriate place to put the point of compliance. Wouldn't you agree?
- A: Based on what we're looking at right now.
- Q: All right. But you don't feel comfortable right now on taking that pink marker and extending your point of compliance from the southwest up towards Monitoring Well 12.
- A: No. Not at this time.²²⁴

The data on Figure III-4.27, which was the subject of that cross-examination, were compiled in 1992. In rebuttal, Ms. Gallup testified that since that time additional monitoring wells and piezometers had been added. She stated that the information on Figure III-4.25 showed measurements as of August 31, 2004. She stated that data, which had more control points, was more reliable than that on Figure III-4.27. She testified that the contours on the more recent Figure III.4.25, along with her review of the more recent groundwater monitoring data, do not support the contention that groundwater is moving across the western boundary of the existing facility. On cross-examination, she conceded that no new monitoring wells or piezometers had been added along the western boundary itself.²²⁵ Nevertheless, she contended that groundwater would move toward the center of the existing Landfill and not reach the western boundary.

Ms. Gallup's initial testimony on cross-examination called into question the proper location of the point of compliance. However, as she stated, the contours depicted on Figure III-4.25 are more reliable than those on Figure III-4.27, because they are based on more data. Those contours do not depict groundwater moving across the western boundary of the existing facility. Although the proposed groundwater monitoring system and the current groundwater monitoring system do not include any monitoring wells along the western boundary south of MW-12, there was such a well

²²⁴ Tr. 640-45.

²²⁵ Tr. 1910-16 and 1922-29.

in place, MW-5, before 1996. That well, on the southern portion of the western boundary, was removed from the system in 1996, because the data from December 1991 to December 1994 showed it to be upgradient. The reason for the 1996 removal of MW-5 from the system, in conjunction with the issuance of Permit 1405A, supports Ms. Gallup's contention that more recent data shows no groundwater movement across the western boundary.

The preponderance of the evidence shows that the point of compliance should not be extended along the western boundary of the existing facility. The point of compliance should be approved as shown in the Application. If the Commission is uncomfortable with the lack of monitoring wells along that boundary, however, it could condition approval of the permit on the reopening of MW-5 and/or the addition of more monitoring wells along that boundary.

B. Drainage Patterns

1. Legal Standards and Evidence

The Commission's rules at 30 TAC § 330.56(f)(4)(A)(iv) require an applicant to submit: discussion and analyses to demonstrate that natural drainage patterns will not be significantly altered as a result of the proposed landfill development.

The ALJs find Williamson County successfully demonstrated that natural drainage patterns would not be significantly altered as a result of the development and therefore conclude Williamson County complied with that rule.

James Roy Murray, III, P.E., testified for Williamson County regarding surface water drainage and runoff control. Mr. Murray, who has considerable experience in preparing Applications for both new landfills and landfill expansions, was the lead engineer responsible for preparing and supplementing this Application. He sponsored Attachment 6 to the Application, which described the surface water drainage and runoff control plan.

As set forth in Attachment 6, drainage and stormwater runoff is to be controlled at the site by the use of drainage terraces, channels, and detention ponds. Mr. Murray testified that Williamson County based the drainage design on estimated stormwater runoff peak flow rates, volumes, and maximum velocities for a 24-hour, 25-year storm event, as specified by TCEQ's regulations.²²⁶

In determining whether the site design met the drainage requirements of 30 TAC § 330.56(f)(4)(A)(iv), Williamson County compared conditions before the existence of any landfill at the site (pre-development conditions) to the conditions proposed to exist at the time of the estimated closure of the site (post-development conditions). Mr. Murray described this approach as a conservative one, because he interpreted TCEQ's rules to allow the Applicant to compare expansion conditions to the conditions under the existing Landfill site.

The landfill design, with its drainage terraces, perimeter channels, and detention ponds, generally creates a longer, more complicated flow path for stormwater than existed before the site was developed. Mr. Murray stated the plan minimizes the effect of runoff on natural drainage patterns. For all but two of the discharge points, post-development peak flow rates and maximum velocities would be maintained at or below peak flow rates and velocities for pre-development, natural conditions. In those two instances (Discharge Points F and G), the increases would be minimal. According to Mr. Murray and Attachment 6, Discharge Point F would have a developed 25-year peak flow rate of 473 cubic feet per second (cfs) versus the natural condition of 471 cfs, an increase of less than one-half percent. Discharge Point G would have a developed 25-year peak velocity of 6.2 feet per second (fps) versus the natural condition of 5.9 fps, an increase of five

²²⁶ A 24-hour, 25-year storm event is the maximum 24-hour precipitation with a probable occurrence interval of once every 25 years, as defined by the National Weather Service.

percent. Both points would discharge into an unnamed tributary along the northwestern edge of the existing permit boundary. In both cases, Williamson County's analysis detected no increase in peak velocity or peak water surface elevation of the tributary.²²⁷

TJFA contended Williamson County failed to demonstrate that natural drainage patterns would not be significantly altered by the proposed landfill expansion. TJFA contended Williamson County did not follow TCEQ regulatory guidelines in preparing its Application and failed to demonstrate that increases in runoff volumes would not significantly alter natural drainage patterns downstream from the site.

TJFA's arguments centered around the volumes of water to be discharged at Discharge Points A and B under the site plan. From the 25-year storm, 62 acre-feet would be discharged from Point A under natural conditions, while 90 acre-feet would be discharged under the proposed developed condition. At Point B, 29 acre-feet would be discharged under natural conditions, while 81 acre-feet would be discharged under the proposed developed condition.²²⁸ TJFA also contended Williamson County had not addressed the effects of the timing of the runoff flows. Specifically, TJFA cited TCEQ's Regulatory Guidance Document RG-417, dated June 2004 and entitled "Guidelines for Preparing a Surface Water Drainage Plan for a Municipal Solid Waste Facility."

The guidance document, which is addressed to potential applicants, includes the following information regarding changes in runoff volume:

As an applicant, it is your responsibility to demonstrate that any volume increase (or decrease) is not "significant." Typical methods for addressing this issue are listed below:

²²⁷ APP. 200 at 53.

²²⁸ APP. 202 at 1146.

- Demonstrate that there is no increase in volume at a discharge point.
- Demonstrate that the additional volume will be released at a rate that will not significantly affect the downstream receiving water body. For example, the total volume increase may be 30 percent more for the postdevelopment condition, compared to the predevelopment condition. However, this increase may be demonstrated to be “not significant” if it can be shown that the additional volume of water will be released at a rate that will not adversely affect the downstream water body.
- Use storm water retention ponds.
- Demonstrate that any change in the volumes of water discharged from the permit boundary discharge points will not have a significant adverse effect on downstream water rights and uses.

Mr. Murray testified he analyzed the flow rates, velocities, and volume of water at the discharge points. He conceded that the total volume of water and the timing of the runoff flow would change from the natural condition under the developed condition. He did not analyze any points downstream in the receiving channels, because of the many variables involved in such analyses and because that type of analysis is not required under the TCEQ’s rules. Mr. Murray stated that the limitation of peak flow by the detention ponds would serve to negate any impacts from the increases in runoff volume.²²⁹

The Executive Director’s witness on the issue, Pladej Prompungorn, testified that the Application complied with the June 2004 Guideline and that it demonstrated that the proposed development would not significantly alter natural drainage pattern. He did not depart from that general assertion on cross-examination, although he agreed that the Application did not contain the information outlined in that Guideline, including the items set forth above.²³⁰

²²⁹ Tr. 260-261.

²³⁰ Tr. 565-1575.

2. ALJs' Analysis

Any land development is likely to affect water runoff volume. The June 2004 Guideline acknowledges that runoff volume is expected to increase with a landfill development—"the expected volume increase could vary from 5 percent to 60 percent."²³¹ Thus, if an increase in runoff volume were prohibited, it is unlikely that any landfill development would ever be approved by the TCEQ.

As Williamson County pointed out, the June 2004 Guideline is not intended to be used as rules or policy and does not include all acceptable practices.²³² However, the ALJs conclude that the Application does comply with the Guideline as well as with the rule, in demonstrating that the additional volume will be released at a rate that will not significantly affect the downstream receiving water body. Mr. Murray's testimony established that the peak flow rates would not be increased significantly at any discharge point under the proposed expansion. The June 2004 Guideline acknowledges that an increase in volume may be mitigated by controlling the rate of discharge. The TCEQ has determined that the issue of whether the receiving body of water is affected is to be addressed at the point of discharge, not by analyzing any points downstream of the proposed facility as suggested by TJFA. Both Mr. Murray and Mr. Prompungorn, the only experts to address the subject, testified that TCEQ does not require analysis downstream of the discharge points.²³³

The TCEQ addressed that question directly in *In the Matter of the Application of Blue Flats Disposal, L.L.C., for Proposed Permit No. MSW-2262*, SOAH Docket No. 582-98-1390, TNRCC Docket No. 98-0415-MSW (Jan. 2, 2001). Analyzing the same rule language as in this case, the ALJs in *Blue Flats* concluded it might be appropriate to examine drainage impacts "beyond the

²³¹ June 2004 Guideline at 4.

²³² June 2004 Guideline at 2.

²³³ Tr. 262 and 1616.

permit boundary of the proposed landfill.”²³⁴ The Commission disagreed. It specifically rejected the ALJs’ Proposed Findings of Fact related to off-site analysis of stormwater or surface-water drainage “because Commission rules and precedent require that the determination of significant alteration be made at the permit boundary, not off site.”²³⁵ That issue was revisited, and the TNRCC’s interpretation confirmed by the TCEQ, in *In re Application of North Texas Municipal Water District for Municipal Solid Waste Permit No. MSW-2294*, SOAH Docket No. 582-02-3386, TCEQ Docket No. 2002-0745-MSW (Finding of Fact No. 105 and Conclusion of Law No. 27) (October 20, 2003).²³⁶

Therefore, Williamson County successfully demonstrated that natural drainage patterns would not be significantly altered as a result of the proposed landfill expansion. Williamson County’s Application complies with 30 TAC § 330.56(f)(4)(A)(iv).

