

**SOAH DOCKET NO. 582-15-2082
TCEQ DOCKET NO. 2015-0069-MSW**

**APPLICATION OF § BEFORE THE STATE OFFICE
130 ENVIRONMENTAL PARK, LLC §
FOR PROPOSED § OF
PERMIT NO. 2383 §
§ ADMINISTRATIVE HEARINGS**

APPLICANT’S RESPONSE TO CLOSING ARGUMENTS

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TO: THE HONORABLE KERRIE JO QUALTROUGH, ADMINISTRATIVE LAW JUDGE AND THE HONORABLE CASEY A. BELL, ADMINISTRATIVE LAW JUDGE:

130 ENVIRONMENTAL PARK, LLC (130 Environmental Park), the Applicant in this proceeding, files this, its Response to Closing Arguments, and would respectfully show as follows:

Written closing arguments were filed herein as follows:

- 130 Environmental Park filed Applicant’s Written Closing Arguments (Applicant’s Closing Arguments) on October 24, 2016.
- The Office of Public Interest Counsel (OPIC) filed OPIC’s Closing Brief (OPIC Closing Arguments) on October 24, 2016.
- Caldwell County, Texas (Caldwell County) filed Caldwell County’s Closing Arguments (Caldwell County Closing Arguments) on October 24, 2016.
- TJFA, LP (TJFA) and Environmental Protection in the Interest of Caldwell County (EPICCC) (collectively TJFA/EPICCC) filed TJFA/EPICCC’s (and Aligned Individual Protestants’) Closing Arguments (TJFA/EPICCC Closing Arguments) on October 24, 2016.
- Plum Creek Conservation District (PCCD) filed Closing Arguments of PCCD (PCCD Closing Arguments) on October 24, 2016.
- The Executive Director (ED) of the Texas Commission on Environmental Quality (TCEQ) filed ED’s Closing Arguments (ED Closing Arguments) on October 24, 2016.

A. SPECIFIC ISSUES

1. SUFFICIENCY OF PROPERTY RIGHTS

OPIC, Caldwell County and TJFA/EPICCC cite 30 TAC §330.67 and argue that 130 Environmental Park, while having demonstrated sufficient property rights for the Site of the 130 Environmental Park Landfill, have not demonstrated sufficient property rights in the portion of the access road between the Site boundary and US Highway 183.

As properly argued by the Executive Director, the Application complies with the requirements of 30 TAC §330.59(d). The Application includes an affidavit executed by the property owner and acknowledging that (1) the State of Texas may hold the property owner of record either jointly or

severally responsible for the operation, maintenance, and closure and post-closure care of the Facility, (2) the owner of the Site has a responsibility to file in the deed records of Caldwell County an affidavit to the public advising that the Site will be used for a solid waste facility prior to the time that the Facility actually begins operating as a municipal solid waste landfill facility, and to file a final recording upon completion of disposal operations and closure of the landfill units in accordance with 30 TAC §330.19, and (3) the Facility owner or operator and the State of Texas shall have access to the Site during the active life and post-closure care period after closure of the Facility for the purpose of inspection and maintenance. *Ex. 130EP-1 pp.26-32.* The Application includes a boundary metes and bounds description of the Site and a drawing of that description, signed and sealed by a registered professional land surveyor. *Ex. 130EP-1 pp.70-72.*

Mr. Steven Odil, is the TCEQ's Permit Engineer who reviewed the Application and determined that it is technically complete. He has reviewed approximately 27 original applications and major amendments for permits and registrations, and approximately 150 modifications. *Ex. ED-SO-1, p.3.* He testifies that permits have been approved for landfills with the access road outside of the permit boundary numerous times. *Tr. p.1920,1/12-16.* In his opinion, appurtenances required for the landfill, such as the gate house and scales, should be included in the Site boundary, but access roads need not be. *Tr. p.1920,1/24-p.1921,1/4.*

Mr. Odil testified that the TCEQ has jurisdiction to enforce the requirements for construction of the access road, control of mud accumulations on the access road, and other permit requirements outside of the permit boundary. *Tr. p.1923,1/16-19.* The TCEQ has the ability to enforce anything that the permit requires even when outside the permit boundary. *Tr. p.1923,1/25-p.1924,1/5.* Contrary to TJFA/EPICC's argument, 130 Environmental Park would not be able to change the access road to connect with FM-1185 or any other public road without a modification to the permit. *Tr. p.1958,1/6-16.*

The Executive Director concludes that 130 Environmental Park has sufficient property rights in all of the property within the proposed permitted Facility boundary.

30 TAC §330.67 establishes a performance standard as regards property and permit entitlements. The rule also establishes the limits of a TCEQ permit as relates to property and permit entitlements. Noticeably missing from the arguments of OPIC, Caldwell County and TJFA/EPICC is the following provision of 30 TAC §330.67(a):

The granting of a permit does neither convey any property rights or interest in either real or personal property; nor does it authorize any injury to private property, invasion of personal rights, or impairment of previous contract rights; nor any infringement of federal, state, or local laws or regulations outside the scope of the authority under which a permit is issued.

Likewise, 30 TAC §330.67(d) provides:

It is also the responsibility of an owner or operator to obtain any permits or approvals that may be required by local agencies such as for building construction, discharge of uncontaminated waters into ditches under control of a drainage district, discharge of effluent into a local sanitary sewer system, etc.

These provisions of the TCEQ's rules clarify that a municipal solid waste permit issued by the Commission does not supplant an owner's or operator's obligations under law to own property rights. These provisions of the TCEQ's rules clarify that a municipal solid waste permit issued by the Commission does not supplant an owner's or operator's obligations to comply with other laws, including a requirement to comply with a county's development ordinances and to obtain necessary local approvals.

130 Environmental Park will be required to obtain (and provide the ED) its floodplain development permit (including floodplain crossings by the entrance road outside of the permit boundary) prior to commencement of physical construction. 130 Environmental Park will be required to implement all roadway improvements (including construction of the entrance road outside of the permit boundary) prior to the pre-opening inspection of the facility. The special provisions will be a condition required to be satisfied before 130 Environmental Park can operate the landfill and are therefore enforceable by the ED. (*See discussion in Section 18 - Local Regulations/Approvals below.*)

TJFA/EPICC's and Caldwell County's additional arguments regarding sufficiency of property rights as relate to obtaining local approvals are addressed below in Section 18 - Local Regulations/Approvals. PCCD does not dispute the sufficiency of 130 Environmental Park's property rights, but provided information during the hearing regarding its easement for flood control on the property that is the subject of the Application.

The Application contains all information required by and complies with TCEQ's rules regarding property rights and 130 Environmental Park has demonstrated that it has sufficient property rights to operate the proposed municipal solid waste disposal facility throughout its operating life and the post-closure care period. The TCEQ has jurisdiction to enforce all permit requirements both within and outside of the permit boundary.

2. EVIDENCE OF COMPETENCY

OPIC, Caldwell County and TJFA/EPICC argue that 130 Environmental Park failed to satisfy the competency requirement of 30 TAC §330.59(f) because it failed to disclose the ownership role of Green Group Holdings, LLC and to provide information regarding that entity. OPIC and Protestants argue that, "[b]ecause Green Group Holdings, LLC owns more than 20 percent of 130 Environmental Park, LLC and the Applicant failed to disclose this fact in the application, it failed to comply with 30 TAC §330.59(e)." *OPIC Closing Argument, p. 6.* OPIC and Protestants contend that 130 Environmental Park was also required to provide information regarding Green Group Holdings, LLC's subsidiaries and their solid waste sites in order to demonstrate competency pursuant to 30 TAC §330.59(f) and that such failure could constitute misleading statements to the TCEQ.

Caldwell County and TJFA/EPICC also argue that Kerry Maroney, the engineer of record, does not know or did not inquire about information regarding 130 Environmental Park management and personnel, and that the Application provides insufficient information concerning 130 Environmental Park management and personnel. *Caldwell County Closing Argument, p.4.; TJFA/EPICC Closing Argument, p.8.*

Caldwell County states that there is no compliance history for 130 Environmental Park. Caldwell County then states that there is no evidence of competency of principals or supervisors of 130 Environmental Park management and personnel. *Caldwell County Closing Arguments, p.4.*

TJFA/EPICC addresses evidence of competency and compliance history together. In addition to the arguments of TJFA/EPICC described above, TJFA/EPICC cites 30 TAC §330.59(e), which requires an applicant to “list all persons having over a 20% ownership in the proposed facility.” TJFA/EPICC also cites 30 TAC §330.59(f)(4), which requires that the “names of the principals and supervisors of the owner’s or operator’s organization shall be provided, together with previous affiliations with other organizations engaged in solid waste activities.” TJFA/EPICC argues that, because 130 Environmental Park is a wholly-owned subsidiary of Green Group Holdings, LLC, this should at a minimum have been disclosed in the Application. *TJFA/EPICC Closing Argument, p.6.*

TJFA/EPICC makes extensive allegations regarding the application of Pintail Landfill, LLC for MSW Permit No. 2377. TJFA/EPICC contends that 130 Environmental Park did not provide information regarding the Pintail Landfill, LLC application because it “would not reflect positively on this Applicant’s ability to prepare thorough application materials.” *TJFA/EPICC Closing Argument, p.10.* TJFA/EPICC concludes that the permit should be denied because of the Applicant’s failure to demonstrate competency and comply with the Texas Administrative Code regulations related to competency.

The Executive Director cites 30 TAC §330.59(f), which requires an applicant to list all Texas solid waste sites that the Applicant has owned or operated within the last ten years; list all solid waste sites in all states, territories, or countries in which the Applicant has a direct financial interest; state that a licensed solid waste facility supervisor shall be employed before commencing facility operation; list the names of the principal and supervisors of the owner’s or operator’s organizations together with previous affiliations with other organizations engaged in solid waste activities; and show landfilling and earthmoving experience, and other pertinent experience or licenses possessed by key personnel as well as list the number and size of each type of equipment to be dedicated to facility operation. The Executive Director identifies the portion of the Application where the required information is provided - Ex. App. 130EP-1, pp.050-051. The Executive Director concludes that the competency information provided in the Application meets the requirements of the 30 TAC §330.59(f).

As required by 30 TAC §330.59(f), the Application includes the names of the principals and supervisors of 130 Environmental Park’s organization, together with previous affiliations with other organizations engaged in solid waste activities *Ex. 130EP-1 pp.50-51.* The Application contains the number and size of each type of equipment to be dedicated to facility operation. *Ex. 130EP-1 pp.51-52; Ex. 130EP-5 pp.119-121.* 130 Environmental Park will provide sufficient equipment to conduct site operations in accordance with the landfill design and permit condition. *Ex. 130EP-1 p.51; Ex. 130EP-5 p.119.* 130 Environmental Park will employ a licensed solid waste facility supervisor and qualified equipment operators in compliance with TCEQ’s rules before commencing operations. *Ex. 130EP-1 pp.50-51.* The Application complies with TCEQ’s rules regarding evidence of competency.

130 Environmental Park, LLC, a Georgia limited liability company, is authorized to do business in Texas as 130 Environmental Park, LLC and will own and operate the permitted municipal solid waste landfill facility. *Ex. 130EP-1, p.75.* 130 Environmental Park, LLC does not own or operate other facilities in Texas. 130 Environmental Park, LLC has no financial interests outside the state of Texas. *Ex. 130EP-1, p.50.*

Ga. Code Ann. 14-11-501(a) provides: "A limited liability company interest is personal property. A member has no interest in specific limited liability company property." Similarly, *Tex. Bus. Org. Code §101.106(b)* provides: "A member of a limited liability company or an assignee of a membership interest in a limited liability company does not have an interest in any specific property of the company." *Tex. Bus. Org. Code §101.101(2)* provides: "'Foreign limited liability company' or 'foreign company' means a limited liability company formed under the laws of a jurisdiction other than this state." Because a member of a limited liability company does not have an interest in any specific property of the company, Green Group Holdings, LLC does not have an interest in specific property of 130 Environmental Park and has no interest in the Facility proposed by the Application.

30 TAC §330.59(e) requires that the owner or operator shall list all persons having over a 20% ownership in the proposed facility. 30 TAC §330.3(52) defines "facility" as "[a]ll contiguous land and structures, other appurtenances, and improvements on the land used for the storage, processing, or disposal of solid waste.

Pursuant to the Georgia and Texas business codes, Green Group Holdings does not own any interest in the proposed Facility. While 130 Environmental Park would not hesitate to list the landfilling, earthmoving and other pertinent experience of Green Group Holdings and its Members, that information is not required by 30 TAC §§330.59(e) and (f), those sections do not require such information and inclusion of that information would be inappropriate and in violation of the rules. Had that information been included in the Application, OPIC, Caldwell County and TJFA/EPICC would certainly be arguing now that the Application should be denied for violation of the cited rules.

As discussed above, Green Group Holdings, LLC is a member of 130 Environmental Park, LLC and has (and will have) no ownership in the proposed Facility. Green Group Holdings is also the member of Pintail Landfill, LLC (another Georgia limited liability company). There is no logical or other analysis of the corporate structure of 130 Environmental Park, LLC, Green Group Holdings, LLC and/or Pintail Landfill, LLC that could present a scenario where Pintail Landfill, LLC owns any interest in the proposed 130 Environmental Park Facility. 130 Environmental Park resolutely rejects and disputes TJFA/EPICC's assertions that Pintail Landfill, LLC demonstrated incompetence in the preparation of its application for MSW Permit No. 2377. 130 Environmental Park also steadfastly rejects TJFA/EPICC's statement that "[d]emonstrating prior history with environmental permits is required by the TCEQ when submitting an application." *TJFA/EPICC Closing Argument, p.10.* TJFA/EPICC cite to no rule or practice to substantiate this boldly alleged requirement, and there is none. If 130 Environmental Park had been required to demonstrate the accuracy of the representations made in the Pintail Landfill application, it would happily have done so. But that demonstration would be irrelevant in this case under any interpretation of the rules that are applicable to this case. Pintail Landfill, LLC has never owned or operated any solid waste disposal site and has no earthmoving or other pertinent experience in Texas or otherwise. Again,

had 130 Environmental Park provided information regarding Pintail Landfill, LLC's application (that did not result in a municipal solid waste disposal permit) OPIC, Caldwell County and TJFA/EPICC would be first to cry foul. Any such information would be irrelevant to and superfluous of the requirements of 30 TAC §§330.59(e) and (f).

Requiring affirmative evidence of competency to operate a landfill would work to prevent new operators without experience from obtaining permits, and essentially provide a monopoly to existing owners and operators.

The applicable rules do not actually have any language that states that an applicant must prove itself competent. Rather, it must simply provide required information that is considered "evidence of competency," *i.e.*, evidence the Commission may consider in valuating an applicant's competency *See: Post Oak Clean Green, Inc. Application for MSW Permit; SOAH Docket No. 582-15-2498; TCEQ Docket No. 2012-0905-MSW Proposal for Decision, pp.89-90.*

The Application complies with TCEQ's rules regarding evidence of competency.

3. COMPLIANCE HISTORY

OPIC bases its argument that the Applicant did not demonstrate a satisfactory compliance history on its allegations that 130 Environmental Park did not disclose the ownership role of Green Group Holdings, LLC and its subsidiaries and solid waste sites as discussed in the foregoing Section 2 - Evidence of Competency. Caldwell County also refers to its argument in the foregoing Section 2 - Evidence of Competency for its argument regarding Compliance History.

OPIC argues that the Applicant had a duty to disclose this information so that the compliance history of each of these companies and facilities could be evaluated. *OPIC Closing Argument, p.8, citing 30 TAC§ 330.57(f).* OPIC also cites Tex. Health & Safety Code §361.084(c) alleging a duty to disclose compliance history information on 130 Environmental Park's member entity and its alleged subsidiaries.

TJFA/EPICC addresses evidence of competency and compliance history together.

TJFA/EPICC cites 30 TAC §330.59(e), which requires an applicant to "list all persons having over a 20% ownership in the proposed facility." TJFA/EPICC also cites 30 TAC §330.59(f)(4), which requires that the "names of the principals and supervisors of the owner's or operator's organization shall be provided, together with previous affiliations with other organizations engaged in solid waste activities." TJFA/EPICC argues that, because 130 Environmental Park is a wholly-owned subsidiary of Green Group Holdings, LLC, this should at a minimum have been disclosed in the Application. *TJFA/EPICC Closing Argument, p.6.*

TJFA/EPICC's argument regarding compliance history is essentially the same as it's argument regarding evidence of competency and that, during deposition testimony, 130 Environmental Park witnesses were uncertain of the various offices held by individuals in 130 Environmental Park, LLC and Green Group Holdings, LLC.

The Executive Director explains that during the application review process, the TCEQ develops and reviews compliance history reports under Chapter 60 of the TCEQ rules. (*See* 30 TAC § 60.1(a)). The compliance history incorporates data from an applicant derived from numerical scores associated with enforcement events. The components of the report include enforcement information related to an applicant, specific to the site that is under review, as well as other sites that are owned or operated by the applicant. (30 TAC § 60.1(c)). The report will provide a compliance score, as well as a classification as a high performer, satisfactory performer, or unsatisfactory performer. Because this is a new site, there is no existing compliance history for this Facility for the ED to consider. Furthermore, the TCEQ does not use compliance information from agencies in other states to develop a facility rating. (Ex ED-SO-8, p. 67). The Applicant's lack of history for operating this or any other site does not provide a basis for denying this Application. *Executive Director Closing Argument, p.4.*

130 Environmental Park incorporates its response in Section 2 - Evidence of Competency herein.

In a Compliance History Report prepared on October 3, 2014, the TCEQ Executive Director evaluated the compliance history of the Facility and classified the Facility and 130 Environmental Park. *Ex. ED-SO-8 p.58-59.* There was no compliance information about the Facility at the time the Executive Director developed the compliance history. *Ex. ED-SO-8 p.58-59.* The compliance history classification for 130 Environmental Park and the Facility is designated as "unclassified". *Ex. ED-SO-8 p.58.* TCEQ's compliance history rules do not prohibit the permitting of the Facility.

TJFA/EPICC's misstatements and innuendo regarding the Pintail Landfill, LLC application and the facilities and operations of Green Group Holdings, LLC (and the entities in which it has a membership interest) are also irrelevant under 30 TAC Chapter 60 - Compliance History. "The compliance history shall include multimedia compliance-related information about a person, specific to the site which is under review, as well as other sites which are owned or operated by the same person." 30 TAC §60.1(c). 30 TAC §3.2(3) defines an "Applicant" as a "person who submits an application to the commission." 30 TAC §3.2(25) defines a "Person" as an "individual, corporation, organization, government or governmental subdivision or agency, business trust, partnership, association, or any other legal entity." 130 Environmental Park has not owned or operated any municipal solid waste disposal site and has no compliance history under Chapter 60. Green Group Holdings, LLC and the entities in which it has a membership interest (including Pintail Landfill, LLC) are not applicants (persons) who submitted an application to the commission. It would be a violation of 30 TAC Chapter 60 and 30 TAC §§330.59(e) and (f) to submit compliance histories of such entities in the Application and for the Commission to consider such histories in relation to the Application of 130 Environmental Park.

130 Environmental Park's lack of history for operating this or any other site does not provide a basis for denying this Application. The Application and 130 Environmental Park comply with all applicable statutory and regulatory requirements regarding compliance history.

4. LAND USE COMPATIBILITY

130 Environmental Park agrees with OPIC, Caldwell County, TJFA and the ED that the applicable rule is 30 TAC §330.61(h), which states that "a primary concern is that the use of any land for an MSW site not adversely impact human health or the environment." For this reason, the rule

requires an application to “provide information regarding the likely impacts of the facility on cities, communities, groups of property owners, or individuals by analyzing the compatibility of land use, zoning in the vicinity, community growth patterns, and other factors associated with the public interest.” The rule then enumerates the information to be included in the Application to assist the Commission in evaluating the impact of the site on the surrounding area.¹

130 Environmental Park also agrees with all parties that the Application and Updated Land Use Report provide all applicable enumerated information required by 30 TAC §330.61(h)(1)-(6). No party contends that 130 Environmental Park’s Application failed to include any of the information enumerated in 30 TAC §330.61(h). The Application indeed satisfies all requirements regarding land use compatibility.²

Protestants’ challenges to the determination of land use compatibility generally fall into two areas. Several of the challenges involve Facility design and operations that are addressed in other areas of the Application subject to specific design or operational standards. Protestants express “concerns” about these areas and assume they will present problems and therefore are incompatible. (E.g.: Site 21 Reservoir and odor.) In their other challenges to the determination of land use compatibility, Protestants seek to change the standard of the rule, assert that 130 Environmental Park should have addressed the standard as changed or created by Protestants, and by failing to do so, 130 Environmental Park presented an incomplete land use analysis. (E.g.; Schools within one-mile, growth trends within 5-miles.)

Proximity to Site 21 Reservoir

OPIC argues that the proposed facility is not a compatible land use because the Facility will be located adjacent to the Site 21 Reservoir. However, OPIC concedes that the proposed landfill will be located outside of the 100-year floodplain. *OPIC Closing Arguments, pp.7-8*. TJFA/EPICC, while implicitly conceding that the Application contains all the enumerated information required by 30 TAC §330.61(h) similarly argues that Mr. Worrall did not look at PCCD’s reliance on its

¹ To assist the commission in evaluating the impact of the site on the surrounding area, the owner or operator shall provide the following:

- (1) if available, a published zoning map for the facility and within two miles of the facility for the county or counties in which the facility is or will be located. 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;
- (2) information about the character of surrounding land uses within one mile of the proposed facility;
- (3) information about growth trends within five miles of the facility with directions of major development;
- (4) the proximity to residences and other uses (*e.g.*, schools, churches, cemeteries, historic structures and sites, archaeologically significant sites, sites having exceptional aesthetic quality, etc.) within one mile of the facility. The owner or operator shall provide the approximate number of residences and commercial establishments within one mile of the proposed facility including the distances and directions to the nearest residences and commercial establishments. Population density and proximity to residences and other uses described in this paragraph may be considered for assessment of compatibility;
- (5) a description and discussion of all known wells within 500 feet of the proposed facility. Well density may be considered for assessment of compatibility; and
- (6) any other information requested by the executive director.

30 TAC §330.61(h).

² Rather than repeating the detailed information by which the Application complies with each and every applicable requirement of 30 TAC §330.61(h), 130 Environmental Park refers the ALJs to Section 5 - Land Use Compatibility, *Applicant’s Written Closing Argument, pp.5-6*.

easement for water storage, and how the proposed landfill might impact the District's use of the reservoir. *TJFA/EPICC Closing Arguments, p.12.*

The TCEQ has specific rules regarding the location of landfill units in relation to floodplains.³ The TCEQ rules contain a location restriction regarding the location of landfills in relation to floodplains.⁴ A large portion of the Application is dedicated to surface water drainage including identification of floodplains and pre-existing drainage patterns and engineering to ensure compliance with these TCEQ rules.⁵ As discussed elsewhere in this Response to Closing Arguments, 130 Environmental Park has satisfied all of the informational and operational requirements regarding surface water drainage and floodplains. Because the Application satisfies the requirements regarding surface water drainage and floodplains, the Application will be protective of human health and the environment as is a primary concern for municipal solid waste landfills as noted in 30 TAC §330.61(h). Because an extensive discussion of surface water drainage and floodplain restrictions are addressed in other portions of the Application by qualified engineers, the TCEQ does not require a separate discussion of surface water drainage and floodplains in the land use analysis, and it would be inappropriate to do so in the Land Use Report by and through an expert witness whose expertise does not extend to surface water engineering or floodplain restrictions.

Similarly, and as discussed in Section 1 - Sufficiency of Property Rights above, the TCEQ rules specify that a landfill permit does not supplant property rights.⁶ Regardless of the permit that is the subject of this proceeding, 130 Environmental Park may not interfere with PCCD's flood easement. 130 Environmental Park has submitted maps demonstrating that the landfill will not interfere with PCCD's easement. *Drawing IIA.12, Part II, Application, Ex. 130EP-1, p.131.* Nor is interference with property rights alleged by TJFA/EPICC OPICC a matter for the consideration of the ALJs in this administrative proceeding concerning 130 Environmental Park's Application.

PCCD has questions about whether there could be operations designed or implemented by the Applicant that would result in an incompatible land use when the District's easement rights are considered from a water quality or quantity perspective. *PCCD Closing Arguments, pp.6-7.* PCCD does not point to any provision of the Application that fails to satisfy any applicable regulatory provision as relates to land use compatibility or otherwise. PCCD states that, if any problems arise related to its easement from a water quality or quantity perspective, it has remedies available to it under state law governing easement rights. *PCCD Closing Arguments, p. 6.*⁷

³ E.g., 30 TAC §330.61(m) and Chapter 301, Subchapter C.

⁴ 30 TAC §330.547.

⁵ See, Ex. 130EP-2, pp.47-468.

⁶ For example, 30 TAC §330.67(a) provides: "The granting of a permit does neither convey any property rights or interest in either real or personal property; nor does it authorize any injury to private property, invasion of personal rights, or impairment of previous contract rights; nor any infringement of federal, state, or local laws or regulations outside the scope of the authority under which a permit is issued."

⁷ PCCD further states that "if any debris problems come into being the District anticipates that it will address those problems using all available appropriate remedies as it has done in the past at other Sites." *PCCD Closing Arguments, p.7.*

There is no evidence in the record that there will be any interference with PCCD's easement for flood storage at the Site 21 Reservoir. PCCD does not contend that interference with its flood storage easement is a basis for denial of 130 Environmental Park's requested permit.

Traffic

TJFA/EPICC raises issue with 130 Environmental Park's and its land use expert's failure to address alleged traffic dangers as part of the land use compatibility analysis. *TJFA/EPICC Closing Arguments*, pp.12-13. The TCEQ has specific rules as to the manner in which an application is to address traffic and transportation.⁸ The Application contains information on the availability and adequacy of roads, prepared by a qualified traffic engineer, and all other information required by applicable rules.⁹ The Application's compliance with and satisfaction of requirements related to traffic and transportation are addressed in more detail in Section 5 - Transportation and Traffic below.

While traffic (as a land use compatibility matter) is not enumerated as information required by 30 TAC §330.61(h), 130 Environmental Park's land use expert, Mr. John Worrall testified:

Q: How does the 130 Environmental Park Landfill's access to transportation compare to other landfill facilities you are aware of?

A: I have never worked on a landfill or proposed landfill with better access directly to a major transportation network such that landfill traffic completely avoids residential and other sensitive land uses.¹⁰

TJFA/EPICC asserts that, had Mr. Worrall "known that the highway was prone to accidents, then he would have reconsidered his 'hyperbolic' statement regarding land use compatibility." *TJFA/EPICC Closing Arguments*, p.13. That is not what Mr. Worrall said. Rather, Mr. Worrall stated that if this particular stretch of U.S. 183 is known to be prone to accidents, he would reconsider what otherwise seems to be a hyperbolic statement. *Tr. p.74, lns.1-22*. There is no evidence in the record or otherwise that the undefined stretch of highway is prone to accidents. The evidence in the record is that the 130 Environmental Park Site has better access than any seen by Mr. Worrall in his extensive career. From a land use perspective, access to transportation at the 130 Environmental Park Site is superlative. From a traffic safety perspective, the Facility and connection to US Highway 180 is a matter for the determination of the Texas Department of Transportation, which has granted 130 Environmental Park's Driveway Permit based on engineering by qualified traffic engineers.¹¹

⁸ E.g., 30 TAC §330.61(i).

⁹ See, e.g. *Exhibits 130EP-1*, pp.98, 155-196, *Denholm-1*, *Denholm-2*, *Parker-1 through Parker-6*.

¹⁰ *Exhibit Worrall-1*, p.3, lns. 39-44.

¹¹ See, e.g., *Exhibits Parker-5 and Parker-6 and discussion in Section 5 - Transportation and Traffic herein*.

The Executive Director finds that the Application includes all the information required to make a land use compatibility determination. OPIC agrees that the location of the site with access to a major transportation corridor is a compatible land use feature of the Facility.¹²

Growth

Caldwell County argues that 130 Environmental Park and its land use expert did not address the County's development ordinance, subdivision regulations and septic permits as relates to growth trends. Caldwell County also contends that construction of the Alma Brewer Strawn Elementary School two and a half to three miles from the Site and the existence of two other elementary schools should have been considered in relation to growth trends.

As to the County's development ordinance, subdivision regulations and septic permits, the mere existence of these regulations and the issuance of permits does not describe land use. As stated by Mr. Worrall:

Those are all useful indicators, but they don't necessarily describe the land use. So that's not unusual for somebody to have a building permit or a septic permit or, for that matter, a permit for a transfer station. And you go out there and you find that the land uses -- it's the same. So just because somebody pulls a permit doesn't mean the land use has changed. So what I'm trying to document isn't -- in the case of documenting and characterizing land use, I'm trying to determine what's really on the ground up. And permits are not necessarily a good way to do that. They're a good way to express intent but not necessarily the facts on the ground.

Tr.p136, lns.7-19

Similarly, Mr. Worrall characterized the land use of the landfill Site as open, even though he is aware that a valid Registration for a municipal solid waste transfer station has been granted for the Site. *Ex. Worrall-1, p.9, ln.44 - p.10, ln.2.* Mr. Worrall's approach has been internally consistent and consistent with the TCEQ rules.

As a growth related concern, OPIC asserts that the area within one mile of the Site is growing at a rate faster than the census block in which the Site is located and that there is a new school located two and a half miles from the proposed Facility. TJFA/EPICC also asserts that the Site will be about 3 miles from Alma Brewer Strawn Elementary School.

30 TAC §330.61(h)(4) requires an applicant to provide specific information regarding land uses within one mile of the Site, including the location of any schools. 130 Environmental Park did so in both the technically complete Application and in the Updated Land Use Report. Protestants want to redraw that line and consider the Alma Brewer Strawn Elementary school - two and a half to three miles from the Site.