VIII. GEOTECHNICAL INVESTIGATIONS AND CONCLUSIONS: SLOPE STABILITY

On the issue of slope stability, Williamson County offered the testimony of Paul Cravens, who stated that the slopes to be used at the Facility will be very stable. TJFA argues that Mr. Craven’s slope stability analysis is either deficient or absent and that the factors of safety are inaccurate and unreliable.²³⁷ Williamson County responds that TJFA mis-cites the evidence and incorrectly applies Environmental Protection Agency (EPA) guidelines instead of the Commission’s rules. Based on the evidence, the ALJs conclude that Williamson County established that there are no concerns over slope stability at the Landfill.

²³⁴ *Blue Flats* Proposal for Decision at 31.

²³⁵ *An Order Denying the Application of Blue Flats Disposal, L.L.C., for Permit No. MSW-2262* at 8 (“Explanation of Changes to the ALJs’ Proposed Findings of Fact and Conclusions of Law”) (January 2, 2001).

²³⁶ *See also North Texas Municipal Water District* Proposal for Decision at 29.

²³⁷ TJFA Initial Brief at 19-21.

Mr. Cravens explained, “[t]he design criteria for the slope stability analyses are measured by the factor of safety.”²³⁸ For purposes of a landfill, the factor of safety is a measure of the weight of fill versus the strength of the soil beneath it:

The purpose of a factor of safety is to . . . give you a threshold to evaluate a cross-section, and . . . it’s a decision threshold . . . the purpose of it really is to give you a threshold by which you can evaluate a slope stability problem and make a decision as to whether you wish to investigate it further, flatten the slope – make a decision about it – or whether it’s fine the way it is.²³⁹

A factor of safety of less than 1.0 implies that the weight of the fill equals the strength of the soil. If the fill weight is greater than the soil strength, the factor drops below 1.0 and slope failure would be expected. A factor of safety of 1.0 or less means that either more information and analysis is needed or the slope should be flattened or undergo some other engineering corrective action. A factor of safety greater than 1.0 implies that the ground strength is greater than the fill weight and no failure would be expected. In developing the factor of safety, engineers generally consider two important variables: whether the slope will be long-term or short-term, and the selection of input data.²⁴⁰ The factor of safety is a mathematical model based on those variables and engineering judgment.²⁴¹

Mr. Cravens testified that the lowest acceptable factor of safety for a long-term slope at the Facility is 1.5. For the short-term construction phase, the lowest acceptable factor of safety is 1.3.²⁴² In fact, during construction, the four-to-one slope to be used on the working face is generally considered to be so stable, that in Mr. Cravens’ professional opinion, no slope stability analysis was

²³⁸ Tr. 1009; APP 202 at 1638.

²³⁹ Tr. 1009-1010.

²⁴⁰ Tr. 1015-1016.

²⁴¹ Tr. 1010-1014.

²⁴² *See generally*, Tr. 1018-1034.

necessary.²⁴³ For the final build-out condition, there are three factors of safety at four locations.²⁴⁴ Based on very conservative assumptions and an “inherently very stable build-out condition” due to the nature of the slope, the maximum factor of safety among all four locations was calculated at 3.2, and the minimum was 1.8, both considered to be acceptable.²⁴⁵

But TJFA argues that “there is uncertainty in the accuracy or the input to the model” and that the 1.8 factor of safety is unreliable because Mr. Cravens “couldn’t identify the source of a friction angle of 11 degrees” in the estimated shear strength of the geomembrane liner between the fill and the underlying soil.²⁴⁶ Mr. Cravens testified, however, that the Application’s use of an interface shear strength of 11 stems from an engineering table (in the Application) that uses standard, manufacturer’s values for different liner systems. The engineer’s analysis used the most conservative number in that it applied the lowest liner sheer strength; and the engineer cited several published references and results from independent interface sheer strength tests, although not the specifics of those tests.²⁴⁷ In short, Mr. Cravens satisfactorily identified the source of the 11 degree shear strength reference, and the ALJs do not consider the lack of testing specifics to cast doubt on his opinion that the final buildout condition will be very stable.

TJFA also argues that Mr. Cravens’ minimum acceptable factors of safety are inconsistent with EPA guidance documents, which show an acceptable range of between 1.5 and 2.0. Yet, as pointed out by Williamson County, EPA guidance documents do not apply here,²⁴⁸ and Mr. Cravens clearly testified that the engineering tests complied with the Commission’s requirements because

²⁴³ Tr. 1021-1022.

²⁴⁴ APP 202 at 1640, Table 2.

²⁴⁵ Tr. 1038 - 1041.

²⁴⁶ TJFA Initial Brief at 20.

²⁴⁷ Tr. 1118-1123; APP 202 at 1843, 1844, and 1848.

²⁴⁸ Applicant’s Reply Brief at 24.

they were conducted in accordance with standards under ASTM, the Army Corps of Engineers, and industry practices and procedures.²⁴⁹ Furthermore, the minimum factor of safety cited by TJFA of 1.5 is inaccurate, because under the EPA guidance document, the minimum factor of safety is actually 1.25 if a slope failure at the Facility would pose no imminent danger to human life or major environmental impact, as is the case here.²⁵⁰ Thus, even if the EPA guidance applied, Mr. Cravens minimum acceptable factor of safety at the Facility is 1.3, still above 1.25.²⁵¹

Similarly, TJFA also takes issue with an analysis Mr. Cravens conducted for rebuttal in an attempt to further explain his conclusions.²⁵² Using inputs so conservative that they did not accurately reflect conditions at the Site, the analysis resulted in a minimum factor of safety of 1.49. Although TJFA argues that this falls below the 1.5 factor cited by Mr. Cravens, his analysis makes clear that the 1.49 factor of safety applies to interim conditions, for which the target factor of safety is 1.3.²⁵³

TJFA's primary concern with Mr. Cravens appears to be his review of and reliance on standards, inputs, and tests conducted by other engineers, which really boils down to whether he is qualified to render an opinion on slope stability, based on what he considers to be reliable analysis and data. As is their prerogative, TJFA and the Protestants tested Mr. Cravens' opinions and analysis through cross-examination, and the ALJs found him to be exceptionally competent and credible. As a result, the ALJs accept Mr. Cravens' opinion that "slope stability is not an issue at this site."²⁵⁴ His testimony was consistent throughout: the analysis used very conservative inputs,

²⁴⁹ Tr. 1132-1135.

²⁵⁰ Tr. 1147-1150.

²⁵¹ Tr. 1021.

²⁵² APP 503.

²⁵³ Tr. 1737-1744; APP 503.

²⁵⁴ Tr. 1131-1132, 1141, and 1151-1152.

assumptions, and models; and his opinion is that the proposed slopes at the Site, both interim and final, will be very, very stable.²⁵⁵

Finally, the Facility has never recorded a slope failure, and the evidence is that slope failures at municipal solid waste facilities in Texas are very rare. Although the Applicant's witnesses were unfamiliar with a slope failure in Texas, TJFA's witness, Dr. Clark, recalled that a slope failure had occurred in Texas north and east of the Facility, although the location and name of the landfill was not specified.²⁵⁶ Nevertheless, Mr. Cravens testified that a slope failure at the Facility would pose "no imminent danger to human life or major environmental impact" due to the use of buffer zones and the types of waste accepted at the Landfill.²⁵⁷ Environmental risks would also be limited, because a slope failure would result in a short-term exposure of waste to the environment, assuming the operator quickly repaired the failure consistent with expectations.²⁵⁸ The ALJs recommend that the Applicant's slope stability analysis be accepted.

IX. SITE OPERATING PLAN, SOURCES OF WASTE, AND BOUNDARY ISSUES

A. Site Operating Plan

The proposed Site Operating Plan (SOP), found in Part IV of the Application, outlines the "procedures to be followed by the landfill personnel for day-to-day operations."²⁵⁹ The Protestants raise concerns over two provisions in the SOP: that the proposed 24-hour, seven-days-a-week

²⁵⁵ Tr. 1020, 1022, 1025-1028, 1032, 1039, 1067, 1084, 1137, 1140, 1142, and 1149-1152.

²⁵⁶ Tr. 518, 910, 1639; TJFA Ex. 3 at 10.

²⁵⁷ Tr. 1016-1017, 1034-1035, 1048, 1145-1149, and 1175-1176.

²⁵⁸ Tr. 1016-1018.

²⁵⁹ Ex. App-202 at 2494.

operations are inconsistent with the surrounding land use; and that the lack of specificity in the fire protection plan fails to comply with the Commission's rules.²⁶⁰

The SOP proposes the ability to operate the Facility on a 24-hour, seven-days-a-week basis.²⁶¹ The Protestants argue that such operating hours are incompatible with the surrounding land use and point out that this will involve 24-hour operations with heavy, loud equipment and bright lights.²⁶² Williamson County explained that it does not intend to operate the Facility 24-hours a day, but that it envisions situations where 24-hour access might be needed, so it prefers such operating hours for flexibility. Williamson County also explained that emergencies such as a hurricane may necessitate 24-hour operations.²⁶³

While the evidence supports round-the-clock operations in emergency situations and for equipment repair, the ALJs agree with Protestants that normal operating activities outside normal business hours might become incompatible with anticipated residential and commercial development in the area. In the event that the Commission limits operating hours, the ALJs agree with OPIC's suggestion that while the Draft Permit would require amendment, the Application should not be denied.²⁶⁴ Questions remain, however, about how and who should determine what constitutes "emergency" conditions that justify 24-hour, seven-days-a-week operations. Although there is little evidence on this matter, the ALJs do not anticipate that developing proper emergency parameters will necessitate reopening the record. The ALJs defer to the ED on how best to develop the parameters for defining emergency operations of the Facility.

²⁶⁰ Jonah Initial Brief at 2-3; HCG Initial Brief at 7-8.

²⁶¹ Tr. 11, 120.

²⁶² Tr. 120-121; Jonah Initial Brief at 2-3; HCG Initial Brief at 7-8.

²⁶³ Tr. 12, 58, 63.

²⁶⁴ OPIC Reply Brief at 7.

Protestants also argue that the Application lacks adequate fire protection measures. HCG points out that 30 TAC § 330.115 requires that the SOP provide fire protection measures specific to “each individual activity.”²⁶⁵ The parties agree that the SOP identifies two working faces that involve combustible materials, a brush collection area and a liquid waste collection area.²⁶⁶ HCG argues that instead of measures specific to each activity, the Application includes only a general fire protection plan to address both activities.²⁶⁷ The evidence established, however, that both working faces are subject to the same fire protection measures; Mr. Prompungorn and Mr. Murray both testified that the SOP’s fire protection measures apply to either working face.²⁶⁸ Based on the testimony of these witnesses, the ALJs conclude that the Application’s fire protection measures comply with the Commission’s rules.

B. Acceptance of Waste from Outside Williamson County

The Draft Permit has no geographic limit on the source of waste. Concerned that waste may be brought in from other counties and elsewhere, Protestants request that the Draft Permit limit the sources of waste to Williamson County.²⁶⁹ Aside from the practical difficulties of policing the Landfill to insure compliance with such a restriction, the obvious problem with this request is that municipalities such as Round Rock, Cedar Park, Leander, and Bartlett lie partially outside of Williamson County. Residents of these cities may likely use the Facility even if the waste they were transporting was generated beyond the County’s boundaries.²⁷⁰ While the Protestants’ concerns sound reasonable, the ALJs are unaware of a statute or rule requiring such a source restriction.

²⁶⁵ HCG Initial Brief at 8.

²⁶⁶ APP 202 at 2514 and 2519; Tr 404-408. HCG Initial Brief at 8; Applicant Reply Brief at 29.

²⁶⁷ Tr. 407 - 408.

²⁶⁸ Tr. 404 - 408 and 1446 - 1449.

²⁶⁹ Jonah Initial Brief at 2-3.

²⁷⁰ Tr. 53, 64.

Furthermore, the current Permit No. 1405A has no restrictions on the source of waste, and there was no evidence of past problems. In particular, there is no evidence that waste from outside the County would increase environmental risks. Nevertheless, in the event that the Commission finds that a source restriction is appropriate, the ALJs are not opposed to such a restriction, but note that no suggestions were offered on language other than limiting waste to that originating from Williamson County. In light of the potential difficulties of crafting and enforcing geographic restrictions, the ALJs decline to offer such language.

C. Boundary Issues

TJFA argues that the Application should be denied because it contains a 25 foot discrepancy in the description of a pipeline easement at the Facility's northern boundary and the Application fails to establish the metes and bounds of the easement.²⁷¹ One portion of the Application describes the easement as 75 feet wide and another describes it as 50 feet.²⁷² TJFA is correct that under cross-examination, Mr. Murray's testimony was confused regarding this discrepancy.²⁷³ But he clearly testified that instead of relying on deed references, the pipeline was physically located through a field survey and then a 25 foot boundary was established on either side; and that the expanded Facility was designed to maintain at least 130 feet between the centerline of the pipeline and the boundary of the waste disposal area.²⁷⁴

²⁷¹ TJFA Initial Brief at 8-9.

²⁷² Tr. 200-205; APP 202 at 48, 213-214, 265 and 271.

²⁷³ Tr. 202-210.

²⁷⁴ Tr. 203-205 and 208; APP 202 at 261.

The Commission's rules prohibit "... solid waste disposal ... within 25 feet of the centerline of any utility line or pipeline easement."²⁷⁵ As a result, Williamson County argues that the discrepancy is immaterial because regardless of whether the easement is 50 or 75 feet, the Landfill expansion complies with the rules, which only require a 25-foot boundary. Although the ALJs strongly recommend that inaccurate or incomplete references to the pipeline easement be corrected,²⁷⁶ they agree that the discrepancy is immaterial, so long as the Application is in compliance with the Commission's rules. Based on the 130-foot boundary design and a minimum actual easement of 50 feet, the ALJs conclude that even without the recommended corrections to the Application, the distance between the waste disposal boundary and the pipeline centerline will exceed the 25-foot distance required under 30 TAC § 330.121(a).

X. REPORTING AND TRANSCRIPTION COSTS

The Commission's rule governing the allocation of reporting and transcription costs is at 30 TAC § 80.23(d). That rule states,

(d) Assessment of reporting and transcription costs.

- (1) Upon the timely filed motion of a party or upon its own motion, the commission may assess reporting and transcription costs to one or more of the parties participating in the proceeding. The commission shall consider the following factors in assessing reporting and transcription costs:
 - (A) the party who requested the transcript;
 - (B) the financial ability of the party to pay the costs;
 - (C) the extent to which the party participated in the hearing;
 - (D) the relative benefits to the various parties of having a transcript;
 - (E) the budgetary constraints of a state or federal administrative agency participating in the proceeding;

²⁷⁵ 30 TAC § 330.121(a).

²⁷⁶ Tr. 207-209; APP 202 at 48.

(F) in rate proceedings, the extent to which the expense of the rate proceeding is included in the utility's allowable expenses; and
(G) any other factor which is relevant to a just and reasonable assessment of costs.

In its brief, Williamson County states it has been assessed reporting and transcription costs of \$24,274 for the prehearing conference and evidentiary hearing. Citing the arguments made in its motion to deny TJFA party status, Williamson County requests the ALJs to determine that all the costs should be assessed to TJFA.

There is no evidence regarding the parties' financial ability to pay the reporting and transcription costs, although apparently both Williamson County and TJFA are able to do so. Both those parties participated fully in the hearing and presumably benefitted from the transcript. Although Williamson County is a political subdivision of the state, it is not a state or federal administrative agency as set forth in the rule, nor is there any evidence as to its budget constraints.

In the ALJs' view, another factor to be considered is that reporting and transcription costs are an expected cost in the course of a major landfill expansion application such as this one. If the Protestants' concerns were frivolous or if their examination of witnesses was unduly repetitive or irrelevant, fairness would require that they bear all or at least a large share of the expenses. That is not the case in this proceeding, however. Although the ALJs recommend approval of the Application, with some modifications, the issues raised by the Protestants were reasonable and well presented. In that situation, an Applicant should be expected to bear reporting and transcription expenses as part of its cost of doing business, unless the other factors demand a different allocation. They do not in this case. The ALJs therefore recommend that all reporting and transcription costs be allocated to the Applicant, Williamson County.

XI. CONCLUSION

In conclusion, although the Protestants raised reasonable concerns regarding the Application, the ALJs recommend that the permit amendment be granted. Williamson County demonstrated that the permit amendment will comply with the Health & Safety Code and the Commission's rules on land use compatibility, transportation, geologic, drainage, and geotechnical conditions. The Facility has been in operation at the current location since 1983 and has a projected life of 25-50 years without the expansion. Although the Facility will likely play a role in the future development of Hutto, with an adjustment to the Site Operation Plan, the expansion of the Landfill is not incompatible with land uses in the area.

Accordingly, the ALJs recommend the Commission issue the attached Proposed Order granting the Application. The Proposed Order contains findings of fact and conclusions of law discussed above and others that are not in dispute.

SIGNED February 14, 2008.

**TRAVIS VICKERY
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS**

**HENRY D. CARD
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS**

**SOAH DOCKET NO. 582-06-3321
TCEQ DOCKET NO. 2005-0337-MSW**

APPLICATION OF WILLIAMSON COUNTY FOR A PERMIT AMENDMENT TO EXPAND A TYPE I MUNICIPAL SOLID WASTE Landfill Facility; (PERMIT NO. MSW-1405B)	§ § § § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS
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**AN ORDER Granting the Application for Permit No. MSW-1405B
to Williamson County TCEQ Docket No. 2005-0337-MSW
SOAH Docket No. 582-06-3321**

On _____, the Texas Commission on Environmental Quality (Commission or TCEQ) considered the application of Williamson County (Williamson County or Applicant) for Permit No. MSW-1405B to authorize Williamson County to laterally and vertically expand the existing Williamson County Recycling and Disposal Facility in Williamson County, Texas. Travis Vickery and Henry D. Card, Administrative Law Judges (ALJs) with the State Office of Administrative Hearings (SOAH), presented a Proposal for Decision (PFD), which recommended that the Commission grant Williamson County’s Application for Permit No. MSW-1405B. After considering the ALJs’ PFD, the Commission adopts the following Findings of Fact and Conclusions of Law:

FINDINGS OF FACT

General Findings/Procedural Issues

1. The Applicant is Williamson County, 301 S.E. Inner Loop, Suite 109, Georgetown, Texas 78626.

2. The Facility is the Williamson County Recycling and Disposal Facility (Williamson County RDF, Landfill, or Facility), which is located at 600 Landfill Road, Hutto, Texas 78220 and is operated by Waste Management of Texas, Inc. (WMTX).

3. The Facility is located northeast of the City of Hutto in Williamson County on the west side of FM 1660 approximately one mile north of the FM 1660 and CR 133 intersection.
4. The Facility is an existing Type I Municipal Solid Waste (MSW) Landfill consisting of approximately 202 acres and permitted pursuant to Permit No. MSW-1405A.
5. Applicant filed Application No. MSW-1405B (the Application), which requests an amendment of Permit MSW-1405A to laterally expand the existing 202-acre Facility to approximately 575 acres and to vertically expand the Facility from 766 feet above Mean Sea Level (MSL) to approximately 840 feet above MSL. The Application proposes to expand the actual limit of waste from approximately 160 acres to approximately 500 acres.
6. Williamson County owns the 575-acre Facility site.
7. The Facility is currently authorized to accept municipal solid waste, Class 2 and Class 3 industrial solid waste, and Class 1 industrial waste that is Class 1 only because of asbestos content.
8. The Application was compiled by RJR Engineering, Ltd., L.L.P. pursuant to the Notice of Engineer's Appointment prepared by Applicant. The Application was developed under the direction and supervision of Williamson County Judge John Doerfler, the sitting Williamson County Judge at the time the Application was filed with the TCEQ.
9. The seal of James R. Murray, a professional engineer registered in Texas, was affixed to all engineering plans and drawings and on the Application cover pages.
10. Parts I and II of the Application were initially submitted to the TCEQ on December 10, 2003. On December 22, 2004, Parts III and IV were submitted to the TCEQ and, thereafter, consolidated with Parts I and II.