30 TAC §330.61(h)(3) specifically requires that an applicant shall provide "information about growth trends within five-miles of the facility with directions of major development." This is exactly what Mr. Worrall did in both the original Land Use Report included in the technically

¹² *OPIC Closing Arguments, p.5.*

complete Application and in the Updated Land Use Report submitted as an exhibit in the hearing.¹³ 130 Environmental Park complied with the rule for the Application and updated the Land Use Report in accordance with the applicable rule for the hearing. Protestants want to set another standard and redraw the line to focus the growth to an area less than five miles from the Site to emphasize a pocket of growth.

Where 130 Environmental Park complied with the applicable rule, Protestants want to redraw the lines as established in the rule to set a different standard and then complain that 130 Environmental Park did not satisfy this altered standard. The issue before the ALJs is whether the application complies with all applicable statutory and regulatory requirements. 30 TAC §55.210(b).

The ED is empowered to request additional information above and beyond what is enumerated in the rule by 30 TAC §330.61(h)(6). In this case, the ED did not request any additional information and recommends that the inclusion of additional information suggested by the Protestants be denied and the review of the Application be limited to the rule requirements. Based on the rule requirements, the ED determined the Application contained sufficient information to demonstrate the landfill is a compatible use. *ED Closing Arguments, p.5.*

Proximity

While related to growth, OPIC also expresses concern the proposed Site is close to existing residences and in an area experiencing recent residential growth. OPIC recounts concerns of local residents that they would be subject to noise, odor, and dust generated by the landfill and its operations. *OPIC Closing Arguments, pp.9-11.* In a similar vein, TJFA/EPICC complains that the number of homes within one mile of the Site would not affect Mr. Worrall's opinion regarding land use compatibility. *TJFA/PICC Closing Arguments, p.13-14.*

Like the arguments concerning floodplains and traffic, OPIC's arguments are essentially that there are insufficient buffer zones provided for the Site and that the odor and dust controls will be inadequate. Buffer zones,¹⁴ odor¹⁵ and dust control¹⁶ are specifically identified in other provisions of the TCEQ rules. These rules are specifically designed to protect human health, welfare and physical property.¹⁷

¹³ Ex. 130EP-1, pp.149, 153; Ex. Worrall-3, pp.5, 9.

¹⁴ 30 TAC §330.543.

¹⁵ E.g., 30 TAC §§330.63(b)(2), (d)(1)(A), 330.139.

¹⁶ E.g., 30 TAC §§330.153(b), 330.223(b), 330.237

¹⁷ TCEQ's municipal solid waste rules provide standards for the design, permitting and operation of municipal solid waste facilities to protect human health and welfare, the environment, and physical property of nearby residents and property owners. *Health & Safety Code Sec. 361.002(a); 30 TAC §§330.1(a) and 330.61(h); Testimony of Kerry D. Maroney, P.E., R.P.L.S. at Ex. Maroney-1 p.5/1.38-41.* A facility permitted and operated in compliance with TCEQ's municipal solid waste rules will be protective of human health and welfare, the environment, and physical property of nearby residents and property owners. The 130 Environmental Park Landfill facility will be protective of human health and welfare, the environment, and physical property of nearby residents and property owners.

Buffer zones, odor and dust control are addressed at length in other parts of the Application including the Site Operating Plan and are addressed at length in other portions of this Response to Closing Arguments.¹⁸ The Application meets or exceeds the buffer zone requirements of the rules and the Site Operating Plan provides appropriate odor and dust controls. Mr. Worrall appropriately relies on the other professionals that prepared the Application and designed the site to meet or exceed the buffer zone requirements and established site operations that comply with the TCEQ rules to control odor and dust.

Caldwell County Siting Ordinance

TJFA/EPICC asserts that the land use analysis did not consider the existence of Caldwell County's landfill siting ordinance. The Caldwell County Ordinance was adopted after the filing of the Application and after the filing of 130 Environmental Park's Application for Registration of Transfer Station, the permitted area of which is coterminous with the permit boundary of the landfill Facility and Site. As such, the Caldwell County Ordinance violated Tex. Health & Safety Code §§363.112 and 364.012 and is not applicable to 130 Environmental Park's Application or requested municipal solid waste facility permit. It therefore has no bearing on land use compatibility and it would have been inappropriate for Mr. Worrall to consider the ordinance as a matter of land use compatibility analysis. (*See additional discussion in Applicant's Closing Argument.*)

Height

Without explaining why it is an issue of land use compatibility, TJFA/EPICC assert that Mr. Worrall justified his land use compatibility finding based on the "organic" design of the landfill and noted that the 170 feet height (highest point above pre-existing grade) is taller than any buildings within five miles of the proposed landfill site. *TJFA/EPICC Closing Arguments, p.13.*

Protestants want to write a limitation on height into the rules where none exists. Height, in and of itself, is not an issue in land use compatibility or otherwise. Mr. Worrall addressed the height of the landfill and the organic shape of the landfill as matters of visibility, even though neither height nor visibility are enumerated items of land use compatibility analysis under 30 TAC §330.61(h).

Q: In terms of visibility and visual compatibility as shown in the accurate visual representations of Exhibit Worrall-11, how does the 130 Environmental Park Landfill compare to other landfill facilities you have been involved in?

A: The accurate visual representations contained in Exhibit Worrall-11 demonstrate that the 130 Environmental Park Landfill will have little visibility. It will be visually compatible with surrounding land uses.

Q: How does visibility and visual screening at the 130 Environmental Park Landfill compare to visibility and visual screening at other landfills you have been involved in over your career as a land use planner?

¹⁸ See, Section 20, Site Operating Plan, Sections 21 Odor, and Section 22, Buffer Zones.

A: The very large buffer zones, the naturally-occurring visual screening, the existing topography, the proposed visual screening berm, and the irregular massing of the landform at the 130 Environmental Park Landfill make this one of the best visually screened landfills I have seen in the thirty-three years that I have been involved in land use and land use compatibility of landfills.

Ex. Worrall-1, pp.1-17.

There is no TCEQ rule establishing a maximum height of a municipal solid waste landfill. Pursuant to 30 TAC §330.137, the ED has authority to determine that additional screening is necessary. As testified by Mr. Worrall, the ED, after review of the Application, has not made a determination that additional screening is necessary. *See Ex. Worrall-1, p.15, Ins.23-32.* As expressed in his testimony quoted above, the 130 Environmental Park Landfill is one of the best visually screen landfills he has seen in the thirty-three years that he has been involved in land use and land use compatibility of landfills. There is no evidence from any party to the contrary.

Conclusion

TFFA/EPICC suggests that an applicant shall include any type of information that may assist the Executive Director in conducting a land use compatibility analysis. *TJFA/EPICC Closing Arguments, p. 11.* What the rule actually requires is that the Applicant shall provide the information required by 30 TAC §330.61(h)(1)-(5) and any additional information requested by the ED pursuant to 30 TAC §330.61(h)(6). The ED concluded that the information contained in the Application is sufficient to demonstrate land use compatibility and that no additional information is required. Based on the rule requirements, the ED determined the Application contained sufficient information to demonstrate the landfill is a compatible use.

Mr. John Worrall, the only expert in land use analysis and land use compatibility to testify in the hearing, also finds that the 130 Environmental Park Facility and Site will be compatible, and that the Facility and Site will be superlatively compatible in several regards including access to transportation without affecting residential areas or other sensitive land uses and including visibility and visual screening. The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding land use compatibility.

5. TRANSPORTATION AND TRAFFIC

Access Availability and Adequacy

TJFA/EPICC cites 30 TAC §330.61(i)(1)-(3) to support its argument that 130 Environmental park did not adequately analyze the availability and adequacy of all roads that will be used to access the Site. 130 Environmental Park provided the data required by 30 TAC §330.61(i)(1) and (2) and projected the volume of traffic as required by 30 TAC §330.61(i)(3). In addition, 130 Environmental Park submitted documentation of coordination of all designs of proposed public highway improvements with the agency exercising maintenance responsibility of the public roadway involved (Texas Department of Transportation or TxDOT) and submitted documentation of coordination with TxDOT for traffic and location restrictions as required by 30 TAC §330.61(i)(4).¹⁹ Of the three subsections cited by TJFA/EPICC, two (30 TAC §330.61(i)(1) and

¹⁹ 130 Environmental Park also analyzed the impact of the facility upon airports in accordance with 30 TAC §330.545 and submitted documentation of coordination with the Federal Aviation Administration for compliance

(2)) require an applicant to provide data. The third (30 TAC §330.61(i)(3)) requires an applicant to submit documentation. Only 30 TAC §330.61(1)(4), which was not cited by TJFA/EPICC, requires an analysis.

Much of the data and analysis regarding vehicle traffic in the Application was provided by John P. Denholm, III, P.E., PTOE, a traffic engineer of unquestioned expertise in traffic engineering. *See Ex. Denholm-1 and Ex Denholm-2.* TJFA/EPICC goes to great lengths to argue that Mr. Denholm was not an expert on TCEQ regulations. Counsel for TJFA/EPICC questioned Mr. Denholm about whether he was familiar with the interpretation of the term “adequate” and “available” under the TCEQ regulations. *Tr. p.245,1/25-p.246,1/2.* The TCEQ regulations do not define either term. Where counsel for TJFA/EPICC ventured in to terms with a technical meaning in traffic analysis, Mr. Denholm demonstrated his expertise and the lack of such expertise of counsel for TJFA/EPICC.²⁰ TJFA/EPICC’s challenges to Mr. Denholm’s expertise are unjustified, unwarranted and inaccurate. TJFA/EPICC offered no expert witness on traffic or transportation.

As noted by TJFA/EPICC, 130 Environmental Park relied on the Traffic Impact Analysis contained in the Application. 130 Environmental Park also relied on the documentation of coordination with the Texas Department of Transportation (TxDOT) contained in the Application and additional documentation of coordination admitted during the hearing on the merits.

Specific information on the entrance road that will be used for site access from US 183 to the Site is included, *inter alia*, in the Permit to Construct Access Driveway Facilities on Highway Right of Way (Driveway Permit). *Ex. Parker-6.* The Driveway Permit was issued by TxDOT on March 16, 2016. *Ex. Parker-6, p.2.* The Driveway Permit specifies details of the entrance road connection to US 183 and applies to the entire entrance road as seen in *Ex. Parker-6, pp. 24, 25, 26, 28 and 29.*

The Driveway Permit provides the following specifications regarding the entrance road:

[Note] 1 THE PAVEMENT SECTION ON THE FACILITY DRIVEWAY SHALL BE IDENTICAL TO THE PAVEMENT SECTION FOR THE FRONTAGE ROAD (NB U.S. 183/S.H. 130).

with airport location restrictions pursuant to 30 TAC §330.61(i)(5). *Ex. 130EP-1 pp.814-820.* There is no airport within a six-mile radius of the Site. *Ex. 130EP-1 pp.98, 122, and 814-820.* The Facility will comply with the Airport Safety Location Restriction in 30 TAC §330.545. *Ex. 130EP-1 p. 838.*

²⁰ “Q. Now, is there an SH 130 entrance ramp near the facility as well?

A. Yes, sir. It's just north of the facility.

Q. Did you do any study of the intersection of that access road with that entrance ramp?

A. No, sir.

Q. Will vehicles be using that on ramp?

A. I would assume so, yes. And we did assume so.

Q. But you did no specific evaluation of that intersection?

A. No, sir. That's technically -- in traffic analysis, that's not an intersection.” *Tr. p.266,1/22-p.267,1/8.*

PAVEMENT SECTION

ASPHALT PAVEMENT	
SECTION	DESCRIPTION
A	2" D-GR HMA (METH) TY-C SAC-C PG76-22
B	4.5" D-GR HMA (METH) TY-B PG84-22
C	PRIME COAT
D	10" CRUSHED LIMESTONE BASE (FLEX BASE)
E	12" LIME TREATED SUBGRADE

Ex. Parker-6, p.26.

TxDOT considers the structural integrity of the proposed driveway and that of the road to which the driveway will be connected. *Tr. p.291,1/22-p.292,1/11.* TxDOT reviewed the proposed design of the entrance road and considered the structural integrity of proposed driveway and US 183 and approved the requested Driveway Permit.

TJFA/EPICC notes that the entrance road crosses the 100-year floodplain at several locations. 130 Environmental Park provided drainage designs and calculations for all of the floodway and significant drainage features to be crossed. For the drainage ditch located within TxDOT's right-of-way, drainage calculations are provided in *Ex. Parker-6, pp.6-21.* Drainage crossing details are provided in the Driveway Permit on *Ex. Parker-6, pp. 25 and 26.* The culvert crossings for the entrance road are contained in *Ex. Marusak-4, pp.35-40.* Mr. Traw testified that the crossings within the permit boundary are designed for 100-yr storm, outside the permit boundary for the 25-year storm as is the standard for US-183.²¹ *Tr. 2022/13-2023/4.*

TJFA/EPICC argues that the Traffic Impact Analysis contains no projection of the background traffic that may be present on this access road as a result of other development that could occur within the private property. Any development that might occur would be speculative and there is no evidence of any development that will use the entrance road other than the reasonable estimates of site generated traffic.

TJFA/EPICC argues that Mr. Denholm made no evaluation of the availability of the entrance access road for the life of the facility and that the record fails to establish that the owner of the property in the future will have an obligation to continue to allow Applicant use of that roadway.

Mr. Steven Odil, is the TCEQ's Permit Engineer who reviewed the Application and determined

²¹ "Q. Did you do the design for the culverts at the locations where the site entrance road is proposed to cross stream channels?"

A. I did.

Q. What design storm did you use in designing those crossings?"

A. On the ones outside of the application -- or outside of the facility boundary, I used the 25-year design storm, and the ones inside the facility boundary, we used the 100-year.

Q. Why did you use the 25-year storm for the crossings outside the facility boundary?"

A. I referenced the TxDOT Drainage Design Manual, and the recommended design storm for principal arterials, which is the same classification as US 183. So we used the same standards that are recommended for US 183.

Tr. p.2022,1/13-p.2023,1/4.

that it is technically complete. He has reviewed approximately 27 original applications and major amendments for permits and registrations, and approximately 150 modifications. *Ex. ED-SO-1, p.3*. He testifies that permits have been approved for landfills with the access road outside of the permit boundary numerous times. *Tr. p.1920,1/12-16*. In his opinion, appurtenances required for the landfill, such as the gate house and scales, should be included in the Site boundary, but access roads need not be. *Tr. p.1920,1/24-p.1921,1/4*.

Mr. Odil testified that the TCEQ has jurisdiction to enforce the requirements for construction of the access road, control of mud accumulations on the access road, and other permit requirements outside of the permit boundary. *Tr. p.1923,1/16-19*. The TCEQ has the ability to enforce anything that the permit requires even when outside the permit boundary. *Tr. p.1923,1/25-p.1924,1/5*.

TJFA/EPICC argues that 130 Environmental Park could change the location of the entrance road to either FM 1183 or to Hohmanville *[sic]* Trail, which TJFA/EPICC asserts 'is not inconceivable'. TJFA/EPICC Closing Arguments, p. 17. Contrary to TJFA/EPICC's argument, 130 Environmental Park would not be able to change the access road to connect with FM-1185 or any other public road without a modification to the permit. *Tr. p.1958,1/6-16*. In addition to requiring a permit modification, it would be highly impracticable to change the entrance road to access another public road. To reach FM 1183, the entrance road would be longer. To change the entrance road to either FM 1183 or Hohmanville *[sic]* Trail would require a new driveway permit. Change to either location would likely require relocation of the scale house and scales, citizens' convenience center, wheel wash, and other features. Changes to those facilities would require at least a permit modification. There is no reason to relocate the entrance road to any other access point, particularly when access to US 183 at the location identified in the Application already provides superlative access.²²

TJFA/EPICC recommends the permit boundary should be expanded to include the entirety of the entrance road extending to US 183 to ensure the availability of the entrance road for the life of the Site. TJFA/EPICC acknowledge that this would require a permit amendment. For the foregoing reasons, TJFA/EPICC's proposed permit amendment is unnecessary and inappropriate.

Safety

TJFA/EPICC raises concerns about the high speed of traffic and accidents at the intersection of FM 1183 and US 183. The intersection is a low-to medium-volume intersection and is not yet heavy enough to warrant a traffic signal. *Tr. p.283,1/17-23*. The severity of an accident does not factor in to the TxDOT's decision regarding traffic signals. *Tr. p.285,1/3-5*. The 130 Environmental Park facility will add only a low number of vehicles to the traffic on US 183 - from 468 vehicles on opening day to 918 vehicles in 2058. "Most cities, they wouldn't even require a traffic study until you hit a thousand trips per day." *Testimony of John Denholm, Tr. p.287,1/8-9*. The traffic generated by the facility does not compare to the traffic generated by other types of businesses like a Walmart (10,000 trips per day), a Love's or QuickTrip gas station (3,000 - 3,500 trips per day)

²² Q: How does the 130 Environmental Park Landfill's access to transportation compare to other landfill facilities you are aware of?

A: I have never worked on a landfill or proposed landfill with better access directly to a major transportation network such that landfill traffic completely avoids residential and other sensitive land uses. *Testimony of John Worrall, Exhibit Worrall-1, p.3, Ins. 39-44*.

or a fast food restaurant (3,500 trips per day). *Tr. p.290,1/9-24.*

In reviewing 130 Environmental Park's application for its Driveway Permit, TxDOT has information regarding traffic safety beyond what is available to the general public or traffic engineers like Mr. Denholm. *Tr. p.291,1/12-21.* TxDOT reviewed the traffic to be generated by the proposed Facility and safety information regarding US 183 and its intersection with FM 1183 and approved the Driveway Permit.

TJFA/EPICC note that school buses use the intersection of FM 1185 and US 183 and that a new school has been constructed (two and a half to three miles) north of the Site. Mr. Denholm testified that the volumes generated by the school - some 20-30 trips per day, are not significant enough to have an impact at the FM 1185/US 183 intersection. *Tr. p.273,1/8-20.* Because the attendance zone for the school is to the north of the Site, Mr. Denholm does not believe that buses from the school will go through the FM 1185/Us 183 intersection. *Tr. p.273,p.25-p.274,1/3.*

TJFA/EPICC argues that Mr. Denholm did not evaluate the "intersection" of the entrance ramp from US 183 north to SH 130. As discussed above, the entrance ramp is not an "intersection" for which data is required by 30 TAC §330.61(i)(1) or (2). TJFA/EPICC argues that vehicles leaving the landfill site will need to go from a dead stop at the facility entrance road and accelerate prior to the SH 130 ramp, and this creates a conflicting traffic pattern.

The entrance ramp was evaluated by TxDOT during its review and approval of the Driveway Permit. *Tr. p. 296,1/5-16.* Part of that evaluation is consideration of the "conflict points" created by the driveway. Adding the deceleration lane to the driveway eliminated one of the two conflict points in the driveway access:

Q. What are the points of potential conflict for [traffic associated with the proposed site driveway or entrance road]?

A. With a right in/right out movement, typically we only have two conflict points. One is the diverge from the roadway; the other is the merge onto the roadway. In this case, that would be the right turn off of the roadway and the right turn onto US 183. In our instance, we have added a deceleration lane to allow traffic that's accessing the site entrance roadway. They can exit 180 -- they can exit the right lane of 183 at full speed, and then complete all their slowing and right turn maneuver in that lane, so they're actually removed from the US 183 travel stream, leaving us with just that single conflict point.

Q. Because if they're using that deceleration lane to make the right turn into the site entrance road, that's removed a point of conflict because you have a decel lane for that traffic to use?

A. Yes, sir.

Tr. p.294,1/1-19. This compares to the thirty-two points of conflict of a typical four-legged intersection with all four directions of travel. *Tr. p.294,1/20-25.* The trucks that will be accessing the Facility are driven by professional drivers are better than the general public at selecting the appropriate "gaps"²³ to utilize when entering traffic and negotiating traffic. *Tr. p.295,1/12-*

²³ "A. Okay. A gap in traffic is simply the distance and -- both in time and space between two vehicles on a

p.296,1/8.

Conclusion

The ED defers to the TxDOT for recommendations on roadway improvements needed to handle expected traffic. Coordination documents with TxDOT, required under 30 TAC §330.61(i)(4), are provided in Part II, Appendix IIC. *Ex. App. 130EP-1, pp. 155-196.* The traffic study recommended a 660-foot deceleration lane on US 183 northbound and no acceleration lane. TxDOT 130 Environmental Park included the deceleration lane in its application for driveway permit and TxDOT approved and issued the Driveway Permit. The ED determined that the Application complies with all applicable requirements regarding availability and adequacy of roads and traffic impact and safety.

130 Environmental Park will be required to obtain (and provide the ED) its floodplain development permit (including floodplain crossings by the entrance road outside of the permit boundary) prior to commencement of physical construction. 130 Environmental Park will be required to implement all roadway improvements (including construction of the entrance road outside of the permit boundary) prior to the pre-opening inspection of the facility. The special provisions will be a condition required to be satisfied before 130 Environmental Park can operate the landfill and are therefore enforceable by the ED. (*See discussion in Section 18 - Local Regulations/Approvals above and Section 30 - Enforceability of Draft Permit below.*)

130 Environmental Park provided all information required by 30 TAC §330.61(i). 130 Environmental Park provided data on the availability and adequacy of roads that the owner or operator will use to access the site as required by Subsection (1). 130 environmental Park provided data on the volume of vehicular traffic on access roads within one mile of the proposed facility, both existing and expected, during the expected life of the proposed facility as required by Subsection (2). 130 Environmental Park projected the volume of traffic expected to be generated by the facility on the access roads within one mile of the proposed facility as required by Subsection (3). 130 Environmental Park submitted documentation of coordination of all designs of proposed public roadway improvements with the Texas Department of Transportation for traffic and location restrictions, including the TxDOT approved Driveway Permit that establishes design criteria for the entire length of the entrance road and its connecting to US 182, as required by Subsection (4).

The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding transportation and traffic.

6. GEOLOGY AND SOILS

“The Application contains complete and accurate information about geology and groundwater required by 30 TAC § 330.63(e) and (f)...The information provided by the Applicant in its Application and supplements (March 2015 and May 2016) complies with the requirements of 30

roadway. And so as motorists, when we're making a right or left turn, either from a minor street onto a major street, which would be the movement from our site entrance road onto 183, that's a right turn from the minor street onto the major, we're going to be looking to the left and looking for that gap in traffic, between two vehicles, that's large enough for us to safely complete that right-turn maneuver.” *Testimony of John Denholm, Tr. p.295,1/14-23.*

TAC Chapter 330 regarding geology and hydrogeology...and other features whose designs depend on the geologic and hydrogeologic characteristics of the site.”

Arten Avakian, P.G.,
Geoscientist, TCEQ Municipal Solid Waste Permits Section
Ex. ED-AA-1 p.11/l.9-11 and p.12/l.5-9.

REQUIREMENTS AND SATISFACTION OF REQUIREMENTS

TCEQ rules set out the requirements for geologic investigation related to a municipal solid waste landfill facility at 30 TAC §330.63(e), “Geology Report”. The main requirements applicable to geology are that the Geology Report must contain:

-A description of the regional geology of the area. (§330.63(e)(1)): Regional geology of the area of the 130 Environmental Park site is described in the Application at *Ex. 130EP-4 pp.11-12, 16-18, and 37-40 and Ex. 130EP-7 p.13; Testimony of John Michael Snyder, P.G. at Ex. Snyder-1. p.14/l.44-p.17/l.4.* The Geology Report includes portions of published map series, including the Geologic Map of Texas, the Geologic Atlas of Texas, and mapping from the USGS Geologic Database of Texas, all of which are regional geologic maps, a description of the generalized stratigraphic column in the area of the Site, with specific information on each geologic unit, and a regional stratigraphic cross-section.

-A description of the geologic processes active in the vicinity of the facility. (§330.63(e)(2)): Geologic processes active in the vicinity of the Site, including information about faulting and subsidence, are described in the Application at *Ex. 130EP-4 pp 12, 13-15 and 40; Ex. 130EP-7 p.13; Testimony of John Michael Snyder, P.G. at Ex. Snyder-1. p.14/l.44-p.17/l.4.*

-The results of investigations of subsurface conditions at the proposed waste management unit. (§330.63(e)(4)): For the 130 Environmental Park landfill unit, this information is provided in the Application at *Ex. 130EP-4 pp.19-31 and 44-222 and Ex. 130EP-7 pp.8-113.*

-For a landfill area of 200-250 acres, the rules require the drilling of 26-29 soil borings, 15-16 of which must be at least 30 feet below the deepest excavation planned at the waste management unit. All forty-three of the soil borings drilled by 130 Environmental Park, LLC were at least five feet deeper than the elevation of the deepest excavation proposed for the Landfill. Eighteen of the 2013 soil borings and four of the 2016 soil borings were drilled to depths at least 30 feet below the deepest excavation planned at the Landfill. *Ex. 130EP-7 pp.21-22.*

-A sufficient number of borings must be performed to establish subsurface stratigraphy and to determine geotechnical properties of the soils and rocks beneath the facility; boring methods shall be used as necessary to obtain adequate samples for soil testing as required by §330.63(e)(4). The number and locations of the 130 Environmental Park, LLC soil borings were sufficient to establish subsurface stratigraphy, to obtain adequate samples for soil testing, and to determine geotechnical properties of the soils and rocks beneath the Facility. *Testimony of Gregory W. Adams, P.E. at Tr. p.894/l.1-8.* The 130 Environmental Park, LLC soil borings were drilled to depths of up to 127 feet below ground surface (bgs) using established field exploration methods, including auger and rotary drilling with drilling fluid introduced when the material became too hard to drill dry. *Ex. 130EP-4 pp.19-20; Ex. 130EP-7 p.8 and pp. 21-22.*

-§330.63(e)(4) states that, “The boring plan, including locations and depths of all proposed borings, must be approved by the executive director prior to initiation of the work.” In this case, as often occurs with regard to soil borings for municipal solid waste landfill facilities, the 2013 soil borings were all completed by August of 2013, prior to the Executive Director’s final approval of the boring plan, which was stated in a letter dated October 10, 2013. John Michael Snyder,

P.G.²⁴, testified that the “prior approval” provision is “an unenforceable rule in that borings that are appropriately done and properly done surely will be allowed to be used. And the remedy for that would be to cause -- the remedy that they could use to enforce the rule is to cause an Applicant to go redrill a boring for which they already have a legitimate boring log. And to my knowledge, at least in my experience, they’ve never done that.” *Testimony of John Michael Snyder, P.G. Tr. p.365/l.16-20; p.436/l.3-p.438/l.5; p.439/l.9-p.440/l.20; p.456/l.5-p.458/l.3; Ex. 130EP-23.*²⁵

-The Geology Report must include boring logs for each boring that contain the boring number; surface elevation and location coordinates; columnar section with text showing the elevation of all contacts between soil and rock layers; description of each layer using the unified soil classification, color, degree of compaction, and moisture content, and a detailed description of materials encountered including any discontinuities such as fractures, fissures, slickensides, lenses, or seams. Boring logs for each of the 130 Environmental Park, LLC soil borings, including all of the required information, are contained in the Application at *Ex. 130EP-4 pp.19-23, 26-31, 50-161, and 221-222; and Ex. 130EP-7 pp.5-11, 14-25, and 69-113.*

-The Geology Report must include a narrative that describes the investigator's interpretations of the subsurface stratigraphy based upon the field investigation. The Geology Report includes narrative discussions describing John Michael Snyder, P.G.'s interpretations of the subsurface stratigraphy based upon the field investigation work conducted at the Site. *Ex. 130EP-4 pp.22-23; Ex. 130EP-7 pp.8-10.*

-The Geology Report must include geotechnical data that describes the geotechnical properties of the subsurface soil materials. (§330.63(e)(5)): Geotechnical data for the subsurface soil materials at the proposed 130 Environmental Park landfill is contained in the Application at *Ex. 130EP-4 pp.24-25 and 175-218; Ex. 130EP-7 pp.9-10 and 28-67; and Ex. 130EP-3 p.59.*

-The rules require that the Geology Report include a report of laboratory testing of soil characteristics from at least one sample from each soil layer or stratum that will form the bottom and side of the proposed excavation. (§330.63(e)(5)(A)): Laboratory testing of soils from samples collected during 130 Environmental Park LLC's 2013 and 2016 site investigations met, and exceeded, this requirement. As shown on the Summary of Laboratory Test Results and in the laboratory test data in Appendix E5 of the Application, laboratory testing of soil samples from the 2013 site investigation included testing on three samples from Stratum I, forty-five samples from

²⁴ Mr. Snyder is a registered professional geologist and project manager with over 30 years of experience. He has a wide range of hydrogeologic and solid waste permitting experience in the state of Texas. Mr. Snyder served as a permit hydrogeologist in the Solid Waste Division of the Texas Water Commission and Texas Department of Health (both predecessors of the TCEQ). As a private consultant and project manager, Mr. Snyder is now responsible for municipal solid waste permitting projects including permit applications, major permit amendments, minor permit amendments and modifications. He has worked on more than 35 successful solid waste permitting projects during the past 30 years. *Ex. Snyder-2.*

²⁵ Exhibit 130EP-23 is an email from Chance Goodin, Manager of TCEQ's Municipal Solid Waste Permits Section, that is in agreement with Mr. Snyder's explanation of the “prior approval” provision. Mr. Goodin stated, “If a prospective applicant executes a soil boring plan before the plan is approved, the applicant does so with the risk that the investigation does not comply with the criteria of §330.63(e)(4), and that it may not have yielded the required information and may not be conclusive. Upon review of a permit application that uses information from a subsurface investigation that did not receive prior approval, it could be determined that additional borings will be needed.” 130 Environmental Park, LLC is aware that a hearsay objection was sustained regarding Exhibit 130EP-23, and includes it in the discussion here only because 130 Environmental Park, LLC respectfully submits that the objection should not have been sustained because the email is subject to the hearsay exception in Texas Rule of Evidence 803.8 and/or because the contents of the email (expressing a potential outcome, not facts) were offered only as a basis for Mr. Snyder's opinions regarding the “prior approval” provision.