11. Notice that the Application was deemed administratively complete by the Executive Director (ED) of the TCEQ was issued on May 13, 2005. Notice of the technically complete determination was issued on March 24, 2006.
12. The Amended Notice of Receipt of Application and Intent to Obtain Municipal Solid Waste Permit Amendment containing the information specified in 30 TEX. ADMIN. CODE § 39.11 was published on June 28, 29, and 30, 2005, in the *Round Rock Leader*, *Williamson County Sun*, and *Austin American-Statesman*.
13. The Notice of Application and Preliminary Decision containing the information required by 30 TEX. ADMIN. CODE § 39.11 was published on April 12, 13, and 16, 2006, in the *Austin American-Statesman*, *Round Rock Leader*, and *Williamson County Sun*.
14. The Notice of Hearing on the Application was published on September 21, 22, and 24, 2006, in the *Round Rock Leader*, *Williamson County Sun*, and *Austin American-Statesman*.
15. On September 19, 2006, the TCEQ Chief Clerk mailed the Notice of Hearing on the Application to the then-identified participants to the proceeding, to other potentially affected persons identified in the Application, to various state and local agencies and officials, to state legislators for the districts in which the Facility is located, and to other persons specified in 30 TEX. ADMIN. CODE § 39.13. Potentially affected persons receiving notice generally included those landowners whose property was within one mile of the Facility. All persons intending to request party status at the hearing were required to attend the hearing and demonstrate how he or she would be adversely affected by the application in a way not common to members of the general public.
16. A preliminary hearing commenced at 10:00 a.m. on October 26, 2006 at the SOAH hearing rooms, William P. Clements Building, 300 West 15th Street, Austin, Texas 78701.

17. The following persons were named as parties to the proceeding: the Applicant; the ED; the Office of Public Interest Council (OPIC); TJFA, L.P. (TJFA); Mount Hutto Aware Citizens (MHAC); the Jonah Water Special Utility District (Jonah Water); and the Hutto Citizens Group and the Heritage on the San Gabriel Homeowners Association (collectively HCG).
18. A contested case hearing on the Application was conducted on August 20-30, 2007, at SOAH, William Clements Building, 300 West 15th Street, Suite 502, Austin, Texas 78701. The record closed on January 11, 2008.

Sufficiency of Permit Application and Draft Permit

19. The conditions which exist at and near the Facility are favorable to the development of an MSW landfill designed, constructed, and operated in a manner considered standard by engineers specializing in the field and which are embodied in the MSW rules. There are no site-specific conditions that require special design consideration. The site is well-suited to the design, construction, and operation of an MSW landfill.
20. The Application is signed by Williamson County Judge John Doerfler, the sitting Williamson County Judge at the time the Application was filed.
21. Applicant coordinated with all appropriate agencies, officials, and authorities that may have a jurisdictional interest in the Application.
22. Applicant has provided complete information concerning permits or construction approvals received or applied for.
23. The ED has prepared a draft permit for Permit No. MSW-1405B (Draft Permit).

Compliance History

24. The ED prepared compliance summaries of Williamson County, WMTX, and the Facility.

25. Williamson County's compliance history is classified as average with a rating of 3.17.
26. WMTX's compliance history is classified as average with a rating of 3.17.
27. The Facility is rated high.

The Identity of the Owner, Operator, and Applicant

28. Williamson County is the owner of the Williamson County RDF.
29. Williamson County has been the owner of the Williamson County RDF since the Facility was first authorized to receive municipal solid waste on December 23, 1981, by the Texas Department of Health under Permit No. 1405.
30. Williamson County is the sole Applicant for Permit No. MSW-1405B and is the sole permittee under the existing permit for the Williamson County RDF, Permit No. MSW-1405A.
31. WMTX operates the Landfill pursuant to a contract with Williamson County and has operated the Williamson County RDF for approximately 14 years.
32. WMTX submitted the Application to the Commission on behalf of Williamson County.

Land Use

33. The Facility is not located within the city limits or extraterritorial jurisdiction of any incorporated city. No zoning ordinances apply to the Landfill. No approval as a non-conforming use or special permit from a local government is required.
34. Within one mile of the Facility, the land is used primarily as undeveloped range and farmland. Out of a total of 4574 acres: 4103 acres are agricultural; 339 acres are residential

rural large-lot or homestead with agricultural activities; and 123 acres are commercial/industrial.

35. Fewer than 150 residences are located within one mile of the Facility. No schools, licensed child care facilities, churches, hospitals, lakes, or recreational areas are located within one mile of the site. A small cemetery is located approximately 2,500 feet southeast of the site. There are four commercial/industrial establishments within one mile of the Facility. The Texas Historical Commission (THC) was contacted regarding the presence of cultural resources that might be impacted by the Landfill. THC determined that an archeological survey is not necessary and it has no archeological concerns related to the expansion. There is one house on-site that is eligible for listing in the National Register of Historic Places, but the house is located within a buffer zone of the proposed expansion and will not be destroyed as a result of Landfill operations.
36. Williamson County's population is growing at an estimated rate of 3.4% per year.
37. The Williamson County RDF is located 1.6 miles north of the City of Hutto, Texas (Hutto). Hutto has grown over 500% in population since the year 2000 when its population was 1,250 persons as compared to its 2006 population of 7,977 persons. Hutto's growth is omnidirectional, including to the north. Hutto can adjust to, and incorporate the Facility into its growth plans.
38. The City of Hutto's 2006 Growth Guidance Plan classifies the area comprising the Landfill as "institutional," which includes uses by government, school, church, and other tax-exempt entities. The Landfill is an "institutional" use. The areas immediately to the east and west of the Landfill are classified as "business park" and "commercial."
39. In August of 2007, the Hutto Independent School District (HISD) purchased a 100 acre tract within one mile of the Landfill. At that time, HISD was aware of the Landfill and classified the Landfill as it currently exists as a compatible land use. The proposed expansion of the

Landfill under the Application does not present nuisance, scavenger, or student traffic-safety issues beyond those already considered acceptable by HISD.

40. A TXU Lone Star Gas Co. gas pipeline easement exists along the northern property boundary and two Jonah Water waterline easements are located along the western property boundary.
41. No oil or gas wells were identified within 500 feet of the permit boundary. TCEQ water well records indicate there are three water wells within one mile of the proposed permit boundary. The United States Geological Survey map indicates an additional four wells within one mile of the Facility. Eighteen unrecorded wells were located by means of a field survey. Of these, five were drilled and 13 were hand-dug; one well is used at a commercial establishment and the others are used for irrigation, livestock, or are inactive. None of the unrecorded wells are used for domestic purposes.
42. The development and operation of the proposed expansion of the existing Williamson County RDF will not result in the destruction or adverse modification of critical habitat or cause or contribute to the taking or harming of any endangered species. The United States Department of the Interior Fish and Wildlife Service does not anticipate the Landfill expansion to adversely affect any endangered species or their critical habitat. The Texas Parks and Wildlife Department (TPWD) does not anticipate adverse impacts to any rare, threatened, or endangered species from the proposed project activities. A biological assessment of the Williamson County RDF and proposed expansion area was conducted and revealed the presence of no endangered or threatened species or their critical habitat within the subject property or any potential critical or essential habitat.

Transportation

43. Access to the Williamson County RDF is provided via FM 1660, which runs north/south along the east side of the site. FM 1660 consists of two 12-foot lanes with three-foot

improved shoulders on each side. FM 1660 is designed with a vehicular weight limit of 80,000 pounds, which is greater than the weight of the heaviest vehicle anticipated to use the Facility.

44. The existing Landfill is served by an abandoned portion of CR 128 from FM 1660. By resolution, Williamson County changed the name of this road from CR 128 to Landfill Road.
45. The Texas Department of Transportation (TxDOT) provided daily traffic volumes in the vicinity of the Landfill for FM 1660 north of CR 100 and south of SH 29 for 2003. The data represent the two-way, 24-hour daily traffic volumes. The data indicates that 1,750 vehicles per day south of the Facility and 1,400 vehicles per day north of the Facility from SH 29 use FM 1660. Given that there are no significant roadways or other significant traffic sources between these two traffic study locations, the majority of the Landfill traffic will enter the Facility from the south. TxDOT estimates that the traffic volumes in the vicinity of the Landfill will increase at a rate of 3.0% per year. Landfill traffic is anticipated to increase at approximately the same rate as Williamson County's population, which is approximately 3.4% per year based on the Capital Area Council of Governments (CAPCOG) data. The maximum percent of traffic attributed to the Landfill in 2050 will be approximately 18%.
46. TxDOT has determined that the adequacy and design capacities of the roadways adjacent to and surrounding the site are sufficient to safely accommodate any additional traffic generated by the proposed Facility.
47. No public use airport is located within five miles of the proposed Landfill boundary. A small private airstrip is located approximately 1.5 miles northwest of the Facility. No bird hazards to aircraft associated with the existing Facility have been reported and none are expected with the proposed amended design.
48. The nearest public airport is the Taylor Municipal Airport, located approximately six miles to the southeast of the Facility. The permit boundary is not located within 10,000 feet of the

end of an airport runway servicing turbojet aircraft or within 5,000 feet of the end of a runway serving piston-type aircraft. Applicant received a letter from the U.S. Department of Transportation Federal Aviation Administration stating that there is “no objection to the proposal from the standpoint of potential bird hazards to aircraft operating at the Taylor Municipal Airport.”

Geology and Groundwater Protection

49. The Landfill site is in south-central Williamson County, in the Grand Prairie Physiographic Province (a.k.a. rolling prairie).
50. The rolling prairie is an elongated area of grassland country underlain by thin, stony, and gently sloping to sloping soils. Those soils were formed in limestone or limestone and marl of upper Cretaceous rocks, which outcrop in the region.
51. The only river in the county is the San Gabriel, which is part of the Brazos River drainage basin.
52. More specifically, the topography of the area surrounding the site is gently sloping valleys trending from a topographical high on the western permit boundary near the northwest corner of the original 122-acre Landfill.
53. The surface water features closest to the site are Mustang Creek, an intermittent tributary of Brushy Creek that flows from northwest to southeast along the southern portion of the permitted Landfill, and an unnamed tributary of the San Gabriel River, located in the northern portion of the permitted Landfill.
54. Approximately three-fourths of the site drains southwest toward Mustang Creek; the remainder drains to the north, toward the unnamed tributary.

55. There is no unfavorable topography in the area that would limit the Landfill's design, construction, or operation.
56. The lowermost aquifer capable of providing usable groundwater is the Edwards aquifer.
57. The approximate depth of the top of the Edwards aquifer is 600 to 700 feet below the ground surface (bgs), or 550 feet below the lowest excavation proposed for the Landfill.
58. The regional geology should not require any limits to be placed on the design, construction, or operation of the proposed Landfill.
59. There are no active faults at or near the Williamson County Landfill site.
60. There are no possible seismic impact zones, subsidence, unstable areas, erosion, or wetlands that should cause any limitations to be placed on the design, construction, or operation of the proposed Facility.
61. A subsurface stratigraphy investigation was conducted to determine the geological feasibility and soundness of constructing the Facility in the area in question.
62. A groundwater investigation was conducted to determine reliable aquifer characteristics and performance data.
63. Data compiled from both investigations were used to design the groundwater monitoring network, the purpose of which is to detect any release of contaminants into the groundwater beneath the Facility.
64. Geologist Katherine Gallup and others under her direction performed field activities for the subsurface investigations of the proposed Williamson County Landfill expansion from April 13 through July 27, 2004.

65. Ms. Gallup and her colleagues also reviewed previous subsurface investigations conducted from 1989 through 1991. Data from soil borings and piezometers installed during those investigations were analyzed to determine the subsurface conditions.
66. Previous investigations provided an adequate characterization of the subsurface conditions beneath the existing Landfill.
67. To investigate the subsurface conditions for the proposed expansion area, Ms. Gallup and her colleagues reviewed the earlier data for the existing Landfill, then examined aerial photographs and topographic maps covering five decades. They saw no features to indicate subsurface discontinuities. They then developed a drilling program, consisting of 44 borings at 35 different locations within the expansion area.
68. Three major stratigraphic units underlie the expansion site down to approximately 592 feet above MSL.
69. In general, those stratigraphic units consist of (1) surficial clay, which generally occurs between 717 and 630 above MSL, with thickness ranging from 8.6 to 60 feet, (2) claystone, typically between 705 to 630 above MSL, with thickness ranging from 5 to 49 feet, and (3) limestone, encountered between 668 feet to 607 above MSL.
70. Williamson County drilled 17 soil borings within the expansion area to a depth of at least 5 feet below the deepest planned excavation and 18 borings to a depth of at least 30 feet below the deepest planned excavation. Nine shallow borings were advanced and completed as piezometers adjacent to deeper, completed piezometers, to determine water-level elevations in the uppermost aquifer and in a potentially hydraulically, interconnected, underlying aquifer, and to perform a series of hydraulic conductivity tests as part of the groundwater investigation.

71. After the borings were completed and samples collected, 22 of the borings were sealed. The remaining 22 were converted to piezometers, 13 of which monitor water elevations in the surficial clay and nine of which monitor the lower claystone/upper limestone unit.
72. The borings conducted at the expansion site were sufficiently deep to identify the uppermost aquifer, including its lowest level.
73. The first zone of the uppermost aquifer occurs in the surficial clay unit and extends into the upper zone of the claystone unit. A lower zone, hydraulically connected to the upper one and therefore considered part of the uppermost aquifer, occurs at the base of the claystone unit into the upper portion of the limestone.
74. The surficial clay and claystone are the only units that will be in contact with the proposed Landfill excavation.
75. The majority of the base grades of the proposed Facility will terminate in the claystone, approximately 10 to 15 feet above the limestone unit. However, some of the side slopes of the excavation will be in contact with coarser materials in the surficial clay.
76. Although the claystone/limestone unit is not even moderately transmissive, it forms the lower boundary of the uppermost aquifer and is the only strata available to monitor subsurface water for the entire site.
77. The surficial clay and the lower claystone/upper limestone units should be considered one hydrostatic unit, constituting the uppermost aquifer, which collectively act as an aquitard to the Edwards aquifer.
78. An “aquitard” is a zone beneath the earth that restricts the flow of groundwater from one aquifer to another.

79. There are “confining beds,” or completely impermeable aquitards, between the Williamson County expansion area and the Edwards aquifer.
80. The proposed groundwater monitoring system would consist of 35 monitoring wells located along the perimeters of the existing and proposed Landfills.
81. The wells would be spaced between 489 to 655 feet apart, with an average spacing of 595 feet. That spacing is similar to the 563-foot average spacing of the present monitoring wells.
82. No monitoring wells were included along the western boundary of the original Landfill site.
83. Of the 35 wells, 25 would be screened in the lower claystone/upper limestone unit and 10 would be screened in the shallow, coarse-grained material of the surficial clay unit, along the eastern boundary of the expansion area.
84. The screens for the wells would generally be 10.0 feet in length for the shallower wells in the surficial clay unit and 15.0 feet in length for the deeper wells at the claystone/limestone interface.
85. Under the proposed monitoring system, two wells, MW-11 and MW 12, which are located at corners of the western boundary of the existing Landfill, where its boundary turns towards the east, are intended as upgradient wells, meant to serve as background monitoring wells.
86. Because groundwater passes through upgradient wells before reaching the Facility, that water will not have been affected by any release from the Facility.
87. The current groundwater monitoring system, approved in 1995 to obtain Williamson County’s current Permit No. MSW-1405A, consists of eight wells, all screened in the lower claystone/upper limestone unit.

88. The upgradient wells under the current system are MW-11, MW-12, and MW-9A. However, MW-9A, which is along the eastern boundary of the current Landfill, would be decommissioned if the expansion is approved, because it would be in the middle of the expanded Landfill. Two other downgradient wells would be decommissioned also, for the same reason.
89. Originally at this Landfill site, three monitoring wells (MW-01 through MW-03) were installed. In November 1991, four new monitoring wells (MW-04 through MW-07) were installed. In January 1996, in connection with Permit No. 1405A, piezometer P-J was converted to MW-9 (later replaced by MW-9A due to damage) and monitoring wells MW-08 and MW-10 through MW-13 were installed. Three of the earlier monitoring wells, MW-01 through MW-03, were plugged and abandoned at that time. Two others, MW-4 and MW-5, remain at the site, but were removed from the monitoring detection system.
90. Piezometers have been maintained at the MW-4 and MW-5 locations.
91. For this Facility, Ms. Gallup located the point of compliance around the entire northern, eastern, and southern boundaries of the Facility, excluding the western boundary of the existing Landfill which she determined to be upgradient.
92. The Geology Report included and summarized geological data, including boring logs, from previous investigations.
93. The Geology Report summarized and discussed historical groundwater monitoring data. Historical data that were not actually included in the filing were analyzed by Ms. Gallup and clearly referenced in the application.
94. It is common practice to reference historical materials rather than include them in an application.

95. Williamson County analyzed and presented adequate information regarding the existing Landfill site.
96. The application adequately discussed the effect of construction on groundwater movement.
97. There is no active faulting in the area of the site.
98. The evidence is inconclusive as to whether there is an inactive fault or faults beneath the Landfill.
99. Although inactive faults theoretically can provide a pathway for the movement of groundwater, there was no evidence of such movement at this site.
100. Even if there is an inactive fault in the area of the site, it does not affect the movement of groundwater.
101. The groundwater monitoring system does not need to be revised to account for the possible presence of an inactive fault.
102. The boring data showed the bottom of the uppermost aquifer to be five to ten feet below the claystone/limestone interface, which is where those monitoring wells will be screened.
103. Although some boring samples showed additional, deeper fractures, those fractures were “at depth,” with an unfractured zone consistently reported between the shallower fractures and the deeper fractures.
104. Most of the boring samples summarized in the application show the limestone as unfractured below the 5-10 foot level below the top of the limestone. If there are fractures a few feet lower, they are almost all totally healed.

105. Of the few samples that show deeper, unhealed fractures, only one, E-16, shows that fracturing anywhere close to that upper level. Even in that sample, there are 24 feet of unfractured rock, or rock with totally healed fractures, between the upper and lower unhealed fractures.
106. The borings showed no water in that lower portion of the limestone.
107. The base of the uppermost aquifer is in the upper portion of the limestone stratum, which is the level at which the groundwater monitoring wells will be screened.
108. Under the proposed groundwater monitoring system, the screens themselves are to be placed to pull in any fractures at the well location.
109. The proposed groundwater monitoring wells will be placed at appropriate depths at the base of the uppermost aquifer.
110. It is not necessary to monitor the claystone stratum itself other than at the levels anticipated in Williamson County's proposed groundwater monitoring system.
111. In the expansion area, the groundwater flow is generally to the east, with some flow to the north and south.
112. To the east the downgradient would ensure groundwater flow through the claystone to the interface.
113. Leaks would spread radially and travel several pathways through the narrow fractures in the claystone. The most likely path would be downward to reach the claystone/limestone interface, not only because of gravity, but because of the prevalence of vertical and subvertical fractures shown in the boring samples.