Stratum II, and twenty-two samples from Stratum III. *Ex. 130EP-4 pp.176-218*. And, as shown on the Summary of Laboratory Results and in the laboratory test data in Appendix D of the 2016 Supplement, laboratory testing was conducted on an additional eighty-one soil samples from 130 Environmental Park LLC's 2016 site investigation and on the additional twelve samples provided to 130 Environmental Park LLC by TJFA/EPICC from their 2016 site investigation. *Ex. 130EP-7 pp.28-67*.

-Required laboratory testing includes permeability (hydraulic conductivity) testing using one of the test methods referenced in the rule, sieve analysis for the 200, and less than 200 fraction using a specified ASTM testing method, Atterberg limits using a specified ASTM testing method; and moisture content using a specified ASTM testing method. (§330.63(e)(5)(B)): The Geology Report for the 130 Environmental Park landfill permit application includes laboratory report data describing the characteristics and geotechnical properties of soil samples from Stratum I, Stratum II, and Stratum III based on geotechnical tests performed in accordance with industry practice and recognized procedures, including permeability, sieve analysis, Atterberg limits, and moisture content. The testing standards in the rule provisions described above were followed in connection with the site investigations done by BME in 2013 and 2016. *Ex. 130EP-4 pp.24-25 and 175-218; Ex. 130EP-7 pp.9-10 and 28-67; Ex. 130EP-3 p.59; Testimony of Gregory W. Adams, P.E. Tr. p.893/l.7-p.896/l.24*.

-Finally, the rules require a discussion with conclusions about the suitability of the soils and strata for the uses for which they are intended. (§330.63(e)(5)): Discussion and conclusions about the suitability of the soils and strata at the 130 Environmental Park site for the uses for which they are intended is in Section 5 of the Geology Report at *Ex. 130EP-4 pp.24-26*, and in the 2016 Supplement at *Ex. 130EP-7 pp.8-10*. The conclusions reached regarding soils tested from 2013 samples include, "The geotechnical design calculations...show that the in situ soils will provide adequate support for the proposed landfill. The factors of safety against slope failure exceeded the recommended factors of safety for all conditions that were analyzed" and "The classification and hydraulic conductivity test results indicate that the clayey and silty soils excavated from the site should be satisfactory for use as compacted soil liner and infiltration layer material...The test results and boring logs show that any of the soil material excavated from the site should be suitable for use as operational and protective cover, and that the surface soils should be suitable for use as the upper layer of the final cover system erosion layer." The conclusions reached regarding soils tested from 2016 samples include, "Based on geotechnical analysis, with the exception of the material in a sandy silt seam at 43 feet bgs in BME-39, all other tested material satisfies TCEQ requirements for compacted soil liner material and would be suitable for that use and for use as landfill cover and general fill material."

TJFA/EPICC ARGUMENTS AND 130 ENVIRONMENTAL PARK LLC RESPONSES

Evidentiary Challenges/Objections and Spoliation Instruction Request.

Much of what TJFA/EPICC include in their Closing Argument under the heading of Geology and Soils consists of evidentiary challenges/objections to testimony and exhibits presented by 130 Environmental Park LLC and/or arguments and authorities in support of their multiple requests for a spoliation instruction/motions for sanctions/motions to strike evidence based on soil samples and field logs from 130 Environmental Park LLC's 2013 field investigation having been discarded soon after the Application was filed in late 2013. Evidentiary challenges and objections were, or should have been, made either by way of written objections, which were due on July 26, 2016 for prefiled direct case evidence (*See, Order No. 15*), or by way of objections at the time testimony or other evidence was offered during the hearing on the merits, for evidence other than prefiled direct

case evidence. Those evidentiary challenges and objections were either timely made and have already been ruled on, or were not timely made and have now been waived. Similarly, TJFA/EPICC have, prior to the hearing on the merits, previously filed and urged requests for spoliation instructions and motions for sanctions/motions to strike evidence related to the discarded soil samples and field logs. Those requests and motions have previously been considered and ruled on. *See*, Order No. 14, Order No. 16, and Order No.26. As a result, 130 Environmental Park LLC respectfully suggests that the ALJs should not, at this time, consider any of the evidentiary challenges/objections or any further requests for a spoliation instruction/motions for sanctions/motions to strike evidence based on soil samples and field logs having been discarded requested or made by TJFA/EPICC in their Closing Arguments. If the ALJs are, nonetheless, inclined to consider such matters, instead of 130 Environmental Park LLC repeating herein the positions, arguments, and authorities it has previously asserted regarding those matters, 130 Environmental Park LLC hereby incorporates herein by reference such positions, arguments, and authorities, including those set forth in its November 24, 2015 Preliminary Response to the Motion to Compel Access to Property or in the Alternative, Motion for Sanctions Due to Spoliation of Evidence; its December 9, 2015 Response to the Amended Motion to Compel Access to Property or in the Alternative, Motion for Sanctions Due to Spoliation of Evidence; its January 6, 2016 Supplemental Response to the Amended Motion to Compel Access to Property or in the Alternative, Motion for Sanctions Due to Spoliation of Evidence; its February 3, 2016 Response to the Second Amended Motion to Compel Access to Property or in the Alternative, Motion for Sanctions Due to Spoliation of Evidence; its February 9, 2016 Supplemental Response to the Second Amended Motion to Compel Access to Property or in the Alternative, Motion for Sanctions Due to Spoliation of Evidence; its July 26, 2016 Objections to Prefiled Testimony and Exhibits of TJFA, L.P. and Environmental Protection in the Interest of Caldwell County; its August 2, 2016 Response to Joint Caldwell County, TJFA, L.P. and Environmental Protection in the Interest of Caldwell County Objections to and Motion to Strike Prefiled Testimony; and its August 3, 2016 Response to TJFA, LP and Environmental Protection in the Interest of Caldwell County Motion to Strike and for Sanctions Due to Spoliation.

In the remaining arguments regarding Geology and Soils in their Closing Arguments, TJFA/EPICC rarely identify a TCEQ rule requirement that they assert has not been complied with by 130 Environmental Park LLC in its geologic investigations or in its Geology Report. Instead they complain about various aspects of field investigation procedures and claim that information regarding geology and soils included in the Application is unreliable and contradicted by information developed by TJFA/EPICC from their 2016 field investigation. As shown below, with regard to these claims, TJFA/EPICC's assertions are either simply wrong or they are based on "requirements" that do not exist or that clearly do not apply to work done for and preparation of a Geology Report for a municipal solid waste landfill facility, as specified in TCEQ's Chapter 330 rules.

Soil Boring Plan

At pages 20-22 of their Closing Arguments, TJFA/EPICC complain that 130 Environmental Park LLC did not conduct slug tests as part of its 2013 field investigation, even though the soil boring plan for that investigation indicated that slug tests would be conducted, and that 130 Environmental Park LLC violated TCEQ's rule at 30 TAC §330.63(e)(4) because the soil borings were done before the TCEQ Executive Director approved the boring plan. TJFA/EPICC do not identify any TCEQ rule requiring that slug tests (a field investigation method for determining

permeability/hydraulic conductivity) be performed as part of a geologic investigations. Not only is there no such requirement, slug tests are not even mentioned in TCEQ's municipal solid waste rules in 30 TAC Chapter 330.²⁶ The professional geoscientist who supervised all aspects of 130 Environmental Park LLC's geologic investigations, John Michael Snyder, P.G., explained that no slug tests were conducted because "our judgment was that we didn't have enough water column in any of the piezometers that we had to conduct a valid slug test" (a decision that was obviously made after the borings had been drilled and the piezometers installed) and that TCEQ staff did not request that slug tests be conducted. *Testimony of John Michael Snyder, P.G., Tr. p.440/l.21-p.443/l.9.* Mr. Snyder also explained that the rule provision regarding "prior approval" of a boring plan is "an unenforceable rule in that borings that are appropriately done and properly done surely will be allowed to be used. And the remedy for that would be to cause -- the remedy that they could use to enforce the rule is to cause an Applicant to go redrill a boring for which they already have a legitimate boring log. And to my knowledge, at least in my experience, they've never done that." *Testimony of John Michael Snyder, P.G. Tr. p.365/l.16-20; p.436/l.3-p.438/l.5; p.439/l.9-p.440/l.20; p.456/l.5-p.458/l.3.*

Drilling Method

At page 22 of their Closing Argument, TJFA/EPICC suggest that the drilling method used for soil borings during the 130 Environmental Park LLC is "unclear" because, while the boring logs state "wet rotary", some logs indicate no fluid was used during drilling for some or all of a boring. Mr. Gregory W. Adams, P.E., the geotechnical engineer who participated in the geologic investigations and characterizations done for 130 Environmental Park LLC, explained that the drilling method used involved a "wet rotary" drill rig, that the soil borings on the Site were typically advanced with an auger for the first few feet (because of gravel embedded in the surficial clay), then generally with a Shelby tube or a split spoon sampler until a depth at which it becomes difficult to bring the cuttings to the surface. This is consistent with the discussion of drilling methods in the Application, and with Mr. Snyder's explanation of the drilling method and the practice of introducing water in a boring when the material encountered became too hard to continue dry drilling. *Testimony of Gregory W. Adams, P.E. Tr. p.2150/l.5-19 and p.2157/l.11-p.2159/l.6; Ex. 130EP-4 pp.19-20; Testimony of John Michael Snyder, P.G., Ex. Snyder-1 p.24/l.4-17 and Tr. p.379/l.7-19.*

Piezometer Logs

At pages 26-27 and 31 of their Closing Argument, TJFA/EPICC suggest that 130 Environmental Park LLC submitted "false information" with its permit application because the logs of piezometers were based on the lithology set out in the boring log for the adjacent soil boring. However, Mr. Snyder explained that it was better to use the logs for the immediately adjacent boring for the lithologic descriptions in the piezometer logs because he had actually looked at "samples of an intact fabric of sample that came out of a Shelby tube or a split spoon as compared to simple cuttings" and because there were laboratory test results for samples from the borings. *Testimony of John Michael Snyder, P.G., Tr. p.388/l.2-p.389/l.22.* In addition, the discussion of

²⁶ What the rules do require (at 30 TAC §330.63(c)(5), as part of the geotechnical data to be included in the Geology Report) is laboratory permeability testing of soil samples. 130 Environmental Park LLC's investigation of the Site included soil permeability testing as required by the rules. Gregory W. Adams, P.E. testified that the permeability testing standards in the rules were followed in connection with the site investigations done by BME in 2013 and 2016. *Testimony of Gregory W. Adams, P.E. Tr. p.893/l.7-p.896/l.24.*

the piezometer logs in the Application states, “The piezometers were installed within ten feet of the corresponding boring number (e.g., P7 was installed adjacent to Boring BME-7). The original borehole was sampled and logged, then the boring was plugged and pressure grouted for the full length of the borehole, in accordance with TCEQ rules. Once piezometer screened intervals were selected, the piezometer borings were drilled and samples were observed to confirm consistency with the original boring lithologies.”

QA/QC Measures

On page 20 of their Closing Arguments, TJFA/EPICC complain that 130 Environmental Park, LLC “failed to include any quality assurance/quality control measures”. This claim was previously made by TJFA/EPICC witness Dr. Lauren Ross, P.E., who asserted in her prefiled testimony that “30 TAC Chapter 330 Subchapter F: Analytical Quality Assurance and Quality Control applies to municipal solid waste facilities submitting laboratory data and analyses for use in commission decisions relating to permits.” *Testimony of Dr. Lauren Ross, P.E., Ex. Protestants’ 6 p.10/l.21-p.11/l.5*. However, on cross-examination Dr. Ross admitted that the rules in 30 TAC Chapter 330, Subchapter F have not been in effect for more than seven and a half years: “This subchapter expires on January 1st, 2009.” *30 TAC §330.261; Testimony of Dr. Lauren Ross, P.E., Tr. p.1393/l.9-p.1396/l.1-13*.

Regulatory Standards

On pages 27-28 of their Closing Arguments, TJFA/EPICC assert that the information in 130 Environmental Park, LLC’s geology report is “not reliable” because it does not comply with “basic regulatory standards”, and on page 32, they specifically refer to TCEQ’s rule provision at 30 TAC §330.57(f) (preparation of an application must conform with the Texas Engineering Practice Act and the Texas Geoscience Practice Act), and to portions of a rule adopted by the Texas Board of Professional Geoscience, 22 TAC §851.106(f)(2) and (5):

A Professional Geoscientist or Geoscience Firm shall keep adequate records of geoscience services provided to the public for no less than five (5) years following the completion and final delivery of the service. Adequate records shall include, but not be limited to: (2) Relevant documentation that supports geoscientific interpretations, conclusions, and recommendations; [and] (5) Other relevant records.

In their various requests for spoliation instructions and motions for sanctions and to strike evidence, TJFA/EPICC have previously asserted that Mr. Snyder violated these rule provisions by discarding soil samples and field logs from 130 Environmental Park LLC’s 2013 field investigation soon after the Application was filed in late 2013. 130 Environmental Park LLC will not repeat here all of its responses to this allegation, but would point out to the ALJs Attachment 1 to these Responses, which is recent materials that show TJFA/EPICC are simply wrong in their assertions regarding 30 TAC §330.57(f) and 22 TAC §851.106(f). Because the material in the attachment is confidential by law, it is being separately filed with TCEQ and SOAH and provided to the ALJs, all in accordance with the filing provisions in 1 TAC §155.101(c) regarding confidential materials. Attachment 1 will also be provided to any party who requests it from 130 Environmental Park LLC and executes an appropriate confidentiality agreement regarding the information in it.

ASTM Standards

Also on page 32 of their Closing Arguments, TJFA/EPICC refer to the American Society of Testing and Materials (ASTM) and state that the organization “has adopted standards to be used for subsurface explorations...ASTM D5434-12”. TJFA/EPICC and their witnesses have previously claimed that 130 Environmental Park LLC’s geologic investigations and geology report are required to comply with this and other ASTM standards, but do not. Lauren Ross referred to ASTM D3740-12a “Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction”; ASTM D5434-12 “Standard Guide for Field Logging of Subsurface Explorations of Soil and Rock”. *Testimony of Lauren Ross, P.E. Protestants’ Ex. 5 pp.9-12; Exs. Protestants’ 5-D and 5-E.* Scott Courtney referred to ASTM D1587 “Standard Practice for Thin-Walled Tube Sampling of Fine-Grained Soils for Geotechnical Purposes”; ASTM 1586 “Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils”; ASTM Standard 5434 “Guide for Field Logging and Subsurface Exploration of Soil and Rock”. *Testimony of Scott Courtney, P.G. Protestants’ Ex. 7 pp.9-16; Exs. Protestants’ 7-B, 7-C and 7-D.* There are a number of problems with the assertions by TJFA/EPICC and their witnesses regarding the “requirements” and applicability of these ASTM standards. First of all, there is nothing in any of these ASTM documents stating or even suggesting that the instructions in them are required to be used by anyone under any circumstances. In particular, there is no reference in any of them to their use in connection with TCEQ municipal solid waste permitting. In fact, three of the ASTM documents include, in Section 1.6 on their first pages, several statements that make it clear the instructions in the documents are not specific requirements: “This document cannot replace education or experience and should be used in conjunction with professional judgment.”; “Not all aspects of this practice may be applicable in all circumstances.”; and “This ASTM standard is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged, nor should this document be applied without consideration of a project’s many unique aspects.” And, finally, this statement that makes clear ASTM “standards” are not “requirements”: “The word ‘Standard’ in the title of this document means only that the document has been approved through the ASTM consensus process.” In addition, and perhaps most importantly, TCEQ’s municipal solid waste rules do specifically identify several ASTM standards that TCEQ specifies must be followed for various laboratory testing of materials as part of a geologic investigation.²⁷ However, none of the ASTM standards referenced by TJFA/EPICC or their witnesses are included among those specified as required by TCEQ.

Leona Formation and Gravel

At pages 36-38 of their Closing Arguments, TJFA/EPICC discuss the Leona formation and gravel found at or “near” the 130 Environmental Park site and claim that 130 Environmental Park’s subsurface characterization is “unreliable” because it “all but discounts the Leona formation and minimizes the presence of gravel at the site”. However, the evidence actually shows that the Leona formation was carefully considered and that gravel was identified at various locations on the site (during the course of several different site investigations) and addressed in the geology report in

²⁷ The specified ASTM standards are: constant head permeability test per ASTM D5084 “Saturated Porous Materials Using a Flexible Wall Permeameter”; sieve analysis for the 200, and less than 200 fraction per ASTM D1140; Atterberg limits per ASTM D4318; and moisture content per ASTM D2216. These standards were followed for the laboratory testing done for 130 Environmental Park LLC. *Testimony of Gregory W. Adams, P.E. Tr. p.893/l.7-p.896/l.24.*

the Application. The Leona formation is discussed in the geology report in the Application, at *Ex. 130EP-4 pp.11, 12, 16, 17, 22, 37-38, and 227; and Ex. 130EP-7 pp.13*. The geology report also references a 2005 report by L.H. Hemphill on the topic of hydrogeology of the Leona (*Ex. 130EP-4 p.33*) and two state reports that discuss the Leona (*Ex. Snyder-3 and Ex. Snyder-4*). The Application states, "Although the geologic map (Figure E1-1) shows the Leona Formation outcropping on the site, actual field investigations, including borings show only discontinuous remnant pebbles and cobbles of terrace deposits imbedded in the top two to six feet of the weathered Midway." *Ex. 130EP-4 p.11*. Mr Snyder also testified:

In my opinion, Leona Formation material is not present at the 130 Environmental Park site. A typical description of Leona Formation material is set out in Exhibit Snyder-4, which states, at page 30, "The Leona formation is composed of stratified gravel, chiefly flattened limestone pebbles, and minor amounts of sand, caliche, marl, clay, silt, sandstone, and conglomerate. In most places, the gravel is fairly well cemented...In some places the gravel is so well cemented that the result is a hard compact conglomerate resembling concrete." In addition, Exhibit Snyder-4 includes, at pages 31 through 33, several photographs of Leona Formation material. Although the cobbles and pebbles observed in the Stratum I materials on the 130 Environmental Park site appear to be remnants of terrace deposits from an ancient stream channel, none of the material observed on the site is consistent with descriptions or photographs of Leona Formation material. In any event, even if there is Leona Formation material present on the site, it is clear from the extensive site investigations that it is not part of any aquifer.

Testimony of John Michael Snyder, P.G., Ex. Snyder-1 p.25/l.32-44. The Leona formation was carefully considered and discussed in connection with investigation for and preparation of the geology report for the 130 Environmental Park permit application.

Similarly, neither investigations of the 130 Environmental Park site nor preparation of the Application "minimize the presence of gravel at the site", as alleged by TJFA/EPICC. (Initially, a note about nomenclature: 130 Environmental Park LLC's geology consultant John Michael Snyder, P.G. testified that he uses the term "cobbles" for rock pieces larger than about 3 inches, "pebbles" for rock pieces between about ¼ inch and 3 inches", and "gravel" for rock pieces smaller than pebbles (less than ¼ inch). *Testimony of John Michael Snyder, P.G., Ex. Snyder-1 p.21/l.26-27*. However, TJFA/EPICC's geology consultant Michael Rubinov, P.G. testified that, in his notes and boring logs, he identified as "gravel" rock pieces "that were about half-inch or three quarters of an inch and above". *Testimony of Michael Rubinov, P.G., Tr. pp.1566-1567*. So, Mr. Snyder would describe as "pebbles" many rock pieces that Mr. Rubinov (and apparently TJFA/EPICC) would describe as "gravel": rock pieces from ¼ inch to an inch and above.) A total of forty-three borings were drilled for 130 Environmental Park LLC's 2013 and 2016 geologic site investigations. The boring logs for forty-two of them (all except BME-21) show that pebbles were encountered within the shallow dark brown subsurface clay (Stratum I) to depths of up to 10 feet below ground surface (bgs). As discussed above, depending on the size of the rock pieces encountered, what Mr. Snyder described as "pebbles" may have been rock pieces that Mr. Rubinov (and, presumably, TJFA/EPICC) would describe as "gravel". In any event, smallish rock pieces were identified the boring logs for all but one of the 2013 and 2016 soil borings done for 130 Environmental Park LLC. *See, boring logs at Ex. 130EP-4 pp.51-126 and Ex. 130EP-7 pp.94-113*. Similarly, Mr. Rubinov noted "gravel" intermixed with shallow dark brown clays and organic soil,

down to depths of up to 11 feet bgs on every boring log for the 2016 soil borings done for TJFA/EPICC. *Testimony of Michael Rubinov, P.G., Tr.p.1568/l.4-p.1569/l.8; Ex. Protestants'-6.* This presence of gravel/pebbles intermixed with shallow clay/organic soils is also consistent with small rock pieces discovered within the shallow clay matrix at various locations on the site during 130 Environmental Park LLC's archaeological and wetlands site investigations, although due to the shallow nature of the hand-dug shovel holes involved with each of those investigations, gravel/cobbles were found only to depths of 4 to 16 inches bgs. *Testimony of Dr. Alan Skinner, P.G., Tr. pp.230-237; Ex. Protestants' 5-K.* Finally, the presence of gravel on the surface at various locations on the site was noted by 130 Environmental Park LLC's archaeological consultants (with gravel coverage less than 50 percent) and by TJFA/EPICC engineering consultant Dr. Lauren Ross. *Testimony of Dr. Alan Skinner, P.G., Tr. pp.230-237; Testimony of Dr. Lauren Ross, P.E. Ex. Protestants' 5 pp.23/l.23-29.* Mr. Adams was asked about the significance of the gravel and pebbles found in the shallow (Stratum I) materials on the site, and he testified about limitations set out in the geotechnical design section of the Application, including the requirement that material used for landfill liner construction include no rocks larger than one inch, and rocks and clods smaller than one inch cannot make up more than 10 percent of the liner material. Mr. Adams also testified that there will be no reason to use that, at the 130 Environmental Park site, there would be "no reason to use that upper zone that has the rocks and clods in it" for liner material, and that "There is so much material on this site that does not have rocks and clods in it, there will be no reason for the contractor to work in the material he would have to put extra work into excluding the rocks and clods." *Testimony of Gregory W. Adams, P.E., Tr. p.860/l.4-p.866/l.7; Ex. 130EP-3 pp.433.*

Subsurface Characterization

At page 38 (and in several other places) in their Closing Arguments, TJFA/EPICC allege that "Applicant's subsurface characterization simplistically described the subsurface as consisting uniformly of a high-plasticity fat clay." Examination of the soil borings logs and soil descriptions in the geology report show this to simply be not true. In the boring logs for the forty-three 130 Environmental Park LLC borings drilled in 2013 and 2016, there are dozens of descriptions of the materials encountered. First of all, every single description in those boring logs of clay soils also includes the word "silty", indicating that although the material being described is predominantly clay, it includes some amount of silt. And, as discussed above, the boring logs for forty-two of the forty-three borings (all except BME-21) show that pebbles (which Mr. Rubinov may describe as "gravel") were encountered within the shallow dark brown subsurface clay (Stratum I) to depths of up to 10 feet bgs. Also, although the material encountered during the field investigations is predominantly (even overwhelmingly) silty clay as shown on the logs, the boring logs also include descriptions of various other materials encountered in small amounts, including "calcereous nodules", "silt partings", "small shell fragments", "traces of gypsum", "limonitic" (iron ore), "gypsum partings", "gypsum seams", "pyrite inclusions", "silt seams", "silty sand seam", "clayey silt", "very fine sand seam", etc. *See, boring logs at Ex. 130EP-4 pp.51-126 and Ex. 130EP-7 pp.94-113.* The Application does not "describe the subsurface as consisting uniformly of a high-plasticity fat clay."

BME-31

At page 39 of their Closing Arguments, TJFA/EPICC complain that the boring log for BME-31 shows the entire interval from 18 to 52 feet bgs as "CH" or "high plasticity, fat clay", although the only tested sample from that interval in BME-31 (sample U-12, 22-24 feet bgs) met the Atterberg

limits criteria for classification as “CL” or “low to medium plasticity, lean clay”.²⁸ When asked about this, Mr. Adams explained that if he were to classify that entire area as “CL” that would be misrepresenting the material as he had observed it in adjacent samples and nearby borings. He said the zone from which the sample was taken would not be thick enough to create a separate interval for it. And he pointed out that the result of the liquid limit test had been 46, near the borderline of a “CH” classification (50). “To see that is not totally uncommon, to see a random one that falls below. But it doesn't -- it serves no benefit to try to break all those out into some type of a separate layer.” When asked the basis for his classification of the entire interval as “CH”, Mr. Adams referred to the other Stratum II materials. “All of these samples in this boring were similar and looked like the samples in the surrounding borings, where those other lab tests were -- the vast majority classified as CH. The random CL that is borderline in the middle of all those is not noteworthy or does not change the whole interval...I used my experience and judgment. I looked at all the other samples. I compared the other samples to all of the surrounding samples that classified as CH...plus what I had horizontally from the other borings.” *Testimony of Gregory W. Adams, P.E., Tr. p.780/l.7-p.784/l.21*²⁹ Finally, changing the classification for some or all of that interval from “CH” to “CL” would have no effect on the landfill-related uses that could be made of the soils in the interval. Exhibit Adams-5 is a plasticity chart on which has been plotted the results of relevant Atterberg limits testing for all of the soil samples tested in 2013 for 130 Environmental Park LLC and all of the samples tested in 2016 for both 130 Environmental Park LLC and TJF/EPICC. Each colored dot represents a tested sample, with liquid limit (LL) shown on the horizontal axis and plasticity index (PI) shown on the vertical axis. The black lines inside the axes show the resulting soil classification for various combinations of LL and PI, so a sample plotted in the lower right portion would be classified (MH inorganic silt) or OH (organic clay) based on the Atterberg limits test results, a sample plotted to the right of the vertical black line and above the diagonal black line would be CH (fat clay) or OH, and a sample plotted to the left of the vertical black line and above the diagonal line would be CL (lean clay) or OL (organic silt/clay). Sample U-12 from BME-31 is the blue dot on the PI=20 line. Perhaps most important for this discussion, as stated in the note at the upper right of the exhibit, materials within the [green] shaded area are “suitable for use as compacted soil liner”, meaning that materials with Atterberg limits test results meet TCEQ requirements for use as landfill liner material. The dot for Sample U-12 is well within the shaded area, so the test results for it demonstrate its suitability for use as liner material, no matter how it is classified (CH or CL). *See, Testimony of Gregory W. Adams, P.E., Ex. Adams-1 p.17/l.4-22.*³⁰

²⁸ The description for that interval in the log of boring BME-31 is “CLAY, SILTY, gray and tan mottled, hard, w/ferrous stains, slightly blocky, moist, (CH)”, with a notation between 37 and 38 feet bgs “w/slit partings”. If changed as TJFA/EPICC seem to believe would be appropriate, the description would become, “CLAY, SILTY, gray and tan mottled, hard, w/ferrous stains, slightly blocky, moist, (CL)”, with a notation between 37 and 38 feet bgs “w/slit partings”. Not very different.

²⁹ The logs of the nearest borings to BME-31 (BME-27, 28, 29, and 32) at or near the depth of the 18 to 52 feet bgs interval show sample test results with liquid limits of 67, 74, 73, 60, 76, 72, 69, 73, 59, 59, 61, 57, and 57. *Ex. 130EP-4 pp.114-120 and 125-126.*

³⁰ On Ex. Adams-5, it is noteworthy that, of the dozens of soil samples tested for 130 Environmental Park LLC and TJFA/EPICC, only two samples are material that does not meet TCEQ Atterberg limits requirements for use as liner material.

Comparison of Characterizations

TJFA/EPICC (at pages 40-41) assert that the subsurface characterization in the geology report is unreliable and inconsistent with other evidence because of differences in reported observations of primary and secondary features in 2013 and 2016 soil samples. As support, they point to two things: no fractures were observed in samples from 130 Environmental Park LLC's 2013 borings but 19 fractures were observed in samples from 130 Environmental Park LLC's 2016 borings, and "numerous fissures and fractures" were identified in samples from TJFA/EPICC's 2016 borings. In response, 130 Environmental Park LLC would point out Mr. Adams testimony when he was asked if he had an opinion as to the reason no fractures were recorded for 130 Environmental Park LLC's 2013 borings and nineteen fractures were observed in 2016: "...I don't know about the term 'discrepancy.' And the reason is, fractures were not encountered in the borings in 2013, and they were encountered in the borings that were done in 2016." Mr. Adams and Mr. Snyder have consistently testified that the boring logs prepared by them reflect what they observed in the soil samples and the results of laboratory testing of collected samples.³¹ And, it appears that the differences claimed by TJFA/EPICC in the occurrences of certain secondary features reported by consultants for Environmental Park LLC and TJFA/EPICC is largely another instance of difference in nomenclature. TJFA/EPICC state:

The results of Protestants' subsurface investigation...revealed numerous secondary features, including numerous fissures and fractures. According to Mr. Rubinov, there were gypsum and iron oxide fissures or layers at "every site where a borehole was completed by Protestants," and numerous fissures or layers present in a majority of the boreholes. He further observed silt seams or layers at every boring drilled by the Protestants. This differs from Applicant's boring logs, included in the application, which fail to identify silt seams, gypsum seams, or fractures.

First of all, TJFA/EPICC say, in the above quote from their Closing Argument, that "Protestants' subsurface investigation revealed...numerous fissures and fractures", but nowhere in Mr. Rubinov's field notes or final boring logs is there any reference to a "fracture" observed in any sample from TJFA/EPICC's borings. It appears that Mr. Rubinov identified any break in material as a "fissure". *Ex. 130EP-40; Ex. Protestants' 6-D*. The most significant differences between secondary features described in Mr. Rubinov's boring logs and those described in 130 Environmental Park LLC's boring logs is that Mr. Rubinov identifies numerous "fissures" in samples but 130 Environmental Park LLC identifies none, and 130 Environmental Park LLC's boring logs contain numerous references to "blocky" texture in samples but that description does not appear in Mr. Rubinov's logs. However, when a sample from TJFA/EPICC boring IV-3 was brought to the hearing room during the hearing, the same secondary features were identified by

³¹ Here is testimony from Mr. Snyder:

Q: If there's a shrink and swell of clays, wouldn't one expect to see fractures throughout the site?