114. Vertical boring is more likely to discover horizontal fractures than vertical or subvertical ones, but in these samples the latter were predominant.
115. Piezometers at the site show groundwater percolating through the surficial clay and claystone to the claystone/limestone interface.
116. It is possible that some groundwater could miss the screens at the interface to the north and south if unhealed horizontal fractures were aligned to allow it to do so, but contaminants would not go undetected.
117. The monitoring well screens should not be extended throughout the depth of the claystone stratum.
118. Williamson County correctly established the point of compliance along the northern, eastern, and southern boundaries of the proposed expanded Facility.
119. The point of compliance should not be extended to the western boundary.
120. The monitoring system proposed for the western boundary of the original Landfill is the same system that has been in place there since 1995, when Williamson County obtained its current permit.
121. The system under that permit consists of eight monitoring wells screened at the lower claystone/upper limestone interface along the northern, eastern, southern, and part of the western boundary of the Landfill.
122. There are no monitoring wells currently on the western boundary of the original Landfill, which comprises roughly the lower two-thirds of the total existing site.

123. There are also no monitoring wells on the upper portion of the western boundary of the existing site, between existing MW-11 and MW-14, the latter of which is on the northern boundary of the site.
124. The groundwater elevation for MW-11 is higher than for MW-10 to its east.
125. MW-11 is an upgradient, rather than a downgradient well.
126. Although the proposed groundwater monitoring system and the current groundwater monitoring system do not include any monitoring wells along the western boundary south of MW-12, there was such a well in place, MW-5, before 1996.
127. MW-5 on the southern portion of the western boundary, was removed from the system in 1996, because the data from December 1991 to December 1994 showed it to be upgradient.
128. There is no groundwater movement across the western boundary.
129. The point of compliance should not be extended along the western boundary of the existing Facility.
130. The point of compliance should be approved as shown in the Application.
131. The Groundwater Sampling and Analysis Plan (GWSAP) contained in the Application provides procedures for collecting representative samples from groundwater monitoring wells and quality assurance/quality control procedures required to ensure valid analytical results. The GWSAP also includes methodology for establishing background water quality in each well and for comparison of the subsequent results to background values in the same well in order that any statistically significant increase may be detected.

Drainage Patterns

132. Drainage and stormwater runoff is to be controlled at the site by the use of drainage terraces, channels, and detention ponds.
133. Williamson County based the drainage design on estimated stormwater runoff peak flow rates, volumes, and maximum velocities for a 24-hour, 25-year storm event.
134. In determining whether the site design met the drainage requirements of 30 TAC § 330.56(f)(4)(A)(iv), Williamson County compared conditions before the existence of any Landfill at the site (pre-development conditions) to the conditions proposed to exist at the time of the estimated closure of the site (post-development conditions).
135. The Landfill design, with its drainage terraces, perimeter channels, and detention ponds, generally creates a longer, more complicated flow path for stormwater than existed before the site was developed.
136. For all but two of the discharge points, post-development peak flow rates and maximum velocities would be maintained at or below peak flow rates and velocities for pre-development, natural conditions.
137. Discharge Point F would have a developed 25-year peak flow rate of 473 cubic feet per second (cfs) versus the natural condition of 471 cfs, an increase of less than one-half percent.
138. Discharge Point G would have a developed 25-year peak velocity of 6.2 feet per second (fps) versus the natural condition of 5.9 fps, an increase of five percent.
139. Both Discharge Points F and G would discharge into an unnamed tributary along the northwestern edge of the existing permit boundary.

140. From the 25-year storm, 62 acre-feet would be discharged from Discharge Point A under natural conditions, while 90 acre-feet would be discharged under the proposed developed condition.
141. At Discharge Point B, 29 acre-feet would be discharged under natural conditions, while 81 acre-feet would be discharged under the proposed developed condition.
142. TCEQ's Regulatory Guidance Document RG-417, dated June 2004, entitled "Guidelines for Preparing a Surface Water Drainage Plan for a Municipal Solid Waste Facility," acknowledges that an increase in volume may be mitigated by controlling the rate of discharge.
143. Peak flow rates would not be increased significantly at any discharge point under the proposed expansion.
144. Natural drainage patterns would not be significantly altered as a result of the proposed Landfill expansion.

Geotechnical Investigation

145. Geotechnical test results of the soils beneath the expansion property indicated that the moisture content of the subsoil units decreases with depth while the compression strength increases with depth. The predominant cohesive materials beneath the Facility are generally stiff to very stiff and have relatively high shear strengths. The average shear strength is 3,734 pounds per square foot (psf) for the surficial soil, 13,887 psf for the claystone, and 60,204 psf for the limestone.
146. In general, the surficial clay and some of the claystone will be excavated during construction of the lateral expansion. These materials are predominately cohesive soils classified as CL and CH, are medium to high plastic, and have a recompacted permeability on the order of

10^{-8} to 10^{-11} centimeters per second (cm/sec). Therefore, the excavated cohesive soils can be used for the compacted liner construction.

147. The subsoils beneath the Facility are suitable for Landfill construction and the excavated cohesive soils are suitable for construction of a compacted soil liner because:
- a. The in-situ soils possess sufficient shear strengths to preclude the possibility of development of bearing capacity type foundation failure under the anticipated overburden pressure of the Landfill;
 - b. The in-situ soils possess sufficient shear strengths to support the 3H:1V excavation slopes and provide the slop stability;
 - c. The in-situ soils are not susceptible to excessive differential settlement that could detrimentally affect the performance of the Landfill liner;
 - d. With proper conditioning and compaction, the on-site cohesive soils will be suitable for clay liner construction and capable of attaining a hydraulic conductivity of 1.0×10^{-7} cm/sec or less; and
 - e. The field investigation program did not uncover deposits of soils capable of liquefaction or other features indicative of potentially unstable foundation conditions.
148. Applicant performed a stability analysis to predict the structural stability of the Facility during Landfill development, including analyses of excavation slopes, the foundation, soil liners, and temporary/permanent berms.
149. The expanded Landfill will be stable if designed and constructed as proposed in the Application.

Groundwater Protection

150. The expansion of the Facility is designed to be protective of groundwater. The design includes a composite liner system and a leachate collection system. The Application provides for quality control procedures to be employed during the construction and

installation of the liner system and requires submission of a Soil and Liner Evaluation Report (SLER) and/or a Geomembrane Liner Evaluation Report (GLER) to the TCEQ detailing the final construction and lining of a new disposal cell prior to the placement of any waste in that cell.

151. The Facility is to be constructed with a composite liner consisting of two components. The lower component will consist of at least a two-foot layer of recompacted clay soil liner with a hydraulic conductivity of no more than 1×10^{-7} cm/sec, and the upper component will consist of a minimum 30-mil flexible membrane liner. The flexible membrane liner will be composed of high-density polyethylene (HDPE) at least 60-mil thick.
152. The leachate collection and associated leachate removal systems will be constructed of HDPE or PVC, materials which are chemically resistant to the leachate expected to be generated, are of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes and by equipment, and are designed to function and will be operated through the life of the Facility and through the closure and post closure period of the Facility.
153. The leachate collection system will consist of either a geonet drainage layer with a filter fabric overlain by a 2-foot thick layer of protective cover or 12 inches of granular drainage material overlain by 12 inches of protective cover.
154. A leachate collection system will be installed on the base grade of all new cells constructed at the Facility. Each new cell will have a centrally located leachate collection trench and an individual leachate collection sump. Collected leachate will be carried to one of the 21 proposed sumps located along the perimeter of the disposal area via specifically backfilled trenches. The leachate collection system is designed to maintain a head of less than 30 cm (one foot) over the liner system.

155. During the operation of the Facility, the level of leachate in each completed sump will be measured to insure compliance with maximum allowable head limits at least monthly for the first 12 consecutive months of cell life. Thereafter, monitoring will be quarterly. No significant leachate accumulation is expected after the final cover is in place, but after the Facility is closed, the leachate levels will be measured annually, or more frequently if necessary, to ensure that the leachate depth does not exceed 30 cm.
156. Leachate recovered from pre-subtitle D and subtitle D sumps will be pumped directly into a tanker truck, recirculated, and/or pumped through a force main system to evaporation ponds or other on-site storage or treatment facilities. Leachate pumped into tanker trucks will be disposed of off-site at a TCEQ-approved treatment Facility.
157. Positive drainage of the leachate collection system will be maintained under the influence of the settlement of the surface of the liner.
158. The Soil Liner & Quality Control Plan (SLQCP) specifies materials, equipment, and construction methods for the construction of compacted soil liners. The SLQCP details installation methods and quality control testing and reporting for the flexible membrane liners, provides guidance necessary for testing and reporting evaluation procedures for the person preparing the SLER and/or the GLER, and describes implementation procedures. It specifies materials and locations for sidewall dewatering and ballasting and guidance for preparation and submission of the Ballast Evaluation Report (BER).
159. New cells at the Williamson County RDF may be constructed below the seasonal high water table. If so, hydrostatic forces may be encountered that could cause the liner system to undergo uplift during its construction. The construction of liner systems below the seasonal high water table, including the sideslopes, will incorporate short-term groundwater control and ballasting as described in the SLQCP. After construction of the liner and placement of ballast, the dewatering/underdrain system will be terminated. In anticipation of the groundwater eventually rebounding to the seasonal high water table, the long-term uplift

resistance design will prevent liner uplift after the full hydrostatic pressure is redeveloped by providing sufficient weight to counteract the uplift force. This resistance will be provided by the weight of the leachate collection system components, protective cover, soil ballast if needed, waste ballast, and final cover.

Site Operating Plan

160. The entire Application, including the site development plan, Site Operating Plan (SOP), final closure plan, post-closure care plan, Landfill gas management plan, and any other required plan, will be placed into the site operating record of the Facility and will become operational requirements for the Facility. All information placed in the operating record of the Facility will be retained for the life of the Facility, including the post-closure care period.
161. The Applicant is authorized to operate the Facility Monday through Friday, 5:00 a.m. to 8:00 p.m. and Saturday 6:00 a.m. to 4:00 p.m. Facility operating hours will be posted at the entrance.
162. In the event of an emergency, as determined by the ED, the Applicant is authorized to operate the Facility 24 hours per day, seven days per week for the duration of the emergency.
163. The operation of the Facility 24 hours per day, seven days per week in non-emergency conditions may be incompatible with surrounding land uses.
164. The operational activities that store, process, or dispose of combustible materials at the Facility include the active working faces of the Landfill and the brush collection area working face. The fire protection plan provides guidelines for Landfill personnel to minimize the potential for fires and instructions for controlling small fires. The fire protection measures in the SOP apply to both the active working face and the brush collection area working face to prevent or extinguish any fire that may occur.

165. Special waste will be received at the Facility in accordance with the Special/Industrial Waste Screening Program and the permit. Wastes specifically prohibited from Landfill disposal will not be accepted for disposal.
166. Class 1 regulated asbestos-containing material will be accepted for disposal within the fill area and is specifically approved for this Facility. The SOP contains procedures to ensure that regulated hazardous waste or radioactive wastes will not be accepted at the Facility.
167. To prevent the disposal of unauthorized waste at the Facility, the SOP provides that the Applicant will post signs regarding hazardous and other unacceptable wastes, screen wastes, provide personnel training, reject haulers carrying unauthorized wastes, and perform random sampling in accordance with the random inspection procedures for the Facility.
168. The SOP provides that waste screenings will be conducted at the gate or offsite before disposal at the Facility. The SOP specifies procedures for random inspections of incoming waste.
169. Access to the Williamson County RDF will be controlled using artificial barriers, natural barriers, or a combination of both. Access to the Facility is controlled using a perimeter fence and a gated entrance. The gated entrance completely restricts access when the Facility is not open. In order to prevent the entry of livestock and discourage unauthorized entry to the Landfill, the perimeter fence consists of six-foot chain-link and/or at least 3.5-foot three-strand barbed wire fence.
170. The SOP provides that the unloading of waste will be restricted to the active working face and that the working face will be confined to as small an area as practical. There may be two active working faces, a single brush unloading area, and a single liquid waste unloading area for a maximum total of four unloading areas at any given time. A trained employee will be present at the entrance at all times during operating hours to monitor all incoming loads of waste and will direct traffic to the appropriate unloading area. Prohibited wastes includes

hazardous waste (except municipal hazardous waste from conditionally exempt small quantity generators), PCB waste, and unauthorized special waste.

171. The SOP provides that the working face will be maintained and operated in a manner to control windblown solid waste. Daily cover or the approved equivalent, litter fences, and litter collection will be employed to protect the working face from prolonged exposure. A minimum of six inches of daily cover will be used in order to prevent disease vectors, control windblown debris and odors, reduce the possibility of fire, prevent scavenging, and improve the operation of the Facility.
172. The SOP specifically prohibits solid waste unloading, storage, disposal or processing operations from occurring within any easement that crosses the site or within any buffer zone.
173. The SOP provides that the Landfill operator will take the necessary steps to ensure that vehicles hauling waste to the site properly secure the load in order to prevent the escape of any part of the load by blowing or spilling. The operator will, as necessary, post signs at the Landfill entrance requiring loads to be covered or enclosed and the potential consequences for non-compliance including reporting offenders to the City of Hutto Police or Williamson County Sheriff's office and assessing litter control surcharges.
174. On a daily basis during daylight hours when the Facility is in operation, FM 1660 and all other public roads used to access the Landfill will be inspected and cleaned of spilled materials and wind blown waste for a distance of two miles in either direction from any entrances used for the delivery of waste to the site.
175. The SOP specifically provides that the Landfill manager will ensure that any unit of the Landfill does not violate any applicable requirements of the approved state implementation plan under the federal Clean Air Act. No open burning of waste will be permitted.

176. The SOP includes an odor management plan that uses a combination of identifying the sources of odor and methods to minimize or eliminate those odors. Methods to achieve these objectives include waste and leachate handling procedures, timely placement of cover materials, the elimination of ponded water, and gas control.
177. The SOP provides that vector control will be achieved through application of daily cover, eliminating ponded water, minimizing the working face, and if necessary, application of appropriate chemicals using appropriate health and safety practices.
178. The SOP specifies procedures to minimize the tracking of any mud and trash by vehicles entering or exiting the Facility onto public roadways. Vehicles will traverse all-weather site access roads and paved site entrance roads allowing for mud to be removed from the vehicle. Additionally, the Facility will minimize the amount of mud at the site entrance and on access roads.
179. The SOP prohibits scavenging, the uncontrolled and unauthorized removal of material at any point in the solid waste management system.
180. The SOP permits salvaging, the controlled removal of waste materials for recycling, reuse, or sale, will be allowed with specific authorization from the Landfill manager in accordance with the SOP, but will not be allowed to interfere with prompt sanitary disposal of solid waste or to create a public health nuisance.
181. The SOP specifies procedures for Landfill gas monitoring and control in accordance with the Landfill Gas Management Plan, Attachment 14 to Part III of the Application.
182. The SOP specifies that ponding of water over waste areas will be minimized and eliminated. Ponding in the active portion of the Facility or on a closed portion of the Facility must be eliminated and the area in which the ponding occurred will be filled in and regraded within seven days of the occurrence. Ponded water from an area with at least 12 inches of

intermediate cover will be pumped or otherwise removed to the Facility's drainage system. The ponding prevention plan will use high density compaction during placement of the wastes along with constructing and maintaining proper cover and slope on all areas to prevent ponding over waste areas.

183. The SOP prohibits discharge of contaminated water without specific written authorization from TCEQ. Water that has become contaminated by contact with the working face or with leachate shall be segregated from uncontaminated surface and groundwater and properly managed.

Reporting and Transcription Costs

184. Williamson County has been assessed reporting and transcription costs of \$24,274 for the prehearing conference and evidentiary hearing.
185. There is no evidence regarding the parties' financial ability to pay the reporting and transcription costs.
186. Both Williamson County and TJFA participated fully in the hearing and benefited from the transcript.
187. Although Williamson County is a political subdivision of the state, it is not a state or federal administrative agency, nor is there any evidence as to its budget constraints.
188. Reporting and transcription costs are an expected cost in the course of a major Landfill expansion application such as this one.
189. Although the ALJs recommend approval of the application, with some modifications, the issues raised by the Protestants were reasonable and well presented.

Other Remaining Issues

190. With respect to all other contested issues and all unrefuted issues, the Application and the remainder of the evidentiary record contain sufficient factual information regarding the Landfill's design and operation to satisfy all applicable statutory and regulatory requirements.

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 ANN. § 361.061.
2. Notice was provided in accordance with TEX. HEALTH & SAFETY CODE ANN. § 361.0665, 30 TEX. ADMIN. CODE §§ 39.5 and 39.101, and TEX. GOV. CODE §§ 2003.051 and 2003.052.
3. SOAH ALJs have jurisdiction to conduct a hearing and to prepare a Proposal for Decision on contested cases referred by TCEQ under TEX. GOV. CODE § 2003.47.
4. Applicant submitted a complete permit amendment application, as required by TEX. HEALTH & SAFETY CODE ANN. §§ 361.066 and 361.068, that demonstrates that Applicant will comply with all relevant aspects of the Application and design requirements as provided in 30 TEX. ADMIN. CODE §§ 330.4(m) and 330.51(b)(1).
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.*, and the State Office of Administrative Hearings, specifically 1 TEX. ADMIN. CODE § 155.1 *et seq.*, and Subchapter C of TEX. HEALTH & SAFETY CODE ANN. Chapter 361.
6. The burden of proof was on the Applicant, in accordance with 30 TEX. ADMIN. CODE § 80.17(a).

7. Williamson County's compliance history was reviewed by the ED and is acceptable under 30 TEX. ADMIN. CODE Chapter 60.
8. WMTX's compliance history was reviewed by the ED and is acceptable under 30 TEX. ADMIN. CODE Chapter 60.
9. The evidence in the record is sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and 30 TEX. ADMIN. CODE Chapter 330.
10. Under 30 TEX. ADMIN. CODE § 330.62(a), the Applicant possesses sufficient property rights in the Facility for which the permit will be issued; the Applicant can ensure right of entry until the end of the post-closure care period.
11. CAPCOG was not required to review the Application.
12. The provisions of 30 TEX. ADMIN. CH. 330 apply specifically to "all aspects of municipal solid waste management," and are based primarily on the stated purpose of TEX. HEALTH & SAFETY CODE ANN. Chapter 361.
13. Williamson County is the "owner" of the Facility as defined in 30 TEX. ADMIN. CODE § 330.2(94).
14. Williamson County is the "site operator" of the Facility as defined in 30 TEX. ADMIN. CODE § 330.2(132).
15. WMTX is the "operator" of the Facility as defined in 30 TEX. ADMIN. CODE § 330.2(91).
16. Under 30 TEX. ADMIN. CODE § 330.2 (97), a "permit" is defined as "a written permit issued by the Commission that, by its conditions, may authorize the owner or operator to construct,

install, modify, or operate a specified municipal solid waste storage, processing, or disposal facility in accordance with specific limitations.”