A: No.

Q: Okay. And you certainly didn't. Isn't that right?

A: That's right.

Q: In fact, you didn't see any in 2013?

A: That's right, we didn't.

Testimony of John Michael Snyder, P.G., Ex. Snyder-1 p.2181/1.24-p.2182/1.7.

Mr. Rubinov as “fissures”³² and by Mr. Snyder as “blocky texture”.³³ As set out above, Mr. Rubinov concluded there were fissures or layers at “every site where a borehole was completed by Protestants,” and numerous fissures or layers present in a majority of the boreholes. Similarly, the logs for the 2013 and 2016 borings drilled for 130 Environmental Park LLC show “blocky” or “slightly blocky” texture in at least one interval in every boring. The most significant differences in reported secondary features is the result of this difference in nomenclature. Finally, TJFA/EPICC assert that “Applicant’s boring logs, included in the application... fail to identify silt seams, gypsum seams, or fractures.” Fractures are discussed above; that discussion will not be repeated here. And the logs of 130 Environmental Park LLC’s borings do identify silt—in every boring: every description of clay (the predominant material encountered in every boring) describes the clay as silty clay (actually “clay, silty” because the predominant material is listed first) and the boring logs do identify “silt seams” and/or “silt partings” in 26 of the 43 borings. Also, the logs of 130 Environmental Park LLC’s borings identify gypsum in 26 of the 43 borings.

The evidence in the record shows remarkably close agreement between 130 Environmental Park LLC and TJFA/EPICC regarding overall characterization of the subsurface materials at the 130 Environmental Park site. The characterization in the Application identifies three strata at the Site: Stratum I (top few feet [two to six feet] is brown to tan silty fat clay with occasional discontinuous occurrence of cobbles, pebbles, and some gravel), Stratum II (weathered silty fat clay; 30 to 60 feet thick), and Stratum III (hard, dense dark grey silty fat clay; exists across the entire site). The descriptions provided by TJFA/EPICC’s geologist, Michael Rubinov, P.G., are essentially identical: (1) upper zone (top few feet down to as much as 11 feet bgs) is dark brownish gray silty fat clay to organic soil with gravel (rock pieces ½” to ¾” and above) embedded in the surrounding soil matrix (*Testimony of Michael Rubinov, P.G., Tr. p.1564/16-p.1569/l.8*); (2) material between the upper and lower zones is predominantly weathered clay (*Testimony of Michael Rubinov, P.G., Tr. p.1569/l.19-p.1570/l.3*); (3) lower zone is dark greenish-gray clay was eventually encountered in every 2016 boring drilled for TJFA/EPICC and 130 Environmental Park LLC at depths of 25 feet bgs or more; the logs of 2013 130 Environmental Park LLC borings show that this dark grey clay was encountered in each of those borings, also. *Testimony of Michael Rubinov, P.G., Tr. p.1563/l.25- p.1564/l.15.*³⁴

Additional indication of the consistency of subsurface characterization between 130 Environmental Park LLC and TJFA/EPICC is apparent from considering the laboratory testing done by TJFA/EPICC on soil samples it collected at the Site during its 2016 field investigation. Notes and recovery logs maintained by TJFA/EPICC geologist Michael Rubinov, P.G. show that they collected 292 soil samples from the 10 borings they drilled. *Ex. 130EP-40*. According to Mr. Rubinov, “samples that appeared to represent material that was not identified as existing at the site

³² In his final log for boring IV-3, Mr. Rubinov described the features in the sample from 24-25 feet bgs as “iron oxide filled fissures”. *Ex. Protestants’ 6-D p.15*. In his live testimony at the hearing, Mr. Rubinov said the features were “probably a fissure filled with iron oxide”. *Testimony of Michael Rubinov, P.G., Tr. p.1668/l.22-p.1669/l.3*

³³ During the hearing, when Mr. Snyder observed the soil sample from TJFA/EPICC boring IV-3 at 24-25 feet, he described the features present in the sample this way: “That is what we refer to as a blocky texture. What you see in that sample are fine cracks that result from the shrink/swell of clays and is part of the weathering process.”

³⁴ This consistency applies throughout the Site, including in borings drilled well to the east of the landfill footprint area, but still within the site boundary, and extending all the way to TJFA/EPICC boring AR-2, drilled nearly 500 feet southeast of the permit boundary and more than 1,200 feet from the landfill footprint.

by the original application were chosen for laboratory analyses.” In other words, TJFA/EPICC were not interested in sending typical or representative samples of materials from the Site for laboratory testing; their interest was just the opposite: to identify and send for laboratory testing samples that were different than the materials identified in Environmental Park LLC’s 2013 subsurface investigation. Instead of the predominant or main soils present at the Site, they wanted to test the outliers, the anomalies, the exceptions. But, even with that as their stated goal, and despite the fact they had collected 292 samples from 10 borings, TJFA/EPICC sent only 11 boring samples for laboratory testing.³⁵ *Ex. Protestants’ 6-C.* And 8 of those were from their borings MP-1 and MP-1A that were drilled very near BME-32 and P-32, a boring and a piezometer drilled in 2013 for 130 Environmental Park LLC near the far south end of the Site, well outside the proposed landfill footprint, more than 200 feet to the south and southeast. *Ex. Protestants’ 6-B.* P-32 is the only piezometer on the Site that has consistently had groundwater in it, even though it is only a few feet of water. So, TJFA/EPICC apparently concluded that only 11 of their boring samples (3.7 percent) were likely to be anomalies/outliers; meaning that 96.4 percent of the samples were obviously similar enough to the silty clays found throughout the Site by 130 Environmental Park LLC that it was not worth having them tested. How did TJFA/EPICC do in their search for anomalous samples to test? Not great. Of the 10 non-gravel samples they tested, 7 turned out to be fat clay (CH) or lean clay (CL), consistent with the predominant materials on the Site. One (from a one-foot interval in MP-1) tested as silt with sand, another one (from a 6-inch interval in MP-1A) tested as sandstone, and the last one (from a 6-inch interval in MP-3, approximately 300 feet east of the landfill footprint) tested as claystone. So, although TJFA/EPICC collected 292 samples looking for material as different as possible from the silty clays the predominate on the Site, they ultimately found very little material that was much different. In fact, ultimately, there was only one sample tested by TJFA/EPICC (out of the 292 collected) that had Atterberg test results showing that it would not be suitable for use as landfill liner material: the sandstone from a 6-inch interval in boring MP-1A, located approximately 200 feet south and east of the landfill footprint area.³⁶ Even TJFA/EPICC’s concerted effort to locate poor-characteristic soils on the Site came up nearly completely empty-handed.

CONCLUSION

“The Application contains complete and accurate information about geology and groundwater required by 30 TAC § 330.63(e) and (f)...The information provided by the Applicant in its Application and supplements (March 2015 and May 2016) complies with the requirements of 30 TAC Chapter 330 regarding geology and hydrogeology...and other features whose designs depend on the geologic and hydrogeologic characteristics of the site.”

Arten Avakian, P.G.,
Geoscientist, TCEQ Municipal Solid Waste Permits Section
Ex. ED-AA-1 p.11/l.9-11 and p.12/l.5-9.

³⁵ One of those tested samples was clayey sand and gravel from Stratum I materials at 7 to 8 feet bgs in boring IV-2A, located near the northern boundary of the Site. *Ex. Protestants’ 6-C.* Two other tested soil samples were gravel from Stratum I materials in shallow trenches (1 to 3 feet bgs), both outside the landfill footprint area, one to the southwest and one nearly 300 feet east of the northern part of the landfill. *Exs. Protestants’ 6-B and 6-C.*

³⁶ Test results on that sandstone sample showed a liquid limit of 24 and a plasticity index of 9. On Exhibit Adams-5, that sample is the green triangle closest to the lower left corner of the chart.

7. HYDROGEOLOGY

“The Application contains complete and accurate information about geology and groundwater required by 30 TAC § 330.63(e) and (f)...The information provided by the Applicant in its Application and supplements (March 2015 and May 2016) complies with the requirements of 30 TAC Chapter 330 regarding geology and hydrogeology...and other features whose designs depend on the geologic and hydrogeologic characteristics of the site.”

Arten Avakian, P.G.,
Geoscientist, TCEQ Municipal Solid Waste Permits Section
Ex. ED-AA-1 p.11/l.9-11 and p.12/l.5-9.

Hydrogeology-related requirements in TCEQ’s municipal solid waste permitting rules are set out in 30 TAC §330.63(e), “Geology Report” and §330.63(f), “Groundwater Sampling and Analysis Plan”. The hydrogeology information to be provided consists of:

- a description of the regional aquifers in the vicinity of the facility based upon published and open-file sources (30 TAC §330.63(e)(4)),
- the depth at which groundwater was encountered and records of after-equilibrium measurements in all borings (30 TAC §330.63(e)(5)(C)),
- identification of the uppermost aquifer and any lower aquifers that are hydraulically connected to it beneath the facility (30 TAC §330.63(e)(5)(F)),
- groundwater flow direction and rate for the uppermost aquifer, and the basis for such identification (i.e., the information obtained from hydrogeologic investigations of the facility area) (30 TAC §330.63(e)(5)(F)), and
- an analysis of the most likely pathway(s) for pollutant migration in the event that the primary barrier liner system is penetrated (30 TAC §330.63(f)(3)).

The required hydrogeology information is included in Attachments E and F of the Application for the 130 Environmental Park facility (*Ex. 130EP-4 pp.1-268 and Ex. 130EP-7 pp.1-113*):

-Regional aquifers: The Geology Report includes a description of the regional aquifers in the vicinity of the Site. Regional aquifers that supply groundwater to wells in Caldwell County are the Carrizo-Wilcox and the Leona formations. The Wilcox Formation crops out east of the Site and in a northeast trending belt across Caldwell County. The Carrizo Formation occurs east and southeast of the outcrop of the Wilcox, approximately 12 miles southeast of the Site. The aquifer portions of these two formations is collectively known as the Carrizo- Wilcox. The Carrizo- Wilcox is characterized by the Texas Water Development Board (TWDB) as a major aquifer. Most groundwater produced in northern Caldwell County is from wells tapping the Carrizo-Wilcox Formation, located east of the site. The primary outcrop of the Leona Formation, from which some groundwater is produced, is located several miles south of the Site. The Leona Formation is not characterized by the TWDB as either a major or minor aquifer. Leona Formation material is not present at the Site. Published literature shows no aquifers located beneath the Site. *Ex. 130EP-4 pp.11-12, 16-18, 29, 37-42, and 227. Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.25/l.30-44.*

-Groundwater encountered during site investigation: There is very little groundwater present in the silty clays and shales that make up the geologic formations at the Site down to a depth of several

hundred feet below the ground surface. Groundwater was not encountered prior to the introduction of drilling fluid during drilling in any of the forty-three soil borings drilled during 2013 and 2016 during boring programs supervised by John Michael Snyder, P.G. Seventeen additional borings were drilled and completed as piezometers to investigate and measure levels of groundwater at the Site. Water level readings were taken in each of the seventeen piezometers every month from October 2013 until May 2016. Water has been observed in only three of the seventeen piezometers, all screened at the interface between Stratum II and Stratum III; one of those has been dry since November 2013, another one has been dry since August 2015. Small amounts of groundwater occur at the Site in the shallow weathered silty fat clay (Stratum II), just above its interface with the underlying hard, dark gray unweathered clay (Stratum III) that is present across the Site. The zone of groundwater occurrence at the Site is not characterized as a major or minor aquifer by the Texas Water Development Board and there are no known wells completed in this zone within one mile of the Site. *Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.26/l.34-46, p.27/l.2-22, and p.31/l.28-32. Ex. 130EP-4 pp.29 and 51-126; Ex. 130EP-7 pp.8, 14, 24, and 94-113.*

-Identification of Uppermost Aquifer: Groundwater at the Site does not occur in sufficient amounts to supply usable quantities to wells that could support industrial, irrigation, domestic, or livestock use. The volume of water observed in piezometers on the Site would be sufficient for sampling and analysis in accordance with TCEQ municipal solid waste rules and, as a result, the zone of groundwater occurrence on the Site satisfies the criteria used by the TCEQ Municipal Solid Waste Permits Section for characterization as an aquifer. The zone of groundwater occurrence in the shallow weathered silty fat clay (Stratum II), just above its interface with the underlying hard, dark gray unweathered clay (Stratum III) is the uppermost aquifer at the Site. There are no lower aquifers that are hydraulically connected to the uppermost aquifer beneath the Facility. Other than the zone of groundwater occurrence in the Stratum II weathered silty fat clay just above its interface with the underlying Stratum III unweathered Midway clay, the field investigation work at the Site showed no aquifers are present beneath the Site. *Ex. 130EP-4 p.29; Ex. 130EP-7 p.8; Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.31/l.28-32.*

- Uppermost Aquifer Groundwater Flow Direction and Rate: The lack of weathering effects in the deeper, unweathered clay (Stratum III) results in Stratum III functioning as an aquitard or lower confining unit to the groundwater in the above weathered clay, thus creating a pathway for groundwater to move at the interface of Stratum II and Stratum III. *Ex. he structural contour map of the top of Stratum III shows a strong resemblance to the surface topography. Groundwater flow from the landfill footprint area may occur to the northwest, west, southwest, south, southeast, and east. Groundwater flow velocity, estimated by using an arithmetic mean for hydraulic conductivity from laboratory test results and site-wide gradients, are estimated at approximately 0.01 to 0.04 feet per year in Stratum II. Due to the limited occurrence of groundwater at the site, a potentiometric surface does not exist. The Stratum III surface (which represents the weathered-unweathered Midway interface) was used a proxy for a groundwater surface. Gradient used in the velocity calculations was estimated from the Stratum III structural contour map. Ex. 130EP-4 pp.29-30; Ex. 130EP-7 pp.11, 17-18, and 25; Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.27/l.24-p.28/l.3.*

- Most Likely Pathway for Pollutant Migration: Any groundwater that may be present at the Site will move through the subsurface very slowly. Groundwater that may be present at the Site could move more readily in the Stratum II weathered clay than in the unweathered clay material in

Stratum III. In the unlikely event any contaminants were to migrate out of the Landfill and enter groundwater, that groundwater could move slowly downward and outward from the Landfill in the weathered Stratum II material above the unweathered material in Stratum III. Groundwater flow direction would likely be to the northeast, west, southwest, south, southeast and east sides of the Site, based on the slope of the top surface of the Stratum III interval. *Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.28/l.5-30; Ex. 130EP-4 pp.229-230.*

In their Closing Argument, TJFA/EPICC complain about two issues related to hydrogeology: soil permeability (hydraulic conductivity) data and the analysis of groundwater flow direction in the uppermost aquifer at the Site.

Hydraulic Conductivity/Permeability Data. TJFA/EPICC argue that hydraulic conductivity (permeability) of soils at the Site should have been evaluated using in-situ testing (slug tests) rather than laboratory testing of soil samples.³⁷ However, slug tests are not even mentioned in, let alone required by, TCEQ's municipal solid waste rules. What the rules do require (at 30 TAC §330.63(e)(5), as part of the geotechnical data to be included in the Geology Report) is laboratory permeability testing of soil samples:

“geotechnical data...including...a laboratory report of soil characteristics determined from at least one sample from each soil layer or stratum that will form the bottom and side of the proposed excavation and from those that are less than 30 feet below the lowest elevation of the proposed excavation [including] permeability tests performed according to one of the following standards on undisturbed soil samples:... (i) constant head with back pressure per Appendix VII of Corps of Engineers Manual EM1110-2-1906, "Laboratory Soils Testing;" American Society for Testing and Materials (ASTM) D5084 "Saturated Porous Materials Using a Flexible Wall Permeameter"; (ii) falling head per Appendix VII of Corps of Engineers Manual EM1110-2-1906, "Laboratory Soils Testing"”

130 Environmental Park LLC's investigation of the Site included soil permeability testing as required by the rules. Gregory W. Adams, P.E. testified that the permeability testing standards in the rules (set out above) were followed in connection with the site investigations done by BME in 2013 and 2016. *Testimony of Gregory W. Adams, P.E. Tr. p.893/l.7-p.896/l.24.* The rules require laboratory testing of only one sample from each soil stratum. However, laboratory testing of 2013 samples included permeability testing on one sample from Stratum I, eight samples from Stratum II, and three samples from Stratum III. Permeability for the one tested sample from Stratum I is 5.9×10^{-8} cm/sec; the average permeability of the eight tested samples from Stratum II is 3.8×10^{-8} , and the average permeability of the three tested samples from Stratum III is 1.5×10^{-8} . *Testimony of Gregory W. Adams, P.E. Ex. Adams-1 p.15/l.11-35; Ex. 130EP-4, pp. 24-25 and 175-218.* And laboratory testing of 2016 samples included permeability testing on one sample from Stratum II and two samples from Stratum III. Hydraulic conductivity/permeability for the tested sample from Stratum II (4.1×10^{-8} cm/sec) is consistent with 2013 test results for Stratum II material. The test results showed hydraulic conductivity/permeability test results for the two tested samples from Stratum III that were higher than 2013 test results for Stratum III material (2.5 to 1.3

³⁷ In their Closing Argument (at page 44), TJFA/EPICC state, “During their 2016 subsurface investigation...Protestants conducted a slug test, the results of which are discussed below...” Not only does their Closing Argument not contain a discussion of any slug test results, none of TJFA/EPICC's witnesses testified about the results of, or even conducting, any slug tests and TJFA/EPICC presented no evidence at all about any slug test.

x 10⁻⁶ cm/sec versus 2.1 to 1.1 x 10⁻⁸ cm/sec) but, as explained by Mr. Adams, “The hardness of the Stratum III material tested in 2016 made it too difficult to trim samples from adjacent material for hydraulic conductivity/permeability testing. It is likely those tested Stratum III samples were also disturbed during preparation, yielding inaccurate test results.” *Testimony of Gregory W. Adams, P.E.* Ex. Adams-1 p.15/l.41-p.16/l.12; Ex. 130EP-7 pp. 28-67.

Analysis of Groundwater Flow Direction. TJFA/EPICC also complain about the reliability of information regarding the direction of groundwater flow in the uppermost aquifer as presented in the Application. They claim that elevation data regarding piezometers at the Site presented by 130 Environmental Park, LLC is incorrect and that the mapped contours of the top of the Stratum III unweathered clay are not consistent with various evidence and their analysis of it.

-Piezometer Elevation Data: TJFA/EPICC claim that nine of the seventeen piezometers do not reach the weathered/unweathered interface between the Stratum II and Stratum III materials, and that six of those nine piezometers are more than 5 feet higher than the interface. In support of these claims, TJFA/EPICC reference measurements done by Dr. Lauren Ross during her 2015 site visit. In evaluating depth to the interface using here measurements, Dr. Ross prepared her Exhibit 5-W. *Testimony of Lauren Ross, P.E. Ex. Protestants' 5 p.37/l.3-14.* In response, 130 Environmental Park, LLC would first point out that five of the seventeen piezometers (identified by the number of the nearby soil boring and an “S” for “shallow”: P4-S, P7-S, P19-S, P22-S, and P24-S) were installed as shallow piezometers, some immediately adjacent to a deeper piezometer. The shallow piezometers were installed at depths between 30.5 and 41 feet below ground surface, well above the Stratum II/Stratum III interface. These piezometers were obviously not intended to identify the Stratum II/Stratum III interface or to measure water levels above that interface. *Ex. 130EP-4 pp.131-143, Testimony of John Michael Snyder, P.G. Tr. p.385/l.15-p.386/l.22.* In addition, Dr. Ross’s Exhibit 5-W states that it was prepared on June 22, 2016 using the piezometer top of casing elevations in Table E-9 (a table in 130 Environmental Park LLC’s original TCEQ permit application). However, as Dr. Ross and TJFA/EPICC know (and knew in June of 2016, because a copy of 130 Environmental Park LLC had provided to them its May 2016 Supplement on May 23, 2016 with its prefiled evidence. The May 2016 Supplement included surveyed top of casing elevations for the piezometers, which, for every piezometer, differed from the elevations originally shown in Table E-9. Dr. Ross’s failure to use this updated information renders her analysis based on the outdated information meaningless. Finally, the 2013 field investigation by 130 Environmental Park, LLC and the 2016 field investigations by 130 Environmental Park, LLC and TJFA/EPICC confirmed that very little groundwater is present in the subsurface at the Site. Groundwater was not encountered during drilling in any of the forty-three soil borings done by 130 Environmental Park, LLC in 2013 and 2016 prior to the introduction of drilling fluid (generally at 50-55 feet below ground surface. *Ex. 130EP-4 pp.51-126; Ex. 130EP-7 pp.94-113.* Water level readings were taken in each of 130 Environmental Park, LLC’s piezometers (completed to depths of up to 86.5 feet below ground surface) every month from October 2013 until May 2016. Water has been observed in only three of the seventeen piezometers, all screened at the interface between Stratum II and Stratum III; one of those has been dry since November 2013, another one has been dry since August 2015. *Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.27/l.2-22; Ex. 130EP-4 p.29; Ex. 130EP-7 p.24.* The only piezometer that consistently had water in it was P32, located near the south permit boundary, approximately 200 feet southeast from, and outside of, the proposed landfill footprint. *Ex. Snyder-1 p.26/l.24-p.27/l.22; Ex. 130EP-7 p.13.* The only location at which TJFA/EPICC found groundwater during their field investigation was above the dark grey

clay in Stratum III in their boring MP-1A, located very near P32. *Testimony of Lauren Ross, P.E. Tr. p.1397/l.25-p.1399/l.8.*

- Mapped Contours of the Top of Stratum III: Citing Dr. Ross's prefiled testimony regarding Figure E6-2 in the Application, TJFA/EPICC also complain about the contouring of the top of Stratum III as shown on that figure, particularly in the vicinity of boring BME-1, and they state, "It does not make sense that groundwater would flow from BME-7...up to BME-1..." In response, 130 Environmental Park, LLC would point out that Figure E6-2 (from the 2013 permit application) was revised based on updated information from 2016 field investigations. The revised figure, Figure E6-2S, is in the May 2016 Supplement to the Application, at *Ex. 130EP-7 p.18*. Figure E6-2S revised the 520 and 530 contours in the northern portion of the site (in the vicinity of BME-1 and BME-7. Dr. Ross apparently chose to ignore this figure in preparing her prefiled testimony (filed on June 27, 2016), even though the May 2016 Supplement had been provided to all parties with 130 Environmental Park LLC's prefiled testimony on May 23, 2016. Finally, 130 Environmental Park, LLC has never even suggested that groundwater would flow from the location of BME-7 to or toward the location of BME-1. On both Figure E6-2 and Figure E6-2S, BME-7 is shown as located to the southeast of BME-1 and the direction of groundwater flow in the area between BME-1 and BME-7 is shown as westerly (following the "groundwater flow path" arrow on the figures, which is perpendicular to the contour lines and moving from higher to lower elevation). Focusing specifically on the location of BME-7, it can be seen that both figures show contouring that would result in groundwater flow from BME-7 moving in a southwesterly direction (again, perpendicular to the contour lines and moving from higher to lower elevation), whereas BME-1 is northwest of BME-7.

Conclusion

As determined by TCEQ's geoscientist, Arten Avakian, P.G., 130 Environmental Park, LLC has satisfied all hydrogeology-related requirements in TCEQ's municipal solid waste permitting rules as set out in 30 TAC §330.63(e) and (f).

8. FAULTS

In the discussion of faults in TJFA/EPICC's Closing Arguments (at pp.48-51), they refer to only one provision in TCEQ municipal solid waste rules: 30 TAC §330.555, which is the "fault areas" location restriction. That rule, and TJFA/EPICC's discussion of it, refer to "a fault that has had displacement in Holocene time".³⁸ However, in their Closing Arguments, TJFA/EPICC do not even suggest that there is such a fault located anywhere near the 130 Environmental Park Site.³⁹ Instead, they claim that "the evidence established the presence of...the type of fault that presents a preferential migration pathway." *TJFA/EPICC Closing Arguments at pp.48-49*. There are

³⁸ The fault areas location restriction provides, "New municipal solid waste landfill units and lateral expansions shall not be located within 200 feet of a fault that has had displacement in Holocene time unless the owner or operator demonstrates to the executive director that an alternative setback distance of less than 200 feet will prevent damage to the structural integrity of the landfill unit and will be protective of human health and the environment. The owner or operator shall submit the demonstration with a permit application or a permit amendment application."

³⁹ The Holocene Epoch is the most recent 11,700 years. Faults located in the area of the Site are documented to have last moved 5 to 56 million years ago, well before the Holocene. *Ex. 130EP-4 p.14*.

numerous problems with TJFA/EPICC's claim. First of all, the evidence does not establish the presence of a fault as claimed by TJFA/EPICC. Although their geologist, Michael Rubinov, testified that he observed "evidence of a possible fault" (*Ex. Protestants' 6 p.19/l.11*), one of the three bases TJFA/EPICC assert for the presence of a fault (supposed dramatic differences in the elevation of the weathered/unweathered contact) is directly contrary to the evidence in the record and, as acknowledged by Mr. Rubinov, their second asserted basis (loss of circulation during the drilling of one soil boring) is easily explained by their third asserted basis: the type and significant number of secondary features in the subsurface at the location of that boring.

TJFA/EPICC witnesses Michael Rubinov and Lauren Ross both testified that they believe there are differences in the elevation of the contact between the weathered/unweathered clay material in borings BME-43 and MP-3, which were drilled in 2016 more than 300 feet east of the proposed landfill footprint. *Ex. 130EP-7 p.14*. Mr. Rubinov concluded that the weathered/unweathered contact is at 30 feet below ground surface (bgs) in BME-43 and between 46.5 and 50 feet bgs in MP-3 (*Ex. Protestants' 6 p.21/l.7-9*); Dr. Ross's different conclusions are that the weathered/unweathered contact is at 36 feet bgs in BME-43 and at 50 feet bgs in MP-3 (*Ex. Protestants' 5 p.35/l.11-15*). While Mr. Rubinov and Dr. Ross do not even agree between themselves about the elevation of the contact in these two borings, a comparison of the boring logs (at *Ex. 130EP-7 pp.110-111* and *Ex. Protestants' 6-D pp.7-8*, respectively) shows that there is no difference in the elevation of the weathered/unweathered contact: the material above 50 feet bgs is described in the logs as weathered clay material with frequent color changes and primary and secondary features ("light greenish gray to brown", "silt layers", "blocky texture", "fissures", "gypsum crystals", "gypsum seams", "layers of light greenish gray and dark greenish gray", "tan and gray, mottled", "blocky", "calcereous nodules and ferrous stains", "fracture", "rootlets", "dark gray and tan", "dark gray and brown", etc.), and the material from 50 feet bgs to the bottom of each boring (56 feet bgs in BME-43, 55 feet bgs in MP-3) is the dark gray clay ("dark greenish gray", "dark gray") that makes up the Stratum III unweathered zone. This evidence actually shows that the weathered/unweathered contact is at 50 feet bgs in both BME-43 and MP-3. So, the first basis asserted by TJFA/EPICC for the presence of a fault fails completely.⁴⁰

TJFA/EPICC also suggest that "the loss of circulation of drilling fluids at BME-43...and the presence of abundant secondary features at these boring locations [BME-43 and MP-3]...indicate that a fault is likely present at this location." *TJFA/EPICC Closing Arguments at p.50*. However, Mr. Rubinov's own testimony is that the loss of circulation during the drilling of BME-43 can be explained by the secondary features found in the subsurface in the area of BME-43 and MP-3. During his testimony regarding the loss of circulation at BME-43, Mr. Rubinov referred to "abundant gypsum fissures" in this area of the Site ("cracks essentially that are typically filled with some kind of mineral deposit or some kind of deposit...typically -- they are secondary features like Dr. Lauren described where they are -- they're formed after initial deposit") and, when specifically asked "[A]re these the types of secondary features that you would anticipate that movement -- like that water loss would be moving through as a possibility?", Mr. Rubinov acknowledged, "That's one possibility that water is lost through these fractures." *Tr. p.1515/l.1-*

⁴⁰ Also, neither Mr. Rubinov nor Dr. Ross offered any explanation as to how differences in depth of weathering (a geologically recent process) could ever be an indication of the presence of a fault, especially one in which the most recent movement would have occurred 5 to 56 million years ago.

p.1516/l.15. Dr. Lauren Ross testified about the “frequent occurrence of fractures and fissures” in borings BME-43 and MP-3, and she noted that gypsum deposits in samples from boring MP-3 were “significantly larger, more extensive, and clustered into groups in a way that was unusual” compared to borings in other areas of the Site. Mr. Rubinov’s testimony is consistent with that of 130 Environmental Park’s geologist, John Michael Snyder, P.G., who testified that a zone of lost circulation in a soil boring “could be an actual open break or void in the subsurface or simply an area with more permeable material or secondary features into which the drilling fluid can flow...The limited volume of drilling fluid lost in BME-43 (approximately 200 gallons) and the ease of re-establishing circulation to complete the boring to its total depth of 56 feet bgs demonstrated that the porosity of the zone in which circulation was lost was limited in extent/total volume.” *Ex. Snyder-1 p.24/l.21-31*. The boring logs for BME-43 and MP-3 confirm the presence of primary features (thin deposits of more permeable material) and secondary features in the Stratum II weathered clay material in that area of the Site: multiple fractures were noted in BME-43 alone, and the boring logs refer to “roots”, “rootlets”, “silt layers”, “blocky texture”, “gypsum fissures”, “iron oxide fissures”, “gypsum seams”, “iron oxide seams”, etc. *Ex. 130EP-7 pp.110-111* and *Ex. Protestants’ 6-D pp.7-8*. The overall ability of the soil materials in Stratum II to transmit water is the result of secondary features resulting from weathering of the material (indicated by blockiness, iron staining, gypsum seams, the presence of roots/rootlets, fractures, etc.), as well as the presence of primary features such as silt partings and seams. *Ex. Snyder-1 p.22/l.38-p.24/l.2*.

TCEQ rules specify criteria that determine when a fault study is required for a proposed landfill.⁴¹ Because the 130 Environmental Park Site does not meet those criteria⁴², the rules did not require a fault study for the 130 Environmental Park Facility. Even so, a fault study of the area of the Site, based on the criteria in 30 TAC §330.555, was conducted by John Michael Snyder, P.G., a licensed professional geoscientist qualified to evaluate faulting. No evidence of faulting was found. *Ex. 130EP-4 pp.13-14 and 37-39; Ex. Snyder-1. p.14/l.44-p.17/l.4*.

Finally, TJFA/EPICC do not identify any way in which their “phantom fault”, even if it were real, would result in any failure to satisfy TCEQ permitting requirements. Their suggested location of their fault is more than 300 feet east of the proposed landfill footprint (the landfill unit), significantly farther than the 200-foot standard set out in 30 TAC §330.555 for further consideration of and demonstration regarding even Holocene-age faults. And, while TCEQ rules do require “an analysis of the most likely pathway(s) for pollutant migration in the event that the primary barrier liner system is penetrated” (30 TAC §330.63(f)(3)), the evidence shows that the most likely pathway at the 130 Environmental Park Site is “downward through the unsaturated

⁴¹ 30 TAC §330.555(b) provides, in part: “Applications submitted for the operation of sites located within areas that may be subject to differential subsidence or active geological faulting must include detailed fault studies. When an active fault is known to exist within 1/2 mile of the site, the site must be investigated for unknown faults. Areas experiencing withdrawal of crude oil, natural gas, sulfur, etc., or significant amounts of groundwater must be investigated in detail for the possibility of differential subsidence or faulting...”

⁴² The area of the 130 Environmental Park Site is not subject to differential subsidence, there is no active faulting in the area of the Site or within one-half mile of the Site, and the area of the Site is not experiencing withdrawal of crude oil, natural gas, sulfur, etc. or significant amounts of groundwater. *Ex. 130EP-1 pp.97, 108, 146-150, and 152; Ex. 130EP-4 pp.14, 16-18, 42, 165; Ex. 130EP-54; Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.4/l.1-6, p.16/l.28-p.17/l.4*.

portion of the weathered Midway clay (Stratum II), [then] laterally at the interface of the weathered and unweathered clay”.⁴³ *Ex. 130EP-4 pp.239-240*. The “most likely pathway” for migration of pollutants from the 130 Environmental Park Landfill in the event the barrier liner system were to be penetrated is certainly not a pre-Holocene, phantom fault imagined by TJFA/EPICC to be present more than 300 feet east of the landfill footprint.⁴⁴

9. GROUNDWATER MONITORING

The proposed facility...includes a groundwater monitoring system design that meets the requirements of Chapter 330, Subchapter J. The Application includes a groundwater monitoring system design and groundwater sampling and analysis plan that meet the requirements of 30 TAC §§ 330.63(f), 330.403, and 330.405.

*Executive Director’s Closing Argument, at page 9;
Response 31 in Executive Director’s Amended Response to
Comments Ex. ED-SO-9 p.37.*

Requirements/Satisfaction of Requirements

Groundwater monitoring requirements for municipal solid waste landfill facilities are set out in TCEQ’s rules at 30 TAC §330.63(f) and 30 TAC Chapter 330, Subchapter J.

330.63(f) requires submission of:

- A map showing the waste management area, the property boundary, the proposed point of compliance and the proposed location of groundwater monitoring wells. (This map is Figure F1-1 in Attachment F of the Application, *Ex. 130EP-4 p.237*.)
- An analysis of the most likely pathway(s) for pollutant migration in the event that the primary barrier liner system is penetrated. (This analysis is in the Application at Section 2.4 of Attachment F: In the unlikely event any contaminants were to migrate out of the Landfill and enter groundwater, that groundwater could move slowly downward and outward from the Landfill in the weathered Stratum II material above the unweathered material in Stratum III. Groundwater flow direction would likely be to the northeast, west, southwest, south, southeast and east sides of the Site, based on the slope of the top surface of the Stratum III interval. *Ex. 130EP-4 pp.229-230; Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.28/l.5-30*.)
- Detailed plans and an engineering report describing the proposed groundwater monitoring program pursuant to 30 TAC §330.403. (The required plans and groundwater monitoring report are in Attachment F of the Application. *Ex. 130EP-4 pp.224-268; Ex. 130EP-7 pp.19*.)

⁴³ Per TCEQ rules, the design of the groundwater monitoring system proposed for the 130 Environmental Park Facility is based on this most likely pathway: the Landfill will be surrounded on all downgradient sides (everywhere except a small area on the northeast perimeter) by groundwater monitoring wells designed to monitor groundwater at and up to 20 feet above the interface between the weathered material in Stratum II and the unweathered material in Stratum III. *Ex. 130EP-4 pp.231-232 and 237; Ex. 130EP-7 p.19*. The primary and secondary features identified in the area of BME-43 and MP-3 are within Stratum II, the zone that will be monitored by this extensive groundwater monitoring system.

⁴⁴ It is also noteworthy that (1) Dr. Ross, who is not a geologist (*Tr. p.1381/l.2-9*), never even mentioned the word “fault” in either her prefiled or live testimony, and (2) Mr. Rubinov testified that his only experience conducting fault studies is “looking for faults on maps” (*Tr. p.1544/l.18-p.1545/l.3*).

30 TAC §330.403 (in Subchapter J) requires:

- A groundwater monitoring system that consists of a sufficient number of monitoring wells, installed at appropriate locations and depths, to yield representative groundwater samples from the uppermost aquifer.
- Background monitoring wells to allow determination of the quality of background groundwater that has not been affected by leakage from a unit.
- Monitoring wells installed to allow determination of the quality of groundwater passing the point of and to ensure the detection of groundwater contamination in the uppermost aquifer.
- Monitoring well spacing for a municipal solid waste landfill unit shall not exceed 600 feet without an applicable site-specific technical demonstration.
- The groundwater monitoring system shall be designed and certified by a qualified groundwater scientist and the design of a monitoring system shall be based on site-specific technical information.

The groundwater monitoring system for the Facility has been designed and certified by John Michael Snyder, P.G., who is a qualified groundwater scientist. Plans for and discussion of the groundwater monitoring system are in Attachment F of the Application. The system includes one background groundwater monitoring well located upgradient from (northeast of) the Landfill footprint. The point of compliance groundwater monitoring system for the Facility will include twenty-five groundwater monitoring wells located downgradient from the Landfill footprint, around the northwest, west, southwest, south, southeast, and east perimeter of the Landfill, and spaced no more than 600 feet apart. The groundwater monitoring wells will be constructed with well screens (perforated portion of the pipe in the well where water can enter the well to be collected for laboratory analysis) starting at the interface of the weathered Stratum II/unweathered Stratum III materials and extending upward for twenty feet. The downgradient monitoring wells will be located at depths and locations to allow for the detection of contaminants in the uppermost aquifer. *Ex. 130EP-4 pp.224-268; Ex. 130EP-7 pp.6 and 19; Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.9/l.15-23, p.12/l.4-9, and p.28/l.5-30.*

30 TAC §330.405 (in Subchapter J) sets out applicable requirements for a Groundwater Sampling and Analysis Plan, including procedures for collecting samples from groundwater monitoring wells and analytical and statistical methods to be used in evaluating samples collected from monitoring wells. The Groundwater Sampling and Analysis Plan for the 130 Environmental Park Landfill is Appendix F2 in Attachment F of the Application; it complies with all applicable TCEQ municipal solid waste regulatory requirements concerning groundwater sampling and analysis plans. *Ex. 130EP-4 pp.240-268; Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.26/l.18-22.*

TJFA/EPICC address groundwater monitoring at pages 51-53 of their Closing Argument.⁴⁵ They do not identify any aspect of the groundwater monitoring system proposed for the 130 Environmental Park facility that they claim does not satisfy the applicable requirements as set out above. Instead, they assert that there is a “high potential” for leachate migration from the proposed

⁴⁵ The only party other than TJFA/EPICC who addressed groundwater monitoring in Closing Arguments is the Executive Director; he addresses groundwater monitoring in his Closing Arguments at pages 15-19. Because 130 Environmental Park, LLC agrees with the ED’s arguments and positions on groundwater monitoring, no specific responses regarding them are included herein.

landfill in the vicinity of their boring MP-1 and 130 Environmental Park's boring BME-32, and that there are "numerous [water] wells completed in the Carrizo-Wilcox Aquifer, which are in close proximity to the location where the potential for leachate migration may be the highest."

In response, 130 Environmental Park would point out that the location of borings MP-1 and BME-32 (the location about which TJFA/EPICC express concern) is well away from the proposed landfill footprint, nearly 200 feet to the southeast.⁴⁶ TJFA/EPICC says the water wells about which it is concerned (because they are in "close proximity") are shown on Protestants' Exhibits 5-T and 5-AD. However, of the well shown on those exhibits, two are more than one-half mile to the east of the landfill footprint, two are approximately one mile to the east, and the others are located even farther away, at distances up to six miles away. *Exs. Protestants' 5-T and 5-AD*. Also, the Wilcox Formation crops out east of the Site and in a northeast trending belt across Caldwell County, and the Wilcox Formation is not hydraulically connected to any formations on the 130 Environmental Park Site. *Ex. 130EP-4 p.229*. The Carrizo Formation occurs east and southeast of the outcrop of the Wilcox, approximately 12 miles southeast of the Site. The aquifer portions of these two formations is collectively known as the Carrizo- Wilcox. *Ex. 130EP-4 pp.11-12, 16-18, 29, 37-42, and 227*. Nevertheless, the groundwater monitoring system proposed for the Facility is designed in accordance with TCEQ rules to detect groundwater contamination in the uppermost aquifer at the point of compliance and will include twenty-five groundwater monitoring wells located downgradient from the landfill footprint, around the northwest, west, southwest, south, southeast, and east perimeter of the landfill, spaced no more than 600 feet apart. These monitoring wells will all be screened in (and thus capable of providing samples of groundwater from) the weathered clay materials in Stratum II, with screened intervals extending from and 20 feet above its interface with the unweathered Stratum II materials—the very zone within which groundwater at the Site may occur and the most likely pathway for pollutant migration in the unlikely event any contaminants were to migrate out of the Landfill and enter groundwater. *Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.28/l.5-30; Ex. 130EP-4 pp.229-232 and 237; Ex. 130EP-7 p.19*. In their Closing Argument, TJFA/EPICC express particular concern about not only the area where borings MP-1 and BME-32 were drilled, but about the "southeast area of the site". However, thirteen monitor wells (MW-1 through MW-13) are proposed to be located along the east side of the landfill, nine monitor wells (MW-9 through MW-17) are proposed to be located along the south side of the landfill, and five monitor wells (MW-9 through MW-13) are proposed to be located along the southeast side of the landfill. Finally, there will be a monitor well (MW-12) located immediately adjacent to the location of MP-1 and BME-32, the particular location about which TJFA/EPICC express concern. *Ex. 130EP-4 p. 237*.

Conclusion

The Application (including March 2015 and May 2016 supplements) includes sufficient information and demonstrates compliance with TCEQ rules regarding groundwater monitoring.

⁴⁶ The waste disposal area of the landfill will, of course, be located within the landfill footprint and will be constructed with a composite liner system on the bottom and sides of the disposal cell. The lower component of the composite liner will consist of at least two feet of soil that has been re-compacted with large construction equipment so that it has extremely low permeability (no more than 1×10^{-7} centimeters per second, which is equivalent to approximately 1/10th of a foot per year). The top of the re-compacted soil liner is then covered with a geomembrane liner, which is a continuous plastic liner (usually made of high density polythene, or HDPE) at least 60 mils (60/1000ths of an inch) thick that covers the entire bottom and sides of the landfill cell. As required by TCEQ rules, the leachate collection system is designed so that the level of leachate in the bottom of the landfill will never exceed 30 centimeters (approximately 1 foot). *Testimony of Gregory Adams, P.E. Ex. Adams-1 p.12/l.29-13/l.14*.

The information provided by 130 Environmental Park in the Application (including March 2015 and May 2016 supplements) complies with the requirements of 30 TAC Chapter 330 regarding monitoring systems and other features whose designs depend on the geologic and hydrogeologic characteristics of the Site, including groundwater monitoring systems. *Testimony of TCEQ Geologist Arten Avakian, P.G. at Ex. ED-AA-1 p.12/l.2-9; Tr. p.1991/l.3-p.1993/l.8.*

10. GENERAL FACILITY DESIGN

TJFA/EPICC cites 30 TAC §330.63(b)(2)(E) and argues that the Application does not contain accurate and complete information regarding the foundational support for on-site storage and processing components of the Facility.

As stated by the ED, “The TCEQ’s only requirement concerning the general landfill design is that an applicant submit the following information in accordance with 30 TAC § 330.63(b): (1) facility access; (2) waste movement; (3) sanitation; (4) water pollution control; and (5) endangered species protection. (30 TAC §330.63(b)).” *ED Closing Arguments, p.12.*

The Application contains a generalized process design and working plan of the overall facility, as required by 30 TAC §330.63(b)(2). *Ex. 130EP-2 pp.14, 24-45.*

“Generalized construction details of slab and subsurface supports of all storage and processing components” (30 TAC §330.63(b)(2)(E)) is addressed as a component of “Waste movement” (30 TAC §330.63(b)(2)), which requires the owner or operator to “submit a generalized process design and working plan of the overall facility that includes ... (E) generalized construction details of slab and subsurface supports of all storage and processing components”

The Application contains generalized construction details of all storage and processing units, including slabs and subsurface supports, and locations and engineering design details of all containment dikes or walls, as required by 30 TAC §330.63(b)(2)(E). *Ex. 130EP-2 pp.27-31 and 39-45.*

Generalized construction details of all storage and processing units including slabs and subsurface supports are provided in Attachment B, Part III of the Application.

- Drawing B.4, Truck Wheel Wash (Ex. 130EP-2, p.42) describes the slab and subsurface support, in part, as “1.5’x6’ CONCRETE FOOTING W/ 6 NO. 5 BARS TOP AND BOTT. W/ NO. 5 STIRRUPS AT 12” O.C. (TYP.)”
- Drawing B.5, Citizen’s Convenience Center (Ex. 130EP-2, p. 43) describes the slab and subsurface support, in part, as “”11.5’ HIGH 6” CONCRETE WALL W/ NO. 4 BARS AT 12” O.C.E.W. EACH FACE” and “1.5’x6’ CONCRETE FOOTING W/ 6 NO. 5 BARS TOP AND BOTT. W/ NO.5 STIRRUPS AT 12” O.C.”.
- Drawing B.7, Leachate Storage Facility (Ex. 130EP-2, p. 45) describes the slab and subsurface support, in part, as “6” THICK SECONDARY CONTAINMENT CONCRETE SLAB W/ NO.4 BARS 12” O.C.E.W.”; “8” THICK CONCRETE TANKS FOUNDATION W/ NO.5 BARS 12” O.C.E.W.”; “8” THICK CONCRETE WALL W/ NO. 4 BARS AT 9” O.C.E.W. BOTH FACES”; and “1’x2’ CONCRETE FOOTING”

TJFA/EPICC also asserts that the Application is deficient as relates to generalized construction details because 130 Environmental Park did not conduct a geotechnical evaluation of the storage

and processing facilities. Mr. Gregory Adams testified that the appropriate time to conduct geotechnical evaluations associated with the structures would be closer to the construction phase when the owner or operator would know the actual final size of the structure and the construction materials. *Tr. p.890, lns.9-15.* He has never in his extensive career permitting, designing and constructing landfills done the level of geotechnical evaluation for those structures at the permitting stage. *Tr. p.890, l/17-20.*

In its discussion of General Facility design, PCCD raises questions about (1) the storm water drainage quantity and quality outside the area outside the active waste disposal portion of the landfill, (2) the source of water to be used by 130 Environmental Park for site operations, and (3) the locations of or quantities of soil that in any stockpiles to be available for fire suppression.

Storm Water Drainage

Processing facilities will be designed to facilitate proper cleaning by controlling surface drainage in the vicinity of the facility to prevent surface water runoff onto, into, and off the treatment area and constructing walls and floors in operating areas of masonry, concrete, or other hard-surfaced materials. *Ex. 130EP-2 pp.32-33,40-45.* The surface water drainage design will manage runoff and runoff during the peak discharge from the 25-year, 24-hour storm event to minimize surface water running onto, into, and off waste processing and storage areas and prevent the off-site discharge of waste and feedstock material, including, but not limited to, processed or stored materials. *Ex. 130EP-2 pp.34,49.* The Facility has been designed to keep contaminated surface water (water that may have come into contact with waste) separated from uncontaminated stormwater runoff. Contaminated water will not be discharged to the surface water management system to be constructed at the Site. *Ex. 130EP-2 p.34.* Surface or groundwater that has become contaminated will be handled, stored, treated, and disposed of in accordance with 30 TAC §330.207. *Ex. 130EP-3 p.214-420.*

The design and operation of the Facility, including waste processing and storage facilities, and the surface water management system, will prevent the discharge of solid waste, pollutants, dredged or fill material, and nonpoint source pollution that would violate any of the provisions referenced in 30 TAC §330.15(h). *Ex. 130EP-2 p.34.* Because all contaminated water will be managed in a controlled manner, groundwater will be protected. *Ex. 130EP-2 p.34, Ex. 130EP-2 pp.47-468.*

Prior to commencing Facility operations, 130 Environmental Park will submit a notice of intent (NOI) under the stormwater permitting requirements of TCEQ's rules, qualifying the facility to operate pursuant to a general stormwater discharge permit (TPDES General Permit No. 050000). *Ex. 130EP-1 pp.107 and 811-812; Ex. 130EP-2 p.34.*

Water Supply

Water will be supplied to the Facility by Polonia Water Supply Corporation. *Ex. 130EP-48.* Potable water (bottled water) will be provided for all employees and visitors at/near the scale house and/or maintenance building. *130EP-5 p.159.* The Application includes sufficient information and demonstrates compliance with limited TCEQ rules regarding water supply. Additional response to PCCD's questions regarding water supply is provided in Section 22 - Water Supply herein.

Soil Stockpiles for Fire Suppression

30 TAC §330.63(b) - General Facility Design does not address fire protection or stockpiles of soil for fire protection. 30 TAC §330.65 - Contents of Part IV of the Application requires the Site Operating Plan to include a description for how the items in Subchapters D and E of Chapter 330 will be implemented. 30 TAC §330.129 addresses fire protection.

Consistent with 30 TAC §§330.65 and 330.129, The Site Operating Plan in the Application contains a detailed Fire Protection Plan in Section 7, Site Operating Plan, Part IV. *Ex. 130EP-5, pp.130-135.* The Fire Protection Plan specifies that:

A stockpile of earthen material will be maintained so that it is available at all times to extinguish a fire. A soil stockpile will be provided in the vicinity of the active working face. The soil stockpile will be provided within 1,000 feet of the active working face. The landfill equipment conducting daily waste filling operations will be suitable for placement of additional soil from the earthen stockpile for fire control.

Ex. 130EP-5, p.131.

The Fire Protection Plan provides that the total volume of soil available from the stockpile will be sized to cover the working face with a minimum six-inch layer of earthen material. The Fire Protection Plan specifies that the earthen material stockpile shall be provided consistent with the size of the active working face and provides a table of calculations to ensure sufficient soil is available to meet fire suppression needs. *Ex. 130EP-5, p.131.*

All of PCCD's questions regarding the locations of or quantities of soil that will be available in any stockpiles to be available for fire suppression are answered in Section 7 - Fire Protection Plan of Part IV - Site Operating Plan of the Application as required by 30 TAC §§330.65 and 330.129.

11. WASTE MANAGEMENT UNIT DESIGN

Slope Stability

TJFA/EPICC argues that considerable uncertainty exists in the accuracy of the slope stability modeling used due to (1) the use of a two-dimensional model that does not account for the irregular shape of the landfill, (2) Applicant's failure to consider the extensive sideslope swales that will be present at the landfill, and (3) the uncertainty in the qualities of the waste that Applicant is relying upon to prevent a failure at the landfill.

Mr. Gregory Adams performed the slope stability analysis for 130 Environmental Park's Application. Mr. Adams is familiar with the methodologies, standards, and rules and has the technical knowledge one must be familiar with in order to perform geotechnical evaluations and design work in connection with TCEQ's MSW permitting process. *Ex. Adams-1 p.6/l.27-39.* In a career of over two decades, Mr. Adams has conducted geotechnical studies and performed design calculations for a variety of construction projects including performing geotechnical evaluations, developing quality assurance plans, designing landfill liners, leachate collection systems, final cover systems, access roads, and other site improvements, and providing construction quality assurance. *Ex. Adams-1 p.7/l.1-5.* Mr. Adams has served as the geotechnical professional of record and has managed over \$100,000,000 of construction at more than 30 landfills. Mr. Adams'

engineering design, construction and oversight of municipal solid waste disposal facilities and other facilities specifically includes experience in performing slope stability analysis. *Ex. Adams-1 p.6/l.27-39.*

Two-Dimensional Model and Factor of Safety

The slope stability analysis Mr. Adams performed for the 130 Environmental Park Landfill is found in Appendix D5-B - Slope Stability Analysis of Attachment D - Waste Management Unit Design, Part III of the Application. *Ex. 130EP-3 pp.77-212.* Mr. Adams performed the slope stability analysis for several components of the Landfill, including the final waste slope, with the PCSTABL6 computer program using the Janbu Simplified Method. *Ex. 130EP-3, p.78.* PCSTABL6 is a two dimensional, limit equilibrium slope stability program. *Id.* A two-dimensional analysis is always more conservative than a three-dimensional analysis. *Tr. p.2162/l.3-17.*

TJFA/EPICC's argument to regarding slope stability analysis is based on testimony of Mr. Tracy Bratton, an expert witness of Caldwell County. Mr. Bratton participated in one slope stability analysis of proposed conversion of a pre-existing landfill to a golf-course. *Tr. p.1879/l.23-p.1880/l.8.* Based on his limited experience in performing slope stability analysis, Mr. Bratton simply "does not know" that a two-dimensional analysis slope stability model would be more conservative than a three-dimensional model. *Tr. p.1880/l.9-12.*

Slope stability analysis under the PCSTABLE6 Janbu method calculates a factor of safety for the landfill components, including the waste mass under final cover independently of any preconceived-acceptable factor of safety. The computer modelling includes inputs of the soil strata on which the landfill is constructed, the bottom liner, the waste mass, the cover liner. *Ex. 130EP-3 p.81.* Using the PCSTABL6 computer model, the calculated long term factor of safety for the analyzed circular arc failure of the final waste cover is 2.1. *Ex. 130EP-3 pp.65,78.*

The PCSTABL6 computer model does not presume any acceptable factor of safety. The TCEQ has not established any recommended factor of safety. *Tr. p.815/l.2-17.* TJFA/EPICC, Caldwell County and Mr. Bratton have not identified any recommended regulatory or industrial standard for a factor of safety. The only factor of safety standard in the record is from the Corps of Engineers "Design and Construction of Levees manual (EM 1110-2-1913). *Ex. 130EP-3 p.78.* Mr. Adams used the PCSTABLE6 computer model to calculate the factor of safety for a circular arc failure in the final cover slope of 2.1 ("Minimal Calculated Factor of Safety") and compared it to the "Recommended Factor of Safety" of 1.5 from the Corps of Engineers manual, and found that the calculated factor of safety exceeds the recommended factor of safety and found that the calculated factor of safety is acceptable. *Id.* The calculated minimum factor of safety (2.1) for a circular arc failure of the final cover exceeds the recommended factor of safety (1.5) by 40%.

Sideslope Swales

TJFA/EPICC argues that uncertainty exists in 130 Environmental Park's slope stability analysis because it did not account for sideslope swales that will be constructed on the final cover. This argument is also based on testimony of Mr. Bratton. TJFA/EPICC puts great weight on the contention that the berms would be exerting downward force on the upper portion of the modelled circular arc. *TJFA/EPICC Closing Arguments p.57.* However, Mr. Bratton, TJFA/EPICC and Caldwell County do not offer any alternative modelling to suggest how inclusion of the sideslope swales (berms) would alter the computer modelling of slope stability.

Mr. Adams explained that it would not be appropriate to include only that weight because the berms “are also adding weight along the arc, also adds resistance.” *Tr. p.825/l.8-13, see also, Tr. p. 834/l.8-p.835/l.11*. Indeed, adding the weight would increase the factor of safety. *Tr. p.828/l.10-16*.

TJFA/EPICC and Mr. Bratton contend that Mr. Adams did not consider the local stability of the individual sideslope swales. Mr. Adams explained that it would not be appropriate to model the individual slopes because they are not critical to slope or slope stability analysis. In the early days of his lengthy career performing slope stability analysis, he did look at each individual side slope but learned that they were insignificant and make no difference in the modelling. *Tr. p.826/l.12-p.827/l.8*. Mr. Bratton offers no such specific experience modelling side slope swales as a component of a landfill final cover or otherwise.

But Mr. Bratton presses his uninformed speculation further. Mr. Bratton’s theory is that the potential failure of one berm could result in discharge of water and debris, result in additional failures of berms downslope of the first, and that there would be a domino effect on the lower berms leading to a potential breach of a landfill detention pond. *E.g., Tr. p.1882/l.11-p.1883/l.10*. Mr. Adams does not believe this is a realistic possibility. He has designed, constructed, observed and monitored miles of the berms across Texas and Oklahoma over the last 20 years, but has never seen the fantastic domino effect proposed by Mr. Bratton. *Tr. p.2163/l.3-15*. One berm failing and influencing a berm downhill from it is unimaginable to Mr. Adams. *Tr. p. 830/l.8-11*.

Qualities of Waste

Without citation or basis, TJFA/EPICC argues that “Mr. Adams’ stability analysis depends on an accurate characterization of the weight and shear strength of the waste placed into the landfill.” *TJFA/EPICC Closing Arguments, p.57*. Mr. Adams testified that, at a given point, the weight and shear strength of the waste could be variable, but within the mass of a waste lift typical of a municipal solid waste landfill, it would be consistent. *Tr. p.838/l.21-25*. The slope stability computer analysis requires an assumption of consistency. *Tr. p.839/l.4-7*. The assumptions regarding the weight of the waste used in the slope stability analysis are very conservative. *E.g., Tr. p.840/l.23-24*.⁴⁷

TJFA/EPICC’s argument that considerable uncertainty exists in the slope stability modelling are unfounded. In each category of suggested “uncertainty”, TJFA/EPICC’s argument asks the ALJs to make unreasonable assumptions based on the speculation of a witness with virtually no experience performing slope stability analysis of landfills. The evidence in the record shows that the slope stability analysis was performed by an expert with extensive experience, using appropriate modelling, and based on accurate site specific data or conservative assumptions. The Application complies with all applicable regulations regarding slope stability analysis.

⁴⁷ As explained by Mr. Adams: “I selected 60 as the appropriate unit weight for the waste because that is a conservative value. It’s at the upper end of what we would ever see. So I did not go to 75, 90, 120, and unreasonable numbers to see how it would affect it.” *Tr. 842/l.4-8*.

Soil Balance

TJFA/EPICC argues that 130 Environmental Park's investigation and conclusions regarding the soils at the site are inadequate and that 130 Environmental Park should provide a soil balance to demonstrate that the on-site soils are suitable for use as source materials for the liner and cover needs at the Facility. *TJFA/EPICC Closing Arguments*, pp.58-60. Most of TJFA/EPICC's foundation for this argument are addressed in Section - Geology and Soils above.

TJFA/EPICC cite 30 TAC §330.63(e)(5) that requires an applicant to provide: "geotechnical data that describes the geotechnical properties of the subsurface soil materials and a discussion with conclusions about the suitability of the soils and strata for the uses for which they are intended." The Application contains all information required by and complies with all requirements of 30 TAC §330.63(e)(5) among the geology and soils information as set forth in Section - Geology and Soils above and in 130 Environmental Park's Written Closing Argument.⁴⁸ 30 TAC §330.63(e) does not require a soil balance, and 130 Environmental Park's Application fully satisfies the TCEQ rules regarding geology and soil investigations, characterization and documentation. TJFA/EPICC provides no regulatory, industry standard or other basis for its inclusion of a soil balance.

TJFA/EPICC off-handedly recommends that greater testing and verification requirements should be included in the Liner Quality Control Plan. *TJFA/EPICC Closing Arguments*, p.60. The Application contains a Liner Quality Control Plan prepared in accordance with 30 TAC §330.63(d)(4)(G) and Chapter 330, Subchapter H. *Ex. 130EP-3 pp.14-15, 40-49, and 422-476*. Section 3.2 of the Liner Quality Control Plan identifies the material classifications that will be encountered or will be needed for landfill construction. *Ex. 130EP-3, pp.430-431*. Section 4.4 of the Liner Quality Control Plan specifies the placement and processing of the constructed liner.⁴⁹

⁴⁸ Silty fat clay is by far the dominant material encountered in all of the Soil Borings. *Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.21/l.22*. Based upon the field investigation work conducted at the Site, the subsurface stratigraphy consists of three strata (beginning at the surface and continuing downward): Stratum I is up to ten feet thick and consists primarily of brown to tan, silty fat clay with occasional discontinuous occurrence of small rock pieces, including cobbles (larger than about 3 inches), pebbles (between about ¼ inch and 3 inches) and some gravel (smaller than pebbles). Stratum II ranges in thickness from about 30 to 60 feet and consists of weathered silty fat clay. Weathering effects are indicated primarily by color from tan near the upper parts to tan and gray and eventually to gray as it transitions to the unweathered dark gray clay below. Stratum III consists of hard, dense, dark gray silty fat clay, up to 77 feet of which was encountered in the Soil Borings. *Testimony of John Michael Snyder, P.G. at Ex. Snyder-1 p.21/l.23-31; Ex. 130EP-3 pp.60-61*.