17. A permit issued under TEX. HEALTH & SAFETY CODE ANN. § 361.087(1) must include the name and address of the “owner” of the land on which the solid waste facility is located and the person who is or will be the “operator” of the facility as defined in 30 TEX. ADMIN. CODE § 330.2.
18. The Draft Permit No. MSW-1405B, shall identify Williamson County as the “owner” and “site operator,” and WMTX as the “operator” of the Landfill. Otherwise the Draft Permit includes all matters required by law.
19. The Applicant has met the requirements of 30 TEX. ADMIN. CODE § 305.43(b) in that WMTX submitted the Application to the Commission on behalf of Williamson County.
20. No site-specific conditions exist at the site that will require special consideration as provided in 30 TEX. ADMIN. CODE §§ 330.51(b)(3) and 330.53(b)(4).
21. The land use information provided in the Application contains the technical information required under 30 TEX. ADMIN. CODE § 330.53(b).
22. The expansion of the Williamson County RDF, if constructed and operated in accordance with the TEX. HEALTH & SAFETY CODE ANN. Chapter 361, 30 TEX. ADMIN. CODE Chapter 330, and the Draft Permit, will not adversely affect public health or the environment.
23. As required by TEX. HEALTH & SAFETY CODE § 361.069, the Facility is compatible with surrounding land uses.
24. The approval of the Application and issuance of Permit No. MSW-1405B, will not violate the policies of the State of Texas, as set forth in § 361.002(a) of TEX. HEALTH & SAFETY

CODE ANN. Chapter 361, 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.

25. The contents of the permit to be issued to the Facility meet the requirements of TEX. HEALTH & SAFETY CODE ANN. §§ 361.086(b) and 361.087.
26. The Texas Health and Safety Code and TCEQ rules do not require Applicant to analyze the impact on on-site drainage of off-site structures that are not within the 100-year floodplain.
27. The TCEQ is not prohibited by TEX. HEALTH & SAFETY CODE ANN. § 361.122 from issuing Permit No. MSW-1405B.
28. Applicant has not proposed to construct the expansion in a floodplain; therefore, Applicant is not required to submit the information specified in 30 TEX. ADMIN. CODE § 330.51(b)(4)(A)-(D).
29. Applicant has submitted documentation of compliance with the National Pollutant Discharge Elimination System (NPDES) program under the federal Clean Water Act Section 402, as amended, as required by 30 TEX. ADMIN. CODE § 330.51(b)(5).
30. As required by 30 TEX. ADMIN. CODE § 330.51(b)(6), Applicant has submitted documentation of coordination with:
 - a. TCEQ for compliance with the federal Clean Water Act Section 208;
 - b. the Federal Aviation Administration for compliance with airport location restrictions; and
 - c. the Texas Department of Transportation for traffic and location restrictions.

31. Applicant has submitted wetland determinations required by applicable federal, state, and local laws as required by 30 TEX. ADMIN. CODE §§ 330.51(b)(7) and 330.53(b)(12).
32. Applicant has submitted Endangered Species Act compliance demonstrations under state and federal laws as required by 30 TEX. ADMIN. CODE §§ 330.51(b)(8), 330.53(b)(13), and 330.55(b)(9).
33. Applicant has submitted a review letter from the Texas Historical Commission as required by 30 TEX. ADMIN. CODE §§ 330.51(b)(9).
34. The Application conforms to the applicable requirements of the Engineering Practice Act, TEX. REV. CIV. STAT. ANN. art. § 3271a, as provided in 30 TEX. ADMIN. CODE § 330.51(d) and 22 TEX. ADMIN. CODE § 131.166.
35. Part I of the Application meets the technical requirements of 30 TEX. ADMIN. CODE §§ 305.45 and 330.52.
36. Part II of the Application meets the technical requirements of 30 TEX. ADMIN. CODE § 330.53.
37. The Site Development Plan, which supports Parts I and II of the Application, meets the requirements of 30 TEX. ADMIN. CODE §§ 330.54, 330.55, and 330.56.
38. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE §§ 330.54-.56.
39. Part IV of the Application, the SOP, meets the requirements of 30 TEX. ADMIN. CODE §§ 330.57 and 330.114.
40. Applicant has shown that it will comply with the operational prohibitions and requirements in 30 TEX. ADMIN. CODE §§ 330.5, 330.111-.139.

41. Applicant has thoroughly investigated for the presence of geologic faults, both active (as required by 30 TEX. ADMIN. CODE § 330.56(d)(3)(A), and inactive faults, which is not required by TCEQ's rules.
42. Williamson County's borings were in compliance with the depth requirements contained in 30 TAC § 330.56(d)(5)(A)(ii).
43. Applicant submitted a subsurface investigation report that complies with 30 TEX. ADMIN. CODE § 330.56(d)(5).
44. The Application contains the required information regarding the effect of site construction on groundwater flow required by 30 TEX. ADMIN. CODE § 330.231(e)(1).
45. The Application meets the requirements of 30 TEX. ADMIN. CODE §§ 330.55 and 330.200-.206, concerning groundwater protection.
46. The groundwater sampling and analysis plan meets the requirements set forth in 30 TEX. ADMIN. CODE §§ 330.56(k) and 330.230-.234.
47. In determining whether natural drainage patterns will be significantly altered, the issue of whether the receiving body of water is affected is to be addressed at the point of discharge, not by analyzing any points downstream of the proposed Facility. *In the Matter of the Application of Blue Flats Disposal, L.L.C., for Proposed Permit No. MSW-2262*, SOAH Docket No. 582-98-1390, TNRCC Docket No. 98-0415-MSW (Jan. 2, 2001) and *In re Application of North Texas Municipal Water District for Municipal Solid Waste Permit No. MSW-2294*, SOAH Docket No. 582-02-3386, TCEQ Docket No. 2002-0745-MSW (Finding of Fact No. 105 and Conclusion of Law No. 27) (October 20, 2003).
48. Applicant has demonstrated that natural drainage patterns will not be significantly altered as a result of the proposed Landfill development, as required by 30 TEX. ADMIN. CODE § 330.56(f)(4)(A)(iv).

49. The Landfill gas monitoring system complies with 30 TEX. ADMIN. CODE § 330.130.
50. Applicant has demonstrated compliance with the location restrictions set forth in 30 TEX. ADMIN. CODE §§ 330.300-.305.
51. Applicant has submitted information regarding closure and post-closure that demonstrates compliance with the requirements of 30 TEX. ADMIN. CODE §§ 330.56(l) and (m), 330.253, and 330.254(b).
52. Applicant has submitted information regarding financial assurance that complies with 30 TEX. ADMIN. CODE §§ 330.52(b)(11) and 330.280-.286.
53. Applicant has listed all permits or construction approvals received or applied for under any program listed in 30 TEX. ADMIN. CODE § 305.45(a)(7).
54. The SLQCP complies with 30 TEX. ADMIN. CODE §§ 330.56(j) and 330.205.
55. Applicant has provided sufficient information concerning its acceptance or disposal of “special waste,” as defined by 30 TEX. ADMIN. CODE § 330.2.
56. Applicant has demonstrated compliance with 30 TEX. ADMIN. CODE § 330.136 regarding disposal of special wastes.
57. Applicant has provided information concerning the disposal of industrial wastes and demonstrated compliance under 30 TEX. ADMIN. CODE § 330.137.
58. Operation of an MSW Landfill in accordance with the applicable law and regulations is a proper land use of the property described in the Application for Permit No. MSW-1405B.

59. Applicant 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 Federal Aviation Administration and in compliance with 30 TEX. ADMIN. CODE §§ 330.51(b)(6) and 330.300.
60. The buffer zones established by Applicant between the edge of fill and the site boundary are compliant with the MSW rules, including 30 TEX. ADMIN. CODE §§ 330.121(b).
61. Applicant has provided sufficiently detailed information regarding the operational methods to be utilized at the site when using daily cover and its preventative effect on vectors, fires, odors, and windblown waste and litter, as required by 30 TEX. ADMIN. CODE § 330.133(a).
62. The methods specified in the SOP for the control of windblown waste and litter comply with the MSW rules, including 30 TEX. ADMIN. CODE §§ 330.114(3) and 330.120.
63. In accordance with 30 TEX. ADMIN. CODE § 330.115, the SOP fire protection plan includes fire protection standards and site personnel training requirements.
64. The SOP's special waste acceptance procedures ensure that special waste, as that term is defined in 30 TEX. ADMIN. CODE § 330.2, will not be accepted or disposed of without the prior written authorization from TCEQ, except with respect to certain special wastes the acceptance of which is previously authorized.
65. The Facility is operated in accordance with the federal New Source Performance Standards and under the Commission's Title V General Operating Permit.
66. Pursuant to the authority of, and in accordance with, applicable laws and regulations, the requested permit should be granted.
67. Pursuant to 30 TEX. ADMIN. CODE §§ 80.23(d)(2), the ED and OPIC may not be assessed any portion of the transcript and reporting costs.

68. For the reasons set out in the Findings of Fact, the court reporting and transcript costs should be assessed to Williamson County.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, IN ACCORDANCE WITH THESE FINDINGS OF FACT AND CONCLUSIONS OF LAW THAT:

1. Permit No. MSW-1405B for a Type I MSW Landfill in Williamson County, Texas, is hereby issued to Williamson County.
2. The Draft Permit No. MSW-1405B, shall identify Williamson County as the “owner” and “site operator” and WMTX as the “operator” of the Landfill.
3. The Draft Permit No. MSW-1405B, shall state the Facility’s operating hours as Monday through Friday, 5:00 a.m. to 8:00 p.m. and Saturday 6:00 a.m. to 4:00 p.m.
4. References to WMTX should be removed from page one of nine of “Part A” of the Application in the “Applicant Name” section, and the “Customer Reference Number” shall only identify Williamson County and Williamson County’s customer reference number.
5. All other motions, requests for specific Findings of Fact or Conclusions of Law, and other requests for general and specific relief, if not expressly granted herein, are hereby denied for want of merit.
6. The effective date of this Order is the date the Order is final, as provided by 30 TEX. ADMIN. CODE § 80.273 and § 2001.144 of the Texas Administrative Procedure Act, TEX. GOV’T CODE ANN.
7. The Chief Clerk of the Commission shall forward a copy of this Order to all parties.

8. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of this Order.

Issued:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Buddy Garcia, Chairman
For the Commission