The Geology Report includes laboratory report data describing the characteristics and geotechnical properties of soil samples from Stratum I, Stratum II, and Stratum III based on geotechnical tests performed in accordance with industry practice and recognized procedures, including permeability, sieve analysis, Atterberg limits, and moisture content. *Ex. 130EP-4 pp.24-25 and 175-218; Ex. 130EP-7 pp.9-10 and 28-67; Ex. 130EP-3 p.59; Testimony of Gregory W. Adams, P.E. at Tr. p.895/l.13-p.896/l.24*. Permeability (hydraulic conductivity) tests were performed on samples from the strata that will form the bottom and sides of the landfill excavations. Tested permeabilities ranged from 5.9×10^{-8} cm/sec in Stratum I material to an average of 1.5×10^{-8} in Stratum III material. *Testimony of Gregory W. Adams, P.E. at Ex. Adams-1 p.15/l.24-35; Ex. 130EP-4 pp.25, 176-177, and 194-205*. The Geology Report includes discussion with conclusions about the suitability of the soils and strata for the uses for which they are intended. The soils at the Site will be suitable for use in construction and operation of the proposed Facility. *Ex. 130EP-4 pp.24-26; Ex. 130EP-7 pp.8-10; Ex. 130EP-3 pp.60-61; Testimony of Gregory W. Adams, P.E. at Ex. Adams-1 p.15/l.8-p.17/l.40; Ex. Adams-5*.

⁴⁹ "The compacted soil subgrade and surface of each lift should be roughened prior to placement of the next lift of compacted soil liner. The soil liner material should be placed in maximum eight-inch loose lifts to produce compacted lift thickness of approximately six inches. The material should be processed to a maximum particle size

In accordance with 30 TAC §330.339(b), Section 4.8 of the Liner Quality Control Plan describes the testing and verification to be performed for material proposed for use as compacted soil liner. *Ex. 130EP-3, pp.434-435.* Table D7-4 specifies the ASTM Standard and frequency for each of the tests to be performed. *Ex. 130EP-3, p.435.* In accordance with 30 TAC §330.341, Section 8 - Documentation of the Liner Quality Control Plan (*Ex. 130EP-3, pp.453-454*) requires documentation of liner testing and verification to be provided to the TCEQ, including a Soil Liner Evaluation Report.

TJFA/EPICC does not state what “greater” level of testing and verification should be required, or if any level of testing and verification would be satisfactory to it. No Protestant presented evidence or testimony in the Record that the testing and verification specified in the Application is inadequate.

30 TAC §330.63(e) does not require a soil balance. 130 Environmental Park strongly disagrees with TJFA/EPICC’s assertions that its geotechnical evaluation fails to demonstrate that on-site soils are suitable for use as source materials for the liner and cover needs at the Facility. To the contrary, 130 Environmental Park has conducted an exhaustive investigation and geotechnical evaluation of the on-site soils and TJFA/EPICC has conducted its own investigation, mostly confirming the geology and geotechnical properties of the Site. (See discussion in Section 6 - Geology and Soils above.) Because the geology and soils have been fully and exhaustively evaluated, a soil balance study or calculation is not warranted. Because the Application complies with 30 TAC §330.63(d)(4)(G) and Chapter 330, Subchapter H, no greater testing or verification is required in the Liner Quality Control Plan.

12. UNSTABLE AREAS

TJFA/EPICC refers to its arguments regarding slope stability in Section 11 - Waste Management Unit Design. 130 Environmental Park refers the ALJs to its responses in Section 11 - Waste Management Unit Design above. To the extent faulting is related to unstable areas, 130 Environmental Park refers the ALJs to Section 8 - Faults above. In addition, 130 Environmental Park offers the following specifically addressing the TCEQ rules and application requirements regarding unstable areas.

The logs of the Soil Borings and laboratory data from soil samples did not indicate the presence of poor foundation conditions such as soft clay or loose sand beneath the Landfill. The hand penetrometer values and unit dry weight results indicate that the subsurface clays are hard. *Ex. 130EP-4 pp.15, 51-126, and 175-218.* The settlement and heave analyses presented in the Application show that the landfill components will not undergo detrimental differential settlement. *Ex. 130EP-4 p.15; Ex. 130EP-3 pp.64 and 71-75.* The slope stability analyses presented in the Application show that landfill components will be stable. *Ex. 130EP-4 p.15; Ex. 130EP-3 pp.65-66 and 77-212.* Evidence of mass movement of natural formations of earthen material on or in the vicinity of the Site was not observed at the Site, in the Soil Borings, or on geologic maps. *Ex.*

of one inch or less before water is added. Rocks and clods less than one inch in diameter should not total more than 10 percent by weight. The surface of the top lift shall contain no material larger than 3/8 inch.” *Ex. 130EP-3, p.433.*

130EP-4 p.15, 51-126. Evidence of karst terrain was not observed at the Site, in the Soil Borings, or on geologic maps of the area. *Ex. 130EP-4 p.15, 51-126.*

The Site is not located in an unstable area. *Ex. 130EP-4 p.15.* The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding unstable areas.

The ED determined that the proposed landfill location complies with the location restriction of 30 TAC §330.559. The Facility will comply with the Unstable Areas Location Restriction in 30 TAC §330.559. *Testimony of Gregory W. Adams, P.E. at Ex. Adams-1 p.21/l.23-p.22/l.44; Ex. 130EP-1 p.845.*

13. LANDFILL GAS MONITORING

Soils

30 TAC §330.371(b) requires owners or operators of municipal solid waste landfill permit to implement a routine methane monitoring program. The type and frequency of monitoring is determined based on (A) soil conditions, (B) the hydrogeologic conditions surrounding the facility, (C) the hydraulic conditions surrounding the facility, (D) the location of facility structures and property boundaries, and (E) the location of any utility lines or pipelines that cross the MSW landfill facility. The Application includes a Landfill Gas Management Plan (LFGMP) as required by 30 Tex. Admin Code § 330.63(g) and that provides for implementation of a routine methane monitoring program based on the requirements of 30 TAC §330.371(b). *Ex. 130EP-5 pp.6-40.*

TJFA/EPICC argues that Heath Parker, the author of the LFGMP, did not sufficiently address soil conditions, hydrologic conditions and hydraulic conditions because he did no work himself to examine the conditions at the site and instead relied on information provided to him by Michael Snyder, the geologist who prepared the Geology Report contained in the Application. TJFA/EPICC argues that Mr. Snyder's soil and hydrologic condition are not reliable for the reasons TJFA/EPICC asserts in Section 6 - Geology and Soils of their Closing Argument. TJFA/EPICC asserts that Mr. Parker should have instead relied on a Soil Survey Map that was included in the wetlands documentation of Application *Ex. 130EP-1, p.311.*

30 TAC §330.371(b)(1) does not require the author of the LFGMP to perform his own soil or hydrogeologic investigation as argued by TJFA/EPICC, but requires the methane monitoring program to be based on, among other things, soil and hydrogeologic conditions surrounding the facility. Mr. Parker appropriately based the LFGMP on the soils and hydrogeologic conditions at the Site as had been extensively evaluated and described by the geologist of record. It would have been inappropriate to disregard the extensive body of site specific information developed for the Geology Report.

The reliability of 130 Environmental Park's soils and hydrogeologic investigations and documentation are addressed at length above in Section 6 - Geology and Soils.

30 TAC §330.371(a) requires owners or operators of landfill units to ensure that methane gas does not exceed specified concentrations in facility structures and in monitoring points, probes, subsurface soils, or other matrices at the facility boundary defined by the legal description in the permit. TJFA/EPICC argues that the LFGMP should have been designed to monitor steams and

floodplains within the facility boundary rather than the monitoring points, probes, subsurface soils, or other matrices at the facility boundary. Applicant does not propose any monitoring of the nearby surface waters because that is not what 30 TAC §§330.62(g) and 330.371 requires. The LFGMP complies with all applicable regulations.

Surface Waters

TJFA/EPICC argues that the LFGMP's monitoring system does not address the potential for landfill gas constituents to enter surface waters present at the landfill site.

30 TAC §§330.63(g) and 330.371 require an owner or operator to manage landfill gas pursuant to the LFGMP. A municipal solid waste landfill is a large system of many integrated systems to protect human health and the environment and includes constructed bottom and top liners, leachate collection, surface water controls and other features. These are controls of potential releases of landfill liquids and gases. The liners are the primary controls to prevent release of landfill liquids and gas. The cited rules require an owner or operator to ensure that specified concentrations of landfill gas do not occur in building structures and at the facility boundary.

The LFGMP is one component of the overall landfill system and is not the sole basis of control of landfill gas. The LFGMP provides, among other things, methane probes at or near the facility boundary to monitor concentrations at the facility boundary as required by the rule. The LFGMP provides a collection system to be installed and operated when required by regulation or in the event it is required to ensure landfill gas concentrations do not exceed the specified concentration in building structures or at the facility boundary. (See further discussion in LFG Control Backup below.)

The purpose of the LFGMP is not, as TJFA/EPICC contend, to detect landfill gas before it reaches water features within the Site boundary. TJFA/EPICC make the alarmist statement that "Applicant does not propose any monitoring of the nearby surface waters to detect the contamination of these waters by landfill gas." *TJFA/EPICC Closing Arguments, p.65*. TJFA/EPICC has created a standard that is not in the rules and then accuses the LFGMP of not meeting that created standard.

Contrary to TJFA/EPICC's statement, Mr. Parker did consider the location of floodplains, and where possible to avoid a probe being in the floodplain, he did. However, in order to maintain the spacing and to monitor the facility boundary as required by the rule. Some monitoring probes are located in the floodplain. *Tr. p.186, l/4-6*. "Surface water would have no effect on these probes." *Tr. p.185, l/14-15*. The probes are air tight and water tight. *Tr. p.175, l/16-p.186, l/1*.

With no reference to the record or otherwise, TJFA/EPICC speculates that placement of probes in the floodplain "creates potential problems in the ability of the Applicant to construct and access the monitoring [probes] while also creating potential modifications of floodwater flow patterns that the Applicant has not considered or evaluated." *TJFA/EPICC Closing Arguments, p.65*. TJFA/EPICC have no basis for this alarmist statement. Again, TJFA/EPICC have conjured up a standard that does not exist in the rules and attempted to fault 130 Environmental Park for not addressing the non-existent standard.

Sufficient Description of Landfill Gas Monitoring and Control Systems

Contrary to the allegations made by TJFA/EPICC, the LFGMP and Application contain sufficient descriptions monitoring procedures. For examples, the LFGMP includes a description of how extraction wells have to be constructed during installation, including design and details including the size of borings (*Tr. p.190,1/15-23*) and the Application includes a detailed drawing of the location and spacing of the gas extraction wells. *Ex. 130EP-5, p.33*. TJFA/EPICC argues that the LFGMP itself does not contain design details of the gas extraction wells or the gas collection system. This is untrue. The LFGMP includes several drawings detailing features of the LFGMP including:

- **APPENDIX G1**
 - Landfill Gas Monitoring Probe Plan
 - Drawing G1 .1 - Gas Monitoring Probe Plan
 - Drawing G1 .2-Monitoring Probe/Vent Details
 - Drawing G1 .3 - Structures Within ~ Mile of Facility Boundary
- **APPENDIX G2**
 - Reporting and Recording Forms
- **APPENDIX G3**
 - Landfill Gas Collection and Control System Plan
 - Drawing G3.1 - Landfill Gas Collection System Plan
 - Drawing G3.2 -Typical Extraction Well Detail
- **APPENDIXG4**
 - Landfill Gas Generation Model
- **APPENDIX GS**
 - Landfill Gas Monitoring Probe Boring/Completion Logs

Ex. 130EP-5, pp.24-40

In addition, gas collection components that are integrated into the liner are detailed, appropriately, in the Liner Details in Attachment D3 - Construction Design Details. *Ex. 130EP-3, p.43*. The Application and LFGMP contain all the detail required by the rules for landfill gas controls, collection, and monitoring - in the appropriate locations.

LFG Control Backup

TJFA/EPICC argues that the LFGMP fails to contain a complete backup plan to be used if the main landfill gas system breaks down or becomes ineffective. As described above, a municipal solid waste landfill is a complex integrated system of liners, surface water controls and monitoring systems, including controls, collection and monitoring of landfill gas. TJFA/EPICC conflates these integrated systems and accuses 130 Environmental Park of not having a backup system for the over-all systems. Mr. Parker explains that the 30 TAC §330.371(g)(3) requires a backup plan if the main system breaks down or becomes ineffective, and that the gas collection system is the backup plan for the main control system.⁵⁰

⁵⁰ Q: This back-up plan contained in the landfill gas management plan, do you have any type of back-up plan for the collection system?

A: Technically, the collection system is the back-up plan

Q: But you don't have a back-up plan if the collection system were to prove ineffective?

A: Well, again, under the rules, it's really referring to landfill gas control, not landfill gas collection system.

The control mechanism at the site is the landfill liner and the soils on top. That's the initial control mechanism. The back-up plan is if those aren't sufficient that we'll install a gas collection system.

Air Emissions

TJFA/EPICC argues that the LFGMP does not adequately address potential non-methane organic compound (NMOC) emissions. NMOC emissions are regulated as part of regulation of air emissions under 30 TAC Chapter 330, Subchapter U - Standard Air Permits. Pursuant to Subchapter U, 130 Environmental Park filed a Standard Permit Certification and General Operating Permit Application for the 130 Environmental Park Landfill. *Ex. 130EP-15*. 130 Environmental Park received Standard Permit Registration Number 135020 for the 130 Environmental Park Landfill. *Ex. 130EP-16*. 130 environmental park received General Operating Permit Authorization to Operate for the 130 Environmental Park Landfill. *Ex. 130EP-17*.

TJFA/EPICC asserts that the LFGMP contains no monitoring for NMOCs whatsoever. *TJFA/EPICC Closing Arguments p.68*. Again, TJFA/EPICC has created a standard that does not exist in the rules and argues that the Application does not meet that non-existent standard.

Conclusion

The LFGMP was prepared by Heath Parker, P.E. Mr. Parker has managed and participated in the design of LFG collection and control systems for over 50 landfills throughout Texas, Louisiana, Oklahoma, Kansas, Montana, Alabama, Georgia, Tennessee, Michigan, and Colorado. *Ex. Parker-1, p.3.1/35-37*. He has prepared and submitted 20 or 30 LFGMPs similar to the designs for the 130 Environmental Park LFGMP for municipal solid waste landfills in Texas, all of which have been approved by the TCEQ. *Tr. p.210.1/21-p.211.1/12*. The ED has reviewed the LFGMP and determined that it meets the requirements of 30 TAC §330.371. *ED Closing Arguments, p. 13*.

TJFA/EPICC did not present any testifying expert regarding landfill gas emissions or LFGMPs. TJFA/EPICC argues that Mr. Parker should have based his LFGMP on a soils map extracted from the wetlands portions of the Application, but TJFA/EPICC presents no testifying expert that was willing to do so. TJFA/EPICC's arguments that the soil and hydrogeologic basis of the LFGMP is unreliable because they dispute the geological and soils investigation and conclusions of Mr. Snyder. This argument is addressed in Section 6 - Geology and Soils above.

14. ENDANGERED OR THREATENED SPECIES

The Application contains an evaluation of endangered or threatened species for the Hunter Property conducted by Russell Marusak, a qualified biologist. *Ex. 130EP-1 pp.681-756; Ex.*

Now, that gas collection system will be designed with a loop, with multiple redundant loops within the system so that if any portion of that gas collection system failed, that the remainder of the system can control and bring vacuum around to those areas through other parts of that loop. Often they're also designed with multiple blowers in case one blower should fail.

So there are redundancies within the gas collection system to serve as back-ups as well.

Q: And so that collection system is part of the gas control system?

A: It is. Right.

Q: But there's no particular back-up system proposed for the gas collection structure as we've been discussing?

A: Right. There's no third back-up system. Correct.

Q: Well, there's -- you have monitoring -- you have certain elements that are part of monitoring at the landfill and other elements that are part of collection at the landfill?

A: Of control. Yes, sir.

Tr. p.206.1/22-208.1/8.

Marusak-2. Caldwell County and TJFA/EPICC argue that Mr. Marusak did not talk to neighbors of the property as part of his investigation. 30 TAC § 330.61(n)(2), requires that the biological assessment be prepared by a qualified biologist. Mr. Marusak is a qualified biologist, and there is no evidence that the neighbors are. Mr. Marusak contacted the United States Fish and Wildlife Service and the Texas Parks and Wildlife Department as required by 30 TAC §330.61(n)(2) for locations and specific data relating to endangered and threatened species. *Ex. 130EP-1 pp.681-756*. There is nothing in the applicable rule that requires contact of neighbors, even if they were qualified biologists. Based on the site specific information provided by the USFWS and TPWD, Mr. Marusak performed an appropriate investigation and report on identified species.

TJFA/EPICC argues that the field work performed by Mr. Marusak was not conducted in the spring and field work did not extend beyond the boundaries of the 130EP property. There is no evidence via testimony or otherwise, or from a qualified biologist or otherwise, that field work for an endangered or threatened species evaluation should be performed in the spring. Nor is there evidence via testimony or otherwise, or from a qualified biologist or otherwise, that field work should extend beyond the boundaries of the Site. Nevertheless, the area of study for 130 Environmental Park Application did extend beyond the proposed permit boundary and included the Site 21 Reservoir and its associated habitats. *Figure A-3 - Study Area Map, Ex. 130EP-1, p.719*.

TJFA/EPICC asserts that Mr. Marusak had done no research regarding the interactions of bald eagles and landfills and had gathered no information regarding 130EP's plans for control of foraging animals at the landfill. 30 TAC §330.61(n) does not require research regarding the interaction of any species with a landfill, be it threatened, endangered or otherwise, to be included in a threatened or endangered species evaluation. Mr. Marusak provided extensive testimony in the evidentiary hearing regarding the occurrence of bald eagles in the area *Tr. p. 1006,1/17-p.1109,1/2*. His qualified expert opinion is that it is unlikely that a bald eagle would occur in the area. *Tr. p.1106,1/24-p.1107,1/4*.

30 TAC §330.61(n) does not require plans for a foraging animal to be included in a threatened or endangered species evaluation. TJFA/EPICC does not explain why it contends a foraging threatened or endangered species might occur in the area or how the construction or operation of the Facility might adversely affect such an unnamed species.

Texas Parks and & Wildlife Department (TPWD) made three recommendations regarding vegetation impacts: the Migratory Treaty Act, revegetation, and rare species. *Ex. App. 130EP-1, pp. 683-686*. Mr. Marusak testified that the first recommendation has already been implemented, and the other two will be implemented pursuant to the Species Protection Plan in the Application. *Ex. App. Marusak-1, pg.11*. TJFA/EPICC makes two recommendations regarding vegetation. Based on the TPWD recommendations incorporated in the Species Protection Plan, TJFA/EPICC's recommendations are redundant or unnecessary. The 130 Environmental Park Facility, if developed and operated as described in the Application, will meet all TCEQ rules regarding protection of endangered and threatened species.

The Facility and its operation will not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species. *Ex. 130EP-1 pp.111, and 681-757; Ex. 130EP-2 p.35; Ex. 130EP-5 pp.145, and 178-187*.

The Facility will comply with the Endangered or Threatened Species Location Restriction in 30 TAC §330.551. *Ex. 130EP-1 p.841*. The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding endangered or threatened species.

15. WETLANDS

In the record of this case, 130 Environmental Park presented significant, detailed information regarding wetlands, including the results of thorough field investigation of the area around and including the 130 Environmental Park Site, prepared by Russell Marusak (who is a well-qualified and experienced wetlands expert⁵¹ and a biologist and environmental scientist at Halff Associates, Inc.), and careful regulatory analysis and conclusions regarding wetlands requirements in TCEQ's municipal solid waste permitting rules and their application to the 130 Environmental Park Site.

In contrast, TJFA/EPICC undertook no investigation of wetlands at the Site and they presented no expert testimony regarding wetlands or the application of wetlands permitting requirements. Instead, in their Closing Arguments (at pp.71-80), they offer to the ALJs three assertions regarding the application of regulatory provisions--assertions that are either not supported by and/or are directly contrary to the evidence in the record and the law, or that are not relevant to the permitting issues to be decided in this case.

The applicable permitting requirements regarding municipal solid waste facilities and wetlands are set out in two provisions in TCEQ's Chapter 330 rules: the application requirements in 30 TAC §330.61(m)(2) and (3)⁵², and the Wetlands location restriction at 30 TAC §330.553.

30 TAC §330.61(m)(2) and (3) provide that a permit application must: (2) include a wetlands determination under applicable federal, state, and local laws and discuss wetlands in accordance with §330.553 of this title (relating to Wetlands). For the purpose of this subsection, demonstration can be made by providing evidence that the facility has a Corps of Engineers permit for the use of any wetlands area; and (3) identify wetlands located within the facility boundary.”

30 TAC §330.553(a) provides:

(a) Municipal solid waste storage or processing facilities shall not be located in wetlands unless the owner or operator makes each of the demonstrations identified in subsection (b)(1) - (5) of this section; and (b) New municipal solid waste landfill units, lateral expansions, and material recovery operations from a landfill shall not be located in wetlands, unless the owner or operator makes each of the demonstrations identified in paragraphs (1) - (5) of this subsection to the executive

⁵¹ Mr. Marusak's qualifications and experience are set out in his testimony at *Ex. Marusak-1 p.3/l.34-p.5/l.25* and in his resumé, *Ex. Marusak-2*. He is familiar with the TCEQ municipal solid waste rules governing landfills and landfill permits in Texas, in particular those having to do with wetlands (*Ex. Marusak-1 p.5/l.21-25*), and he has specific experience delineating and identifying wetlands in connection with TCEQ municipal solid waste permitting for at least six other existing or proposed MSW landfill facilities in Texas: McCommas Bluffs Landfill, Jacksboro Landfill, Skyline Recycling and Disposal Facility, City of Grand Prairie Landfill, New Boston Landfill, and Weatherford Landfill (*Ex. Marusak-1, p.4/l.34-41*).

⁵² 30 TAC §330.61(m)(1) addresses floodplains.

director. The owner or operator shall submit the demonstrations with a permit application, a permit major amendment application, or a registration application, as appropriate. The demonstration shall become part of the operating record once approved.

30 TAC §330.553(b) describes the demonstration to be made if facilities are proposed to be located in wetlands:

(1) Where applicable under Clean Water Act, §404 or applicable state wetlands laws, the presumption that a practicable alternative to the proposed landfill or recovery operation is available that does not involve wetlands shall be clearly rebutted.

(2) The construction and operation of the municipal solid waste landfill unit or recovery operation shall not:

(A) cause or contribute to violations of any applicable state water quality standard;

(B) violate any applicable toxic effluent standard or prohibition under the Clean Water Act, §307;

(C) jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973; and

(D) violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary.

(3) The municipal solid waste landfill unit or recovery operation shall not cause or contribute to significant degradation of wetlands. The owner/operator shall demonstrate the integrity of the landfill unit and its ability to protect ecological resources by addressing the following factors:

(A) erosion, stability, and migration potential of native wetland soils, muds, and deposits used to support the landfill unit;

(B) erosion, stability, and migration potential of dredged and fill materials used to support the landfill unit;

(C) the volume and chemical nature of the waste managed in the landfill unit;

(D) impacts on fish, wildlife, and other aquatic resources and their habitat from release of the solid waste;

(E) the potential effects of catastrophic release of waste to the wetland and the resulting impacts on the environment; and

(F) any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.

(4) To the extent required under Clean Water Act, §404 or applicable state wetlands laws, steps have been taken to attempt to achieve no net loss of wetlands (as defined by acreage and function) by first avoiding impacts to wetlands to the maximum extent practicable as required by paragraph (1) of this subsection, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands).

(5) Sufficient information shall be made available to the executive director to make

a reasonable determination with respect to these demonstrations.

The permit application for the 130 Environmental Park Facility satisfies the wetlands requirements in TCEQ's municipal solid waste rules. *Ex. Marusak-1 p.9/1.1-15*. The application includes identification and determination of wetlands within the facility boundary (*see*, permit application Appendix IID.1, *Waters of the United States Delineation Report and Wetland Determination and Identification* at *Ex. 130EP-1 pp.275-670*⁵³; and permit application Appendix IID.2, *Summary of Wetlands Determination and Identification for 130 Environmental Park Facility Boundary Areas* at *Exhibit 130EP-1, pp. 671-674*) and the demonstration described in §330.553(b) (*see*, permit application Appendix IID.3, *Wetlands Demonstrations* at *Exhibit 130EP-1, pp. 675-679*).

The three assertions advanced by TJFA/EPICC in their Closing Arguments regarding the application of wetlands-related regulatory provisions in this case are:

- (1) 130 Environmental Park's permit application does not provide a wetlands determination under Texas state law.
- (2) The provision in 30 TAC §330.61(m)(2) (that "demonstration can be made by providing evidence that the facility has a Corps of Engineers permit for the use of any wetlands area") applies only to "the wetland determination and discussion under federal law".
- (3) Texas has a "no net loss of wetlands" regulation.

130 Environmental Park will address each of these assertions.

1. State Wetlands Determination

The Texas state definition of "wetlands", as set out in 30 TAC §307.3(84) (incorporated into TCEQ's municipal solid waste rules at 30 TAC §330.3(178)) is:

An area (including a swamp, marsh, bog, prairie pothole, or similar area) having a predominance of hydric soils that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and that under normal circumstances supports the growth and regeneration of hydrophytic vegetation. The term "hydric soil" means soil that, in its undrained condition, is saturated, flooded, or ponded long enough during a growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation. The term "hydrophytic vegetation" means a plant growing in: water or a substrate that is at least periodically deficient in oxygen during a growing season as a result of excessive water content. The term "wetland" does not include irrigated acreage used as farmland; a man-made wetland of less than one acre; or a man-made wetland for which construction or creation commenced on or after August 28, 1989, and that was not constructed with wetland creation as a stated objective, including but not limited to an impoundment made for the purpose of soil and water

⁵³ In their Closing Arguments, TJFA/EPICC reference Mr. Marusak's *Waters of the United States Delineation Report and Wetland Determination and Identification* and incorrectly state, "The work was undertaken to secure Corps concurrence that certain wetlands and on-site water bodies were not jurisdictional to the Corps, i.e., were not 'waters of the United States'." The actual purposes for Appendix IIID.1 are set out in Section 1.0 of the document (at *Ex. 130EP-1 p.278*): "This document has been prepared to meet wetland delineation guidelines published by the U.S. Army Corps of Engineers (USACE), to serve as supporting documentation for a jurisdictional determination under Section 404 of the Clean Water Act, and to provide information for a wetlands determination and identification pursuant to Texas Commission on Environmental Quality rules at 30 TAC 330.61 (m)(2) and (3)."

conservation that has been approved or requested by soil and water conservation districts. If this definition of wetland conflicts with the federal definition in any manner, the federal definition prevails.

In his prefiled direct testimony, Mr. Marusak explained the definition of “wetlands” he uses in his work related to delineating and identifying wetlands in connection with TCEQ municipal solid waste permitting in Texas:

I typically use (and in this case used) the definition of wetlands in 33 CFR §328.3(c)(4): “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” This definition is nearly identical to, and potentially more inclusive than, the state definition, which does not conflict with this definition in a situation like MSW permitting where TCEQ is acting pursuant to state law...

Testimony of Russell Marusak, Ex. Marusak-1 p.6/l.44-p.7/l.9.

The federal definition obviously has the potential to include more areas within the scope of “wetlands” because three exceptions not included in the federal definition are part of the state definition in 30 TAC §330.3(178), which specifically states that the term “wetland” does not include:

- irrigated acreage used as farmland,
- a man-made wetland of less than one acre, or
- a man-made wetland for which construction or creation commenced on or after August 28, 1989, and that was not constructed with wetland creation as a stated objective, including but not limited to an impoundment made for the purpose of soil and water conservation that has been approved or requested by soil and water conservation districts

In their Closing Arguments, TJFA/EPICC assert that the federal and state definitions of “wetlands” are significantly different and that the state definition may actually be more inclusive than the federal definition. The first and most significant problem with their assertion is found in a portion of the state definition itself—a portion that TJFA/EPICC carefully omitted from the information they provided to the ALJs. The last sentence of the state definition reads: “If this definition of wetland conflicts with the federal definition in any manner, the federal definition prevails.” So, if the state and federal definitions actually are significantly different, as claimed by TJFA/EPICC, state law requires the use of the federal definition, which Mr. Marusak testified is the definition he uses in his work related to delineating and identifying wetlands in connection with TCEQ municipal solid waste permitting in Texas. *Id.*

There are other problems with TJFA/EPICC’s arguments regarding a determination of wetlands under Texas state law. For example, as part of their claim that the state definition may actually be more inclusive than the federal definition, they assert that “the threshold inquiry under state law is whether there is a predominance of hydric soils” in an area under consideration, suggesting that making such an inquiry part of the investigation of possible wetlands areas might result in increasing the number and/or size of areas that satisfy the state definition of “wetlands”, but that

would not be included within the scope of the federal definition. However, just the opposite is true. Applying the TJFA/EPICC “threshold inquiry” would establish an additional limiting factor on areas that could be wetlands: no area would be further considered as possible wetlands if it did not have a “predominance of hydric soils”. Applying this limiting factor could only have the potential to reduce the number and/or size of areas determined to be wetlands; it could never expand the number and/or size of such areas.

For the 130 Environmental Park Site, consideration of the exclusions in the state definition of “wetland” would certainly result in a reduction of the areas determined to be wetlands. In Appendix IID (“Wetlands Documentation”) of the 130 Environmental Park permit application, areas within the proposed facility boundary that were identified as and determined to be wetlands are listed in Table IID-2.1 and shown on Figure IID-2.1 (at *Ex. 130EP-1, p.673 and p.674*, respectively). The table shows that 20 areas within the facility boundary, totaling 1.46 acres, were identified as and determined to be wetlands and that 12 of these areas, totaling 0.68 acre, are located within the proposed waste management unit boundary (the landfill footprint). However, each of these wetlands areas located within the proposed landfill footprint is man-made and less than one acre in size (*Testimony of Russell Marusak at Ex. Marusak-1 p.6/l.44-p.7/l.26; Ex. 130EP-1, pp.271, 298-299, and 671-674*). So, if the second exclusion in the state definition of “wetland” is considered (“The term ‘wetland’ does not include a man-made wetland of less than one acre”), there would be no wetlands within the proposed landfill footprint. However, by using the more inclusive federal definition, Mr. Marusak conservatively considered these areas to be wetlands and included them in a demonstration under the Wetlands location restriction in 30 TAC §330.553(b), as referenced in 30 TAC §330.61(m)(2). *See, Wetlands Demonstrations at Ex. 130EP-1 pp.675-679.*⁵⁴

2. Corps of Engineers Permit

Per 30 TAC §330.61(m)(2), the 30 TAC §330.553 wetlands demonstration “can be made by providing evidence that the facility has a Corps of Engineers permit for the use of any wetlands area.” The 130 Environmental Park Facility has such a permit. *See, the Corps of Engineers authorization letter and Nationwide Permit 14 in Ex. 130EP-1, at pp. 199-269.*

⁵⁴ In the discussion of wetlands determination under state law in their Closing Arguments, TJFA/EPICC also appear to invite the ALJs to overrule the Corps of Engineers’ approval of the wetlands identification and delineation set out in the *Waters of the United States Delineation Report and Wetland Determination and Identification* (*Ex. 130EP-1 pp.275-670*), and the Corps of Engineers’ Approved Jurisdictional Determination, as reflected in *Ex. 130EP-1, at pp. 199-269*, based on unsupported claims that the investigation and conclusions in the *Delineation Report and Wetland Determination and Identification* are inconsistent with Corps of Engineers guidance regarding hydrophytic vegetation, climate variability, grazing, and land use practices. The ALJs should decline this invitation. The Corps of Engineers approved the wetlands identification and delineation in the report and issued an Approved Jurisdictional Determination based on it (*Ex. Marusak-3; Testimony of Russell Marusak at Tr. p.9/l.23-p.10/l.10*), all following a Corps of Engineers field investigation in December 2013 (*Testimony of Russell Marusak at Tr. p.1135/l.6-16*), the wetlands investigation included consideration of specific guidance from the Corps of Engineers regarding hydrophytic vegetation criteria (*Ex. 130EP-1 p.287*), and Mr. Marusak testified that the methods employed in preparing the *Delineation Report and Wetland Determination and Identification* were reasonable and appropriate (*Ex. 130EP-1 p.7/l.13-p.8/l.6*) and that the wetlands investigation for 130 Environmental Park did not involve “difficult wetlands situations” as described in the Corps of Engineers guidance referenced by TJFA/EPICC (which includes hydrophytic vegetation, climate variability, grazing, and land use practices) (*Testimony of Russell Marusak at Tr. p.1134/l.3-p.1135/l.21; Ex. Protestants-43*).

TJFA/EPICC assert that the language in §330.61(m)(2) that “demonstration can be made by providing evidence that the facility has a Corps of Engineers permit for the use of any wetlands area” applies only to “the wetland determination and discussion under federal law”. *TJFA/EPICC Closing Arguments at p. 71*. But, in providing that a Corps of Engineers permit satisfies requirements in the municipal solid waste rules, §330.61(m)(2) states that the “demonstration can be made”; it does not refer to “the wetland determination and discussion under federal law”. Because the only wetlands “demonstration” applicable to TCEQ municipal solid waste permitting is the demonstration in the Wetlands location restriction in 30 TAC §330.553, 30 TAC §330.61(m)(2) is obviously referring to satisfaction of that demonstration requirement by way of a Corps of Engineers permit. And, as acknowledged by the June 20, 2014 Corps of Engineers letter (at *Ex. 130EP-1 pp. 199-269*), the 130 Environmental Park project is covered by such a permit, Nationwide Permit 14. Therefore, per §330.61(m)(2), the demonstration requirement is satisfied by that permit. Even so, as discussed above, 130 Environmental Park included in its TCEQ permit application the demonstration under 30 TAC §330.553, addressing/satisfying each element described in §330.553(b).

3. “No Net Loss of Wetlands” Regulation

In their Closing Argument, at p.80, TJFA/EPICC assert that Texas has a “no net loss of wetlands regulation”. In support, they cite to a policy statement included in the chapter of TCEQ’s rules (30 TAC Chapter 279) that governs TCEQ’s consideration of water quality certifications pursuant to Section 401 of the federal Clean Water Act.⁵⁵ Tellingly, TJFA/EPICC do not even suggest that this Chapter 279 policy statement has any applicability to 130 Environmental Park’s municipal solid waste permit application or to this proceeding. It does not.

The policy statement referenced by TJFA/EPICC is one sentence from 30 TAC §279.2, which sets out the “Purpose and Policy” of the 401 Water Quality Certification rules:

(a) This chapter establishes procedures and criteria for applying for, processing, and reviewing state certifications under CWA, §401, for activities under the jurisdiction of the agency. It is the purpose of this chapter, consistent with the Texas Water Code and the federal CWA, to maintain the chemical, physical, and biological integrity of the state’s waters.

(b) It is the policy of the commission to achieve no overall net loss of the existing wetlands resource base with respect to wetlands functions and values in the State of Texas. All activities under the jurisdiction of the agency that require a federal license or permit and that may result in any discharge to waters of the United States are subject to review for consistency with the federal CWA and the Texas Surface Water Quality Standards. After such a review, the agency shall:

(1) grant certification for any activity that will not result in any discharge in violation of water quality standards or any other appropriate requirements as set forth in §279.9 of this title (relating to Executive Director Review of Water Quality Certification Application);

⁵⁵ 30 TAC §279.1 provides, “This chapter governs the issuance by the Texas Natural Resource Conservation Commission of state certifications as authorized by 33 United States Code, §1341, commonly known as the federal Clean Water Act (CWA), §401.”

(2) grant conditional certification stating that the conditions necessary to prevent any activity that will result in a discharge from violating water quality standards or any other appropriate requirements as set forth in §279.9 of this title;

(3) deny certification for any activity that will result in a discharge in violation of water quality standards or any other appropriate requirements as set forth in §279.9 of this title; or

(4) waive certification. The agency may condition the waiver of certification upon the agreement of an applicant to include and comply with specific water quality-related conditions in the applicant's federal permit.

(c) The executive director is delegated the responsibility for performing all certification functions under this chapter on behalf of the commission, except that at the request of the executive director, the commission may review the question of certification prior to the executive director's determination on certification.

TJFA/EPICC reference the first sentence of 30 TAC §279.2(b): “It is the policy of the commission to achieve no overall net loss of the existing wetlands resource base with respect to wetlands functions and values in the State of Texas.” Although it is not clear in their Closing Arguments, in referring to this sentence, TJFA/EPICC appear to be suggesting to the ALJs that it establishes the requirement described in 30 TAC §330.553(b)(4) (the provision related to “no net loss of wetlands” as part of the demonstration to be made under the Wetlands location restriction if waste management units are proposed to be located in wetlands). There are many problems with this suggestion.

Initially, the sentence referenced by TJFA/EPICC states a policy, it does not establish a requirement. And, even if it did establish a requirement, because it is in Chapter 279, it would be a requirement applicable only to state water quality certifications under Section 401 of the federal Clean Water Act, not to Texas state municipal solid waste permitting under the Texas Solid Waste Disposal Act, Health & Safety Code Chapter 361. In addition, the determinations to be made and actions that may be taken by the TCEQ Executive Director under Chapter 279 (*See, e.g.* 30 TAC §§279.2(b)(1)-(4) and 279.9) do not require any implementation of or even refer to the §279.2 policy referenced by TJFA/EPICC. Also, it is clear from specific language in Chapter 279 that it has no applicability to a situation in which the Corps of Engineers has authorized activities under a nationwide permit, such as is the case with the 130 Environmental Park Facility where the Corps of Engineers has authorized activities pursuant to Nationwide Permit 14: 30 TAC §279.12(a)(1) states in part, “Water quality certification for activities authorized under a nationwide permit is complete at the time the permit is issued. No additional certification is required for activities authorized under that nationwide permit.”⁵⁶

⁵⁶ TJFA/EPICC claim that when TCEQ’s predecessor agency proposed adding this policy statement to the water quality certification rules, it “disconnected the ‘no net loss of wetlands’ standard from, as had previously been the case, only those Commission actions that were reviews of proposed federal permits.” However, as discussed above, the quoted sentence in §279.2 is not and does not establish any sort of “standard” or “requirement”, it is a statement of policy. And, far from “disconnecting” the policy statement from TCEQ reviews of federal permits, the statement was put specifically into a chapter of the agency rules that is about nothing but reviews of federal permits by TCEQ’s predecessor agency: 30 TAC §279.1 states, “This chapter governs the issuance by the Texas Natural Resource Conservation Commission of state certifications as authorized by 33 United States Code, §1341, commonly known as the federal Clean Water Act (CWA), §401” and subsection (a)(1) of Section 401 of the federal Clean Water Act (33 USC §1341) provides, “Any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the

Finally, when considered in the context of rules that actually do apply to municipal solid waste permitting, it is clear that the policy statement referenced by TJFA/EPICC (“It is the policy of the commission to achieve no overall net loss of the existing wetlands resource base with respect to wetlands functions and values in the State of Texas”) is not at all the same thing as the requirement described in §330.553(b)(4): “To the extent required under Clean Water Act, §404 or applicable state wetlands laws, steps have been taken to attempt to achieve no net loss of wetlands (as defined by acreage and function) by first avoiding impacts to wetlands to the maximum extent practicable as required by paragraph (1) of this subsection, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands).” There simply is no such requirement in Texas law, especially one that is applicable in the context of municipal solid waste permitting. As stated in the Wetlands Demonstrations in Appendix IID.3 of the TCEQ municipal solid waste permit application for the 130 Environmental Park Facility (*Ex. 130EP-1 p.679*):

The requirement to avoid, minimize, and/or mitigate impacts to wetlands is made applicable under Clean Water Act Section 404 by way of the Section 404(b)(1) guidelines as set out in 40 CFR §230.10(d) and by way of [Corps of Engineers] permitting requirements at 33 CFR §325.1(c)(7); it is not applicable under any Texas state law. Under the Section 404(b)(1) guidelines and [Corps of Engineers] rules, the “avoid, minimize and/or mitigate” requirement applies to wetlands only if they are subject to jurisdiction under Section 404 (“jurisdictional wetlands”). Because none of the 0.68 acre of wetlands areas within which the landfill unit will be located is jurisdictional wetlands, this requirement does not apply and no demonstration is required.

The wetlands-related assertions by TJFA/EPICC in their Closing Arguments are not supported by the evidence and/or the law. As set out in the Amended Response to Public Comment (*Ex. ED-SO-9 at pp.7-8*) and in the Executive Director’s Closing Arguments (at pp.14-15), “The ED has determined that the Application contains sufficient information regarding wetlands.” The evidence in the record establishes that 130 Environmental Park’s permit application satisfies, and the 130 Environmental Park Facility will satisfy, all applicable TCEQ municipal solid waste regulatory requirements regarding wetlands. *Ex. Marusak-1 p.3/l.26-28.*

Conclusion

“The ED has determined that the Application contains sufficient information regarding wetlands.” *Executive Director’s Closing Argument, at page 15.*

16-17. SURFACE WATER AND DRAINAGE AND FLOODPLAINS

In Section P and Q of its Closing Arguments, Caldwell County makes various claims related to Surface Water and Drainage and Floodplains.⁵⁷ Because the County’s discussion of these issues is

navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates...”

⁵⁷ The Executive Director addresses these issues in his Closing Arguments at pages 15-19. Because 130 Environmental Park, LLC agrees with the ED’s arguments and positions on these issues, no specific responses regarding them are included herein. The only other party that addressed these issues in its closing arguments is Plum

so intertwined, 130 Environmental Park, LLC is responding to them in this combined section of its response.

Background

There are two separate systems for managing stormwater at a municipal solid waste landfill facility like the proposed 130 Environmental Park Landfill: one for managing uncontaminated stormwater, and one for managing stormwater and other liquids that have come in contact with waste (leachate) and, as a result, are managed as contaminated water. *Testimony of Tyson Traw, P.E., Ex. Traw-1 p.6/l.16-20.*⁵⁸ The drainage system addressed in the Facility Surface Water Drainage Report (Part III, Attachment C, *Ex. 130EP-2, pp.47-468*), also known as the stormwater management system, consists of engineered, constructed features and operational controls that manage uncontaminated stormwater at the facility--both stormwater from rain that falls within areas of the facility boundary away from active waste disposal areas, and stormwater that may run onto the facility from adjacent properties, either as sheet flow across the ground surface or in stream channels. *Testimony of Tyson Traw, P.E., Ex. Traw-1 p.6/l.22-27.*

A landfill, like most any other type of land development, (1) increases the runoff volume of stormwater that flows across the ground surface after a given amount of rainfall because development generally decreases infiltration or the volume of rainfall moving downward into the soil, and (2) changes the way rainwater moves across the surface after it falls (drainage patterns). TCEQ, like most cities and other entities that regulate various types of land development, has adopted standards to ensure that these changes resulting from development do not have adverse effects, especially on downstream areas where the changes could result in increased flooding risk. In addition, it is important to have a properly designed stormwater management system at a landfill so uncontaminated stormwater remains uncontaminated. This system must be designed and constructed so the stormwater can be routed through the site in various facilities and structures (like swales, channels, and ponds) that have adequate capacity and other features to properly manage the stormwater. *Testimony of Tyson Traw, P.E., Ex. Traw-1 p.6/l.32-44.*

Applicable Requirements

TCEQ's rules require that an application for a municipal solid waste landfill facility permit include design information for the drainage system for the facility, which must be based on a 25-year, 24-hour storm. *30 TAC §§330.63(c)(1)(B) and (D), 330.303, and 330.305(b)-(e); Testimony of Steven Odil, P.E. at Ex. ED-SO-1 p.23/l.14-p.24/l.4.* The rules also require a drainage analysis showing

Creek Conservation District (at pages 10-11 of its Closing Arguments). The only issue raised by PCCD that requires a response from 130 Environmental Park, LLC is the issue of water quality associated with discharges from the proposed facility. 130 Environmental Park, LLC would point out that TCEQ's municipal solid waste rules, the draft permit prepared and recommended for issuance by the Executive Director, and the Site Operating Plan for the Facility all prohibit unauthorized discharges of contaminated water. Methods for accomplishing this are set out in the Leachate and Contaminate Water Management Plan (*Ex. 130EP-3 pp. 214-420*) and in the Site Operating Plan (*Ex. 130EP-5 pp.3-187*). In addition, as required by TCEQ's municipal solid waste rules (at 30 TAC §330.61(k)(3)) and TCEQ's Stormwater Permitting Program, 130 Environmental Park, LLC will obtain coverage under, and will operate in compliance with, TCEQ's TPDES General Permit No. TXR050000, which regulates stormwater discharges (including water quality) from industrial facilities. *Ex. 130EP-1 p.107.*

⁵⁸ The management of contaminated water is addressed in in the Leachate and Contaminate Water Management Plan (*Ex. 130EP-3 pp. 214-420*) and in the Site Operating Plan (*Ex. 130EP-5 pp.3-187*).

that existing drainage patterns will not be adversely altered as a result of the proposed landfill development. This analysis must also be based on a 25-year, 24-hour storm, and consists of comparing peak flow rates, volumes, and velocities under existing conditions and postdevelopment conditions (after development of the solid waste facility) at various points. 30 TAC §§330.63(c)(1)(C) and (D), 330.303, and 330.305(a); *Testimony of Tyson Traw, P.E. Tr. p.2011/l.3-23; Testimony of Steven Odil, P.E. at Ex. ED-SO-1 p.23/l.14-p.24/l.4 and Tr. p.1906/l.3-7; Testimony of Tracy Bratton, P.E. at Tr. p.1859/l.17-p.1860/l.8.* In addition, the rules require that an application include information regarding the 100-year floodplain in the vicinity of the site. 30 TAC §§330.63(c)(2). If the landfill waste disposal area (waste management unit or footprint) or waste storage or processing facilities are proposed to be located in the 100-year floodplain, the application must include various additional demonstrations (the design will prevent the washout of waste, the landfill will not restrict the flow of the 100-year flood or reduce the water storage capacity of the floodplain, etc.). If the landfill footprint and waste storage and processing facilities will be located outside the 100-year floodplain, these additional demonstrations are not required. 30 TAC §§330.547; *Testimony of Steven Odil, P.E. at Ex. ED-SO-1 p.27/l.1-p.28/l.13.*

Satisfaction of Requirements

Design information for the drainage system for the 130 Environmental Park facility, including plans for the various drainage features and structures, are in Attachments C1 and C3 of the Application. *Testimony of Tyson Traw, P.E., Ex. Traw-1 p.11/l.38-46; Ex. 130EP-2 pp.52-242 and 447-468.* All components of the drainage system meet the requirements in TCEQ's rules, and many exceed them. For example, perimeter channels for the landfill and the facility detention ponds will not only accommodate the peak discharge from the 25-year rainfall event, they will also accommodate the peak discharge from the 100-year rainfall event. *Testimony of Tyson Traw, P.E., Ex. Traw-1 p.12/l.2-1.*

The comparison of existing and postdevelopment conditions that shows no adverse alteration of existing drainage patterns is in Attachment C1 of the Application. *Ex. 130EP-2 pp.52-158; Testimony of Tyson Traw, P.E., Ex. Traw-1 p.8/l.2-p.9/l.34.* Three tables from Attachment C1 show comparisons at each analysis point of peak discharge, volume, and water flow velocity for both the 25-year and 100-year storm events. *Ex. 130EP-2 p. 079.* These tables, the Existing Condition Runoff Summary map (*Ex. 130EP-2 p. 76*), and the Postdeveloped Runoff Summary map (*Ex. 130EP-2 p. 078*) show that development of the 130 Environmental Park Landfill will not adversely alter existing drainage patterns. A detailed discussion of comparisons between existing conditions drainage patterns and postdeveloped conditions drainage patterns is in Section 7 of Attachment C1 (*Ex. 130EP-2 pp.068-070*). The demonstration of no adverse change to drainage patterns indicates that the landfill would reduce peak discharges and slightly increase discharge volume. The increase in volume represents less than 1% of the capacity of the Site 21 reservoir during the 25-year storm event. MSW staff contacted the Dam Safety Program about the Site 21 Reservoir and Dam. They indicated that the 1% increase in volume is insignificant. *Testimony of Steven Odil, P.E. at Ex. ED-SO-1 p.26/l.10-17.*

The floodplain analysis for the 130 Environmental Park facility is in Attachment C2 of the Application, at *Ex. 130EP-2 pp.255-445*. It includes, at *Ex. 130EP-2 p.257*, a copy of the current (2012) Federal Emergency Management Agency (FEMA) floodplain map for the Site and the surrounding area. TCEQ's rules, at 30 TAC §330.63(c)(2)(B), state that "FEMA maps are prima facie evidence of floodplain locations". The FEMA floodplain map shows that the landfill

proposed for the 130 Environmental Park Landfill site will be located outside the 100-year floodplain. *Testimony of Tyson Traw, P.E., Ex. Traw-1 p.9/l.36-p.11/l.2; Ex. 130EP-2 p.257.* At the request of TCEQ Permit Engineer Steven Odil, P.E., Tyson Traw conducted and included in Attachment C2 computer modeling to delineate the 100-year floodplain in the vicinity of the proposed 130 Environmental Park Landfill site. The modeling and analysis Mr. Traw performed for the Application also shows that the landfill proposed for the 130 Environmental Park Landfill site will be located outside the 100-year floodplain. *Testimony of Steven Odil, P.E. Tr. 1913/l.3-22; Testimony of Tyson Traw, P.E. Ex. Traw-1 p.11/l.4-36; Ex. 130EP-2 pp.255-445.* In addition, after the Application was filed with TCEQ, 130 Environmental Park, LLC filed with Caldwell County an application for preliminary approval of a subdivision plat for the Hunter Property, including the proposed landfill site. The preliminary plat application included the same floodplain delineation as the Application. *Testimony of Tyson Traw, P.E. Tr. p.636/l.10-14 and p.2012/l.6-10.* Based on requests from Caldwell County's engineer, Tracy Bratton, Mr. Traw prepared and submitted to the County revisions to the initial floodplain delineation materials. *Testimony of Tyson Traw, P.E. Tr. p.2012/l.6-p.2013/l.18.* The differences in the floodplain as delineated based on the modeling done for the Application and as delineated based on the revised modeling that included all of the revisions requested by Caldwell County are insignificant. In both versions, the landfill footprint is outside of the floodplain. *Testimony of Tyson Traw, P.E. Tr. p.702/l.12-p.703/l.14 and p.2011/l.16-19; Exs. 130EP-24 and 130EP-25.* In fact, every expert witness who testified about the location of the proposed landfill footprint relative to the floodplain agrees that the landfill footprint will be outside the floodplain: Tyson Traw, P.E. (*Testimony of Tyson Traw, P.E. Ex. Traw-1 p.11/l.4-36 and p.702/l.12-p.703/l.14*); Gregory W. Adams, P.E. (*Testimony of Gregory W. Adams, P.E. Tr. p.904/l.3-p.905/l.18*); Kerry D. Maroney, P.E., R.L.P.S. (*Exhibit 130EP-1, p. 839*); Steven Odil, P.E. (*Testimony of Steven Odil, P.E. Ex. ED-SO-1 p.27/l.1-14*); even Tracy Bratton, P.E. (*Testimony of Tracy Bratton, P.E. Tr. p.1879/l.9-14*).

Caldwell County Arguments and 130 Environmental Park LLC Responses

The primary position regarding surface water/drainage and floodplains advanced by Caldwell County in its Closing Arguments is that Tyson Traw (the engineer who did the floodplain and drainage designs/analyses for the 130 Environmental Park project) used incorrect inputs in computer modeling, "resulting in an underestimation of the floodplain". The County offers several claims in support of this proposition and 130 Environmental Park, LLC will address the problems with them below. But the failure of the County's position is immediately obvious upon consideration of only two points: (1) as discussed above, Mr. Traw re-ran the modeling using every one of the revisions sought by Caldwell County's engineering witness, Tracy Bratton, and the floodplain delineated using that revised modeling is indistinguishable from the floodplain based on Mr. Traw's original modeling; and (2) Tracy Bratton himself testified that the proposed landfill footprint (the waste management unit boundary) will be "outside of the 100-year floodplain." In light of this, and because Mr. Bratton had, well before he testified in this case, reviewed and approved the revised modeling and the floodplain delineation based on it (also approved by Caldwell County), the County's assertion that Mr. Traw's original modeling underestimated the floodplain is disingenuous, at best. *Testimony of Tyson Traw, P.E. Tr. 702/12-703/14; Testimony of Tracy Bratton, P.E. Tr. p.1896/l.3-18; Ex. 130EP-47).*

Caldwell County's Closing Arguments include other claims in support of its "underestimation of the floodplain" assertion: the County alleges that the drainage and floodplain modeling done for 130 Environmental Park is based on inappropriate flow lengths for shallow concentrated flow and

inappropriate values for “Manning’s n” (a roughness coefficient), and claims that the modeling done by Tyson Traw for 130 Environmental Park, LLC failed to account for “existing wetland features and ponds”. These claims are similarly without merit.

The County cites to testimony of Tracy Bratton in support of its claim that the modeling done for the Application was based on inappropriately long flow lengths modeled as shallow concentrated flow. Mr. Bratton testified that the maximum allowable watercourse length that can be considered as shallow concentrated flow is 800 to 1,200 feet. *Testimony of Tracy Bratton, P.E. Tr. p.1818/l.3-20*. In explaining the basis for his assertion, Mr. Bratton referred to the National Engineering Handbook and TR-55. *Testimony of Tracy Bratton, P.E. Ex. Caldwell 1 p.8/l.20-p.9/l.17*. However, neither of those sources specifies a maximum allowable length for evaluation as shallow concentrated flow. In discussing the three flow regimes used in hydrology computer modeling, TR-55 states, “Water moves through a watershed as sheet flow, shallow concentrated flow, open channel flow, or some combination of these. The type that occurs is a function of the conveyance system and is best determined by field inspection.” The discussion of these flow regimes in TR-55 also includes a section on “limitations”, which identifies a limit of 300 feet for sheet flow methodology, but no such limit for shallow concentrated flow. TR-55 also includes an example (3-1) in which shallow concentrated flow methodology is used for a watercourse length of 1,400 feet. *Testimony of Tyson Traw, P.E. Tr. p.2019/l.23-p.2020/l.4; Bratton Ex. B; Ex. Protestants’ 9-C pp.29 and 32*. Mr. Traw testified that he knows of no reference source that specifies a maximum allowable length for shallow concentrated flow and that he makes the change from shallow concentrated flow to channel flow where he has sufficient topographic data to determine the channel geometry in such a way that he can use the methods described in the channel flow description in TR-55. *Testimony of Tyson Traw, P.E. Tr. p.2020/l.5-16*.

The County also cites to Mr. Bratton’s testimony to support its claims that the modeling done by Mr. Traw should have used a “Manning’s n” roughness coefficient of 0.045, rather than the 0.065 Mr. Traw used. Mr. Bratton claimed that using the higher coefficient resulted in modeled results showing lower peak flows and, again, an underestimation of the floodplain. Mr. Bratton testified that a “value of 0.045 is an appropriate Manning’s n for small natural streams that are winding, weedy, and include ineffective areas or areas of pooling”. *Testimony of Tracy Bratton, P.E. Ex. Caldwell 1 p.13/l.6-17*. When asked about the source for his position that 0.045 is an appropriate “Manning’s n” for such streams, Mr. Bratton said “I don’t recall using a specific reference text for that...those are my words.” *Testimony of Tracy Bratton, P.E. Tr. p.1857/l.19-p.1858/l.11*. No wonder Mr. Bratton couldn’t, or didn’t want to, identify a reference source: for channels described with words nearly identical to those used by Mr. Bratton (“natural streams, sluggish reaches, weedy, deep pools”), the TxDOT Hydraulic Design Manual (identified by Mr. Traw as an appropriate reference source) specifies a “Manning’s n” value of 0.050 to 0.080. The middle of this range is 0.065, the very Manning’s n value used by Mr. Traw in the modeling work he did for the 130 Environmental Park facility. *See, cover and relevant portion of TxDOT Hydraulic Design Manual attached hereto as Attachment 2*. Mr. Traw testified that he based his selection of “Manning’s n” values on aerial photographs and walking stream channels during several site visits he made and the use of “Manning’s n” tables, and that the Manning’s coefficients he used in his initial floodplain delineation were accurate and appropriate. *Testimony of Tyson Traw, P.E. Tr. p.2014/l.23-p.2016/l.25*. Mr. Traw also testified that using a lower roughness coefficient (per Mr. Bratton’s recommendations) did not result in an increase in the delineated floodplain because, while using a

higher coefficient would result higher peak flows, it would also result in less friction in the channels and those two effects “pretty well offset. That’s why there’s insignificant changes between the floodplain shown in the application and the one on the preliminary plat.” *Testimony of Tyson Traw, P.E. Tr. p.2110/l.11-p.2111/l.19.*⁵⁹

Finally, in its Closing Argument the County refers to testimony by TJFA/EPICC witness Dr. Lauren Ross and claims that 130 Environmental Park, LLC “failed to account for the effect of existing wetland features and ponds in hydrologic calculations, as required by FEMA standard policies. Specifically, there are eight open-water stock ponds or natural water features at the proposed site, occupying more than 20 acres. There are additionally 46 emergent wetlands that have been identified onsite. The application does not provide data that these existing ponds and wetlands on the site have been included in its hydrologic analysis.” Caldwell County and Dr. Ross are wrong in at least two ways. First, it is perhaps not surprising that Dr. Ross, who claims no training, background, experience, or expertise in surface water/drainage analysis, floodplain analysis, or hydrologic or hydraulic modeling⁶⁰, does not realize it, but the analyses done by Tyson Traw did include modeling significant areas as “water”. The last seven columns in the “Existing Watershed Characteristics” table on page C1-B-11 in the Application (*Ex. 130EP-2 p.93*) shows the way in which various areas within each modeled watershed area are described and treated in the modeling, from “Brush” through “Water”. As shown in the table, more than 242 acres was modeled as “Water”. Also, what Dr. Ross described as FEMA “standard policy” applies only to FEMA staff and FEMA contractors doing work on FEMA flood maps, not to work done for TCEQ MSW permit applications. *Ex. Protestants’ 5-AF p.1, Section V*. This is yet another example of TJFA/EPICC, and in particular their witness Lauren Ross, claiming that various requirements apply to TCEQ municipal solid waste permitting and permit applications submitted to the agency when the referenced “requirement” either (1) clearly does not apply, and/or (2) simply is not any sort of requirement.

⁵⁹ Similarly, at page 13 of its Closing Arguments, the County includes two tables showing peak flows for various watershed sub-basins. Table 1 is values taken from existing conditions modeling of the floodplain as presented in the Application and Table 2 is values taken from existing conditions modeling of the floodplain, revised with all of the changes sought by Mr. Bratton during the preliminary plat review process. These values are all existing condition values; none of them reflects any changes resulting from development of the landfill facility. *Testimony of Tracy Bratton, P.E. Tr. p.1864/l.10-16*. While these tables do show an increase in peak discharges from certain sub-basins, Mr. Traw’s testimony referenced above explains that the higher peak flows resulting from modeling using Mr. Bratton’s recommended input values was offset by lower channel friction resulting from Mr. Bratton’s recommended “Manning’s n” values so that, as Mr. Bratton and Caldwell County know, the extent of the floodplain delineated based on the values in Table 2 (in the final preliminary plat materials) is indistinguishable from the floodplain delineation based on Mr. Traw’s modeling included in the Application. And, to the extent the County suggests that using the values in Table 2 as part of a comparison of existing and postdevelopment conditions would affect such a comparison, the County is correct. However, because the County does not dispute the postdevelopment peak discharge rates for these sub-basins as set out in the Application, using these higher existing condition values would provide even more support for a conclusion of no adverse alteration of existing drainage patterns.

⁶⁰ Dr. Ross is the witness who claimed, in her prefiled testimony, that the leachate storage tanks for the Facility would be located within the 100-year floodplain. However, on cross-examination, she admitted that the map she had prepared and relied on (*Ex. Protestants’ 5-AG*) shows the location of the floodplain based on an outdated, 1999 FEMA map. Neither the leachate storage tanks, nor any other waste management units at the Facility, will be located within the 100-year floodplain as shown on the current (2012) FEMA floodplain map or as delineated based on Mr. Traw’s detailed computer modeling of the floodplain. *Testimony of Dr. Lauren Ross, P.E. Tr. p.1381/l.24-p.1393/l.6; Exs. 130EP-1 pp.131 and 140; Adams-4; 130EP-2 p.261; 130EP-26, 130EP-27, 130EP-28, Protestants’ 5-Y and Protestants’ 5-AG*.

Executive Director's Position

As set out in the Executive Director's Closing Arguments (at pp.15-19), "The ED has determined that the Application complies with all applicable requirements regarding surface water and drainage requirements" and "no solid waste storage, processing, or disposal units are located within the 100-year flood, and so no further demonstration is required under these rules [30 TAC § 330.63 (c)(2) and 30 TAC § 330.547]".

18. LOCAL REGULATIONS/APPROVALS

Citing 30 TAC §330.63(c)(2)(D)(ii), Caldwell County argues that portions of the 130 Environmental Park facility site are located with the floodplain, and that the access road crosses the floodplain in several locations outside of the permit boundary. Caldwell County argues that 130 Environmental Park has not requested floodplain permits from Caldwell County, the local floodplain administer. Citing 330 TAC §330.76(d), Caldwell County argues that 130 Environmental Park has not provided Caldwell County with a final plat or application for a commercial development permit for the proposed landfill.

During technical review of the Application, it became apparent that the entrance road would be constructed across a floodplain in the portion of the property outside of the permit boundary, requiring the Applicant to obtain a floodplain development permit. (*Ex. ED-SO-4, Item 20. e.*). 130 Environmental Park received notice of its deficiency in two Notice of Deficiency (NOD) letters dated May 6 and June 27, 2014. (*Ex. ED-SO-4, Item 20. e. and Ex. ED-SO-5, Item 4*). After receiving the first NOD, 130 Environmental Park began the process of obtaining a floodplain development permit from Caldwell County. (*Ex. ED-SO-4, Item 20. e.*). By the time of the second NOD, 130 Environmental Park had begun the process, but still had not obtained the permit. (*Ex. ED-SO-5, Item 4*). When the only remaining deficiency was obtaining a floodplain development permit, the ED determined that the use of a special provision was appropriate in these circumstances. (*Tr. p. 1984, ln. 7-19*). The ED determined that the special provisions are sufficient to ensure that the floodplain development permit authorizing construction of the entrance road as described in the Application and the commercial development permit would be acquired in harmony with TCEQ rules. The ED added two special provisions to the draft permit:

Section IX of the draft permit includes two special provisions, as follow:

A. Before physical construction may commence, the permittee must provide the Executive Director with a floodplain development permit from the city, county, or other agency with jurisdiction over improvements authorized by this permit.

B. The facility must implement all roadway improvements specified in Part II, Appendix IIC of the permit application prior to the pre-opening inspection of the facility. *Ex. ED-SO-8 p.45*. No other permit special provisions are necessary.

As further described in Section 31 - Permit Special Provisions below, the ED's use of special provisions is not uncommon and that the Commissioners and staff have used special provisions to: (1) add things to the permit based on the specifics of the application; (2) remind regional enforcement teams of pending requirements or improvements; and (3) allow for coordination with other agencies to occur without effecting MSW Permits timelines. *See Section 31 - Permit Special Provisions below.*

The two special provisions proposed by the ED serve the purposes for special provisions described above. 130 Environmental Park will be required to obtain (and provide to the ED) its floodplain development permit (including floodplain crossings by the entrance road outside of the permit boundary) prior to commencement of physical construction. 130 Environmental Park will be required to implement all roadway improvements (including construction of the entrance road outside of the permit boundary) prior to the pre-opening inspection of the facility. The special provisions will be a condition that must be satisfied before 130 Environmental Park can operate the landfill.

30 TAC §330.67(d) provides that it is the responsibility of an owner or operator to obtain any permits or approvals that may be required by local agencies. The special provisions will remind regional enforcement teams of the floodplain and development permits required by Caldwell County and will allow for coordination of those requirements consistent with the MSW timelines. The conditional nature of the proposed special provisions of the draft permit ensures that the rule requirements will be met or the permit will be ineffective and enforceable.

The ED reviewed the Application, the draft permit, and the relevant testimony and recommends that the special provisions be allowed to remain as part of the permit. 130 Environmental Park agrees to and accepts the special provisions contained in the draft permit.

Based on the application, applicable testimony, and special provisions included in the permit, the ED concludes that the Applicant satisfactorily complied with the local regulation and authorization requirements necessary. The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding local regulations/approvals.

19. WASTE ACCEPTANCE PLAN

30 TAC §330.61(b)(1) requires an applicant to:

identify the sources and characteristics of wastes (i.e., residential, commercial, grease trap, grit trap, soluble sludges, septage, special wastes, Class 2 or Class 3 industrial solid wastes, compost feedstocks, etc.) proposed to be received for storage, processing, or disposal.

TJFA/EPICC argues that “Applicant has consistently refused to identify any sources that could amount to the huge waste acceptance rate projections contained in the waste acceptance plan.” TJFA/EPICC Closing Arguments, p.82. TJFA/EPICC is misconstruing the term “sources”. The applicable rule does not require identification of customers that will be acting as sources, but to identify the types of sources that are proposed to be received for storage, processing, or disposal. The rule provides examples: residential, commercial, grease trap, grit trap, soluble sludges, septage, special wastes, Class 2 or Class 3 industrial solid wastes, compost feedstocks, etc.

30 TAC §330.61(b)(1)(C) requires the applicant for a landfill permit to provide “an *estimated* maximum annual waste acceptance rate for the facility projected for five years.” (*Emphasis added.*) The estimated maximum annual waste acceptance rate for the facility were just that - estimates - and they were reasonable. TJFA/EPICC does not explain why the reasonable estimates were not accurate. TJFA/EPICC dismisses the qualifications of B. Jeffery Hobby, P.E. who

testified that the estimates are reasonable. Mr. Hobby's experience includes thirty years in the waste management industry and twenty years in engineering or management of municipal solid waste disposal facilities in Texas in large markets of the region surrounding the proposed Site. See *B. Jeffery Hobby, P.E. - Resume, Ex. Hobby-2*. Mr. Hobby is certainly qualified to opine that the estimated maximum annual waste acceptance rate for the facility is reasonable.

TJFA/EPICC had ample opportunity to present evidence regarding the reasonableness of the waste acceptance estimates. Mr. Dennis Hobbs, a long-time employee of Texas Disposal Systems Landfill, Inc. was present throughout the evidentiary hearing and the deposition of Mr. Hobby. But TJFA/EPICC and Mr. Hobbs offered no evidence as to the reasonableness or unreasonableness, or the accuracy or inaccuracy of the waste acceptance estimates, whether under their definition of sources or under the TCEQ's definition of sources. The ALJs should not encourage or tolerate TJFA/EPICC's attempted fishing expedition for transparently anti-competitive purposes.

In compliance with 30 TAC §330.61(b), 130 Environmental Park provided the information required for a waste acceptance plan. Solid wastes to be accepted at the Facility include municipal solid waste, special wastes, and Class 2 and 3 industrial wastes. *Ex. 130EP-1 p.90*. Limiting parameters for waste to be accepted at the Facility include: a concentration of 1,500 mg/kg total petroleum hydrocarbons, the levels for Class 1 industrial solid waste provided in 30 TAC §335.521(a)(1), the presence of free liquids, the presence of regulated hazardous waste, the presence of polychlorinated biphenyls, the presence of radioactive waste, and the presence of chlorinated fluorocarbons. *Ex. 130EP-1 p.90*.

Waste contributed to the Facility is expected to come from residences and businesses in Caldwell County and surrounding Texas counties. *Ex. 130EP-1 p.42*. The Facility will serve an estimated population equivalent of approximately 470,000 persons to 922,000 persons during the life of the Facility. *Ex. 130EP-1 p.91*. The estimated maximum annual waste acceptance rate for the Facility projected for five years is as follows: Year 1 - 429,000 tons; Year 2 - 435,778 tons; Year 3 - 442,663 tons; Year 4 - 449,658 tons; Year 5 - 456,762 tons. *Ex. 130EP-1 p.91*.

The ED has determined that 130 Environmental Park provided the information required pursuant to 30 TAC §330.61(b). The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding waste acceptance plan.

20. SITE OPERATING PLAN

TJFA/EPICC argues that that the contents of the Site Operating Plan must be specific and enforceable, citing *BFI Waste Systems of North America, Inc. v. Martinez Environmental Group*, 93 S.W.3d 570, 579 (Tex. App.—Austin 2002, pet. denied). TJFA/EPICC's reliance on *BFI* is misplaced. The *BFI* opinion centered on the wording of 30 TAC §330.114 (West 2004), which required the SOP to "provide operating procedures for the site management and site operating personnel in sufficient detail to enable them to conduct the day-to-day operations of the facility." The rule further required that the SOP include specific guidance, procedures, instructions, and schedules on the procedures that the operating personnel were to follow. In March 2006, Section 330.114 was repealed and the remaining requirements of that rule were moved to current rule 30 TAC §330.127. Under the current rule, the SOP must include "provisions for site management

and the site operating personnel to meet the *general* and site-specific requirements” of Subchapter D. (*Emphasis added.*) The provision for the site operating personnel must include a description of the *general* instructions that they are to follow concerning the operational requirements of the subchapter. 30 TAC §330.127(3) (*emphasis added*).

Water Supply

TJFA/EPICC argue that a Site Operating Plan may not be based on a promise to plan (relying to the *BFI* case discussed above) and that the Site Operating Plan cannot be complete unless Applicant is able to demonstrate that it will have access to the water that it needs. The *BFI* case does not support TJFA/EPICC’s argument because it applies to rules that have been repealed. 30 TAC §330.127 now authorizes a general plan to be provided in the SOP. 130 Environmental Park addresses TJFA/EPICC’s more specific arguments regarding water supply in Section 22 - Water Supply below.

Access Road and Flooding

TJFA/EPICC argue that the Site Operating Plan is deficient because a portion of the access road extends to Highway 183N beyond the permit boundary. TJFA/EPICC does not argue that the specification for the access road are not met by the Site Operating Plan. (30 TAC §330.153(a): “All-weather roads must be provided from the facility to access public roads and within the facility to the unloading area(s) designated for wet-weather operation . . . The methods for controlling mud and associated debris tracked onto public roadways must be specified in the site operating plan.) Rather, TJFA/EPICC argue that the TCEQ will not be able to enforce the Site Operating Plan requirements outside of the permit boundary and that 130 Environmental Park could change the location of the access road outside of the permit boundary without a permit amendment. This is not accurate. As described in more detail above in Section 1 - Sufficiency of Property Rights, the TCEQ does have enforcement jurisdiction outside of the permit boundary and the owner or operator could not change the location or connection point without a permit amendment.

Specifically, Mr. Odil testified that permits have been approved for landfills with the access road outside of the permit boundary numerous times. *Tr. p.1920,1/12-16*. In his opinion, appurtenances required for the landfill, such as the gate house and scales, should be included in the Site boundary, but access roads need not be. *Tr. p.1920,1/24-p.1921,1/4*.

Mr. Odil testified that the TCEQ has jurisdiction to enforce the requirements for construction of the access road, control of mud accumulations on the access road, and other permit requirements outside of the permit boundary. *Tr. p.1923,1/16-19*. The TCEQ has the ability to enforce anything that the permit requires even when outside the permit boundary. *Tr. p.1923,1/25-p.1924,1/5*. Contrary to TJFA/EPICC’s argument, 130 Environmental Park would not be able to change the access road to connect with FM-1185 or any other public road without an amendment to the permit. *Tr. p.1958,1/6-16*.

TJFA/EPICC also argues that the access road outside the permit boundary crosses a floodplain and the Site Operating Plan does not state precise methods for ensuring that the entire stretch of the road is all-weather and clear of mud and associated debris. As discussed above, 30 TAC §330.127 does not require more than general plans for achieving the requirements of 30 TAC, Chapter 330, Subchapter E. The Application contains specific requirements for control of access, including a narrative for Facility Access in Section 1 of the General Facility Design in Attachment B details

for the access road in Section 1 - Facility Access, Attachment B of the Application. *Ex. 130EP-2, p.26*; and entrance road construction details in Drawing D1.5, *Ex. 130EP-3, p.23*;

The entrance road will tie in to US Highway 183N, a facility under the jurisdiction of TxDOT. As such, TxDOT controls the terms of access to the highway through a Driveway Permit. 130 Environmental Park has provided all information and construction details of the entrance road to TxDOT by way of a Permit [Application] to construct Access Driveway Facilities on Highway Right of Way (“Driveway Permit Application”). *Ex. Parker-5*. The Driveway Permit Application includes details design and construction standards for all facets of the entrance road. *Ex. Parker-5, pp.28-55*. Construction drawing for the entrance road (including culvert and floodplain crossing details) are detailed in drawings in the Driveway Permit Application *Ex. Parker-5, pp.20-27*. Drainage Calculations for the entrance road Driveway Permit. *Ex. Parker-5, pp.4-19*.

TxDOT approved 130 Environmental Park’s Application for Driveway Permit, deeming the construction details, culverts and floodplain crossings, drainage calculations and all other features of the entrance road acceptable to TxDOT, *Ex. Parker-6*.

No one is challenging the adequacy of the access road, its design, construction or maintenance within the permit boundary. The access road outside of the permit boundary will meet or, where required by TxDOT, exceed the standards of the access road inside the permit boundary. The TCEQ will have enforcement jurisdiction over the access road outside of the permit boundary and TxDOT will have jurisdiction over the access road as it will be connected to the State highway system pursuant to a Driveway Permit that has been approved by TxDOT.

Operating Hours

OPIC and TJFA/EPICC argue that municipal solid waste landfills inherently generate noise, odor, and dust conditions. OPIC and TJFA/EPICC further argue that 130 Environmental Park provided no evidence that would justify granting expanded hours of waste acceptance or site operations beyond the normal 24/7 operating hours.

30 TAC §330.135(a) requires a site operating plan to specify the hours of waste acceptance. The rule states that waste acceptance hours of a municipal solid waste facility may be any time between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, unless otherwise approved in the authorization for the facility.

OPIC and TJFA/EPICC cite 30 TAC §330.135(a), which provides that waste acceptance hours may be any time between 7:00 a.m. and 7:00 p.m. without specific approval. Similarly, the rule provides that site operations (transportation of materials and heavy equipment operations) may be any time between 5:00 a.m. and 9:00 p.m. without special approval.

Contrary to OPIC’s and TJFA/EPICC’s argument, an applicant is not required to provide evidence to justify the normal 24/7 per week waste acceptance and site operating hours. The rules clearly contemplate that MSW facilities may opt to operate more than 12 hours a day, five days a week. As stated above, 130 Environmental Park requested that authorization. The Site Operating Plan included as part of the Application states that the waste acceptance hours are 24/7 days a week, and that the actual waste acceptance hours will be displayed on the site entrance sign. *Ex. 130EP-*

5, p.138. The Executive Director confirmed that the operating hours comply with the provisions in 30 TAC §330.135.

TCEQ's rules do not specify any standard for obtaining such approval or any criteria that the agency will consider when deciding whether to grant approval for the normal 24/7 operating hours. The current 30 TAC §330.135 was adopted in 2004. During the 2004 rulemaking, the TCEQ rejected efforts to make any deviation from the default 24/7 operating hours dependent on an owner or operator demonstrating "good cause" for the deviation. 29 *Tex. Reg.* 11069-70.

In the preamble to the 2004 rules, the Commission specifically said that it would look to "objective criteria" and consider the "potential impact" that the facility's operating hours may have on the surrounding community, e.g., whether the proposed operating hours would create a "nuisance" or would otherwise be "incompatible with land use in the area." Specifically:

The rule has not been changed in regard to comments that a variance from the operating hours designated in the rule should only be granted on a showing of good cause and that a 24 hour operation should not be authorized in a populated area. Adding a requirement to show good cause would not add any objective criteria for making a determination. The commission will continue to make these decisions on a case by case basis considering the potential impact on surrounding communities.

Id.

Despite the lack of any requirement that an applicant demonstrate justification for the normal 24/7 operating hours, 130 Environmental Park has demonstrated that 24/7 operating hours are justified under any standard. TCEQ rules provide for minimum buffer zones. 30 TAC §330.543(b), requires new Type I landfills to maintain a 125-foot buffer zone between the landfill unit, or fill foot-print, and the site boundary. The evidence in the record is that, at the 130 Environmental Park Facility, the design calls for a minimum 200-foot buffer zone along the north and northeast sides of the site. In addition, the permit boundary is set another 125 feet back from the boundary of the approximately 1229-acre site on which 130 Environmental Park owns a purchase option. So the facility design calls for an effective minimum buffer zone of at least 325 feet within and adjacent to the facility boundary on property owned or controlled by 130 Environmental Park, or at least 200 feet *larger* (more than double) than is required by the TCEQ's applicable rules. *E.g., Ex. Worrall-1, p.14,1/25-33.*

130 Environmental Park has requested approval of extended hours via the Application and has designed the Facility to provide buffer zones more than double the standard in 30 TAC §330.543(b). 130 Environmental Park has provided evidence that the proposed Facility will exceed the required buffer zones and that, given the extensive buffer zones, the Facility operating hours will be compatible with existing land uses and will not result in a nuisance. The extensive buffer zones limit the impact of noise, odor, dust and visibility. OPIC argues that lights from site operation vehicles will be a land use compatibility issue. 130 Environmental Park's land use expert testified that the "natural screening within the extraordinary buffer zone, the vegetated screening berm, and site operations described in Part IV of the Application together provide excellent visual screening." *Ex. Worrall-1, p.13.1/45-p.14.1/2.* 130 Environmental Park has also provided evidence in the Application and through the testimony and exhibits sponsored by Mr. Worrall that the

Application - including the 24/7 operating hours, is compatible with surrounding land uses and will not result in a nuisance.

TJFA/EPICC have another reason for requesting that the operating hours at the 130 Environmental Park Facility be limited. It is sought for anti-competitive reasons to limit the customers that could be served by 130 Environmental Park Landfill. TJFA is directly related to Texas Disposal Systems Landfill, Inc. (TDS). Mr. Dennis Hobbs, President of TJFA is employed by TDS a solid waste disposal company that operates a municipal solid waste landfill to the north of the 130 Environmental Park Site. *Testimony of Dennis Hobbs, Transcript of Prehearing Conference, March 26, 2015 (PHC Tr.) p.30,1/5-17.* The President and owner of TDS is Bob Gregory. Mr. Gregory is also a member of TJFA, L.P. *PHC Tr. p. 33,1/16-23.* TJFA has entered and participated in hearings opposing applications for landfills for several of TDS's competitors. *PHC Tr. p.33,1/24-p.34,1/8.*

The TDS landfill is permitted for 24-hour operations. The hours of operation of the TDS landfill were authorized under former 30 TAC §330.118(a), but which has been re-codified as 30 TAC §330.135(a), although the TCEQ intentionally made the re-codified Site Operating Plan rules more liberal with their 2006 rulemaking, as discussed above.

Early morning collection requirements are common for many landfill customers, such as school districts, universities, hospitals, and other large commercial, industrial, municipal, and governmental entities that are located in urban service areas that are heavily populated or heavily trafficked during normal business hours. If the 130 Environmental Park Facility is to maintain and serve these customers and compete for similar such customers in the future, the 130 Environmental Park Facility must be authorized to accept waste in the hours between 7:00 p.m. and 7:00 a.m.

Weekend operating hours at the 130 Environmental Park Facility are also important to citizens that seek to dispose of waste at the Landfill and work a typical work week, which may prevent them from bringing their waste to the Landfill on a weekday as would be required if 130 Environmental Park's operating hours are limited. Further, certain businesses that are closed on weekends also benefit from weekend collection schedules. Finally, many of these businesses that are open on the weekends are generating waste that could cause nuisance odors if left for several days. These businesses must have weekend collection.

Limiting 130 Environmental Park's operating hours under the same rule under which TDS was granted twenty-four hour operating hours would be to the distinct competitive disadvantage of 130 Environmental Park and to the direct competitive advantage of TJFA's relative, TDS.

130 Environmental Park and the Application satisfy all applicable requirements for the operating hours stated in the Application and Draft Permit.

Alternative Daily Cover

TJFA/EPICC argues that, because the proposed landfill is expected to reach heights of up to roughly 170 feet, it must be covered with adequate soils to reduce odors and windblown waste. TJFA/EPICC's premise - that the landfill is expected to reach heights of up to roughly 170 feet - is used throughout Protestants arguments to give the false impression that a mass of waste will be stacked in a vertical wall at the property boundary. Nothing could be farther from the truth. An

illustrative example of the layout of the landfill and final contours is found in Drawing D1.7. Ex. 130EP-3, p.25. A peak elevation of 736.00 feet is identified in the northern portion of the landfill. Applying the scale of the drawing (in the upper-right corner of the drawing) shows that the peak elevation will be over 1000 feet from the closest property boundary to the north. The toe of the landfill (where the elevation of the final cover meets the ground elevation) is a minimum buffer zone of at least 325 feet within and adjacent to the facility boundary on property owned or controlled by 130 Environmental Park.

TJFA/EPICC and OPIC identify the proximity of the landfill to properties on the northern side of the landfill as a reason not to allow the option of seeking TCEQ approval of alternative daily cover, tied to the alleged problem that alternative daily cover will not provide effect control of feral hogs as vectors. 130 Environmental Park will be required to cover waste with areas every day with well-compacted clean earthen materials or a TCEQ approved alternative cover. Ex. 130EP-5, p.147. Environmental Park must comply with TCEQ rules that require a landfill owner or operator to avoid accumulating more solid waste than can be processed within an adequate time so as to preclude the creation of odors, insect breeding, or harborage of other vectors. 30 TAC §330.551 requires a landfill operator to control on-site populations of disease vectors using proper compaction and daily cover procedures and the use of approved methods when needed. The operator must describe the general methods and performance based frequencies for disease vector control in the SOP.

In addition to the measures, (and as described above) 130 Environmental Park plans an extensive buffer around the working face and the landfill itself, which will diminish much of the dust, odor and noise. 130 Environmental Park will be responsible for protecting the site from feral hogs. If alternative daily cover cannot be demonstrated to control feral hogs under the conditions actually encountered at the Facility, the alternative daily cover will be disallowed or discontinued. Ex. 130EP-5, p.144. Scavenging will be prohibited at all times and not allowed. Ex. 130EP-5, p.145.

If the operator must seek requests authorization to use alternative daily cover, it must first seek authorization from the TCEQ for a specific alternative daily cover. The alternative daily cover, if authorized, will be limited to a 24-hour period after which either waste or daily cover as defined in §330.165(a), and applied as described in Section 8.18.2 of this SOP, must be placed. Ex. 130EP-5, pp.148-149. Pursuant to 30 TAC §330.165(d), alternative daily cover may only be allowed by a temporary authorization under 30 TAC §305.70(m) followed by a major amendment or a modification in accordance with 30 TAC §305.70(k)(1). 30 TAC §330.165(d)(2) requires:

A status report on the alternative daily cover must be submitted on a two-month basis to the executive director during the temporary authorization period describing the effectiveness of the alternative material, any problems that may have occurred, and corrective actions required as a result of such problems.

If the trial period demonstrates the alternative daily cover is not effective, the TCEQ may revoke the temporary authorization and may deny the major amendment or modification.

OPIC asserts that a municipal solid waste landfill has the potential to attract feral hogs to the facility, especially if the waste is not properly managed. This (like the 170-foot tower) is presents a false and unsupported impression. Feral hogs are now throughout the State of Texas but there is

no evidence that they have become a vector or scavenging issue at any of the many landfills throughout the State, many of which use alternative daily cover including tarps. If 130 Environmental Park were to seek authorization from the TCEQ to use tarps or other alternative daily cover that the Facility, the TCEQ would certainly apply whatever experience it has obtained in assessing the effectiveness of that type of alternative daily cover in making a decision whether to approve its use. As yet, there is no evidence of feral hogs being a problem at any municipal solid waste landfill.

Windblown Waste

TJFA/EPICC bases its argument regarding windblown waste on its premise that the Facility will be tall and that it should therefore not be allowed to use alternative daily cover. These arguments are addressed under Alternative Daily Cover above. TJFA/EPICC also asserts that, while the Site Operating Plan provides that the operator will use litter control fences of “sufficient height” to control windblown waste, the Site Operating Plan does not indicate what this height may be. The Site Operating Plan actually states: “The litter control fence will be of sufficient height and will be located as close as practical to the active area to control windblown waste and litter. The height will therefore be sufficient in light of how close they will be to the active area given the practicalities of the working conditions at the time. The provisions for control of windblown waste comply with the requirements of 30 TAC §330.233.

Visual Screening

TJFA/EPICC’s argument regarding visual screening is that “the Site Operating Plan does not explain how Applicant’s clearing of forested areas and perimeter fencing during the months of June, July, and August would affect the visual screening [and that this] results in a plan for visual screening that is incomplete and not adequately specific or enforceable.” *TJFA/EPICC Closing Arguments*, p.88. TJFA/EPICC cites testimony of Russell Marusak, the biologist who prepared the endangered and threatened species report.

Construction of the vegetated screening berm and fencing are part of how 130 Environmental Park will provide visual screening.⁶¹ 130 Environmental Park fails to see the logic of how limiting the clearing for those visual screening features makes the plan for visual screening incomplete. As discussed in various places herein, visual screening at the 130 Environmental Park Landfill is superlative. As stated by Mr. Worrall, an experienced land use planner having extensive experience in permitting of municipal solid waste landfills, visual screening and land use compatibility of municipal solid waste landfills:

The very large buffer zones, the naturally-occurring visual screening, the existing topography, the proposed visual screening berm, and the irregular massing of the landform at the 130 Environmental Park Landfill make this one of the best visually screened landfills I have seen in the thirty-three years that I have been involved in land use and land use compatibility of landfills.

⁶¹ **8.22 Visual Screening of Deposited Waste**

Existing topography and vegetation provide natural screening of deposited waste. Visual screening of deposited waste is provided as part of normal waste disposal and cover placement operations and sequence of development. Final cover will be placed as the landfill reaches final contours. As the site is developed, the visual effect of the disposal activities will be minimized through the use of screening provided by fencing, constructed berms, planted vegetation, and natural vegetation located within the buffer zone. *Ex. 130EP-5p.152.*

Ex. Worrall-2, p.15,1/17-21.

Vector Control and Scavenging

TJFA/EPICC argues that “the Site Operating Plan [does not] outline provisions for preventing scavenging and the spreading of disease vectors by feral hogs, which are known to be present in the area.” *TJFA/EPICC Closing Arguments, p.88.* OPIC also raises feral hogs as an issue in vector control and scavenging. *OPIC Closing Arguments, p. 13.* 130 Environmental Park does not dispute that feral hogs have been sighted in the area of the Facility. As discussed in Alternative Daily Cover above, feral hogs are now throughout the State of Texas. But there is no evidence that they have become a vector or scavenging issue at any of the many landfills throughout the State. As yet, there is no evidence of feral hogs being a problem at any municipal solid waste landfill.

On-site populations of disease vectors (including feral hogs) will be controlled by minimizing the size of the active working face; placing daily, intermediate, and final cover; adhering to the ponded water plan; the use of other approved methods when needed; and following the detailed procedures described in the Site Operating Plan. *Ex. 130EP-5 p.144.* 130 Scavenging (by humans, feral hogs or otherwise) will be prohibited at all times and not allowed. *Ex. 130EP-5 p.145.*

Conclusion

TJFA/EPICC’s reliance on *BFI* is misplaced. The *BFI* opinion is based on a rule regarding site operating plans that has been repealed. Under the current rule, the SOP must include “provisions for site management and the site operating personnel to meet the *general* and site-specific requirements” of Subchapter D. (*Emphasis added.*)

130 Environmental Park’s Site Operating Plan meets the requirements of 30 TAC §330.65 and Subchapter D, including those related to water supply, access road, flooding, operating hours, alternative daily cover, windblown waste, visual screening, and scavenging. The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding site operating plan.

21. ODOR

OPIC, Caldwell County and TJFA/EPICC argue that odor is likely to be an issue due to the close proximity to existing residents living off of Homannville Trail. OPIC further argues that the proposed facility has three features that will exacerbate nuisance conditions: (1) the site operating plan proposes operations 24 hours a day, seven days week; (2) the draft permit does not require construction of a vegetated screening berm; and (3) the site operating plan anticipates the use of alternative daily.

Caldwell County argues that the earthen berms are not effective in diluting the odors once the elevation of the landfill is higher than the berm.

TJFA/EPICC cites 30 TAC §330.149 and argues that odor management plan does not address all the sources of odors, but only addresses some very specific sources. TJFA/EPICC further argues that the odor management plan does not address sheetrock, food and these other regular sources of odors but only “special wastes,” which the odor management plan describes as “odor producing wastes,” and special problems like ponding, “storage and processing facilities,” and a minimum

buffer distance. An adequate odor management plan is essential, considering the height of the proposed landfill and its proximity to nearby residences.

OPIC recommends that the proposed facility should be required to operate according to the standard TCEQ hours, that a permit condition requiring a vegetated screening berm be added, and that 130 Environmental Park be required to utilize daily cover.

Hours of Operation

Hours of operation are addressed in Section 20 - Site Operating Plan - Operating Hours above. Because the Application provides for extensive buffer zones, substantially exceeding the size of buffer zones required by TCEQ rules, the operating hours provided in the Application are justified and appropriate. OPIC's recommended special provision limiting the operating hours is therefore unjustified and unnecessary.

Vegetated Screening Berm

The Application includes a vegetated screening berm in the site design. *E.g., Ex. 130EP-3, p.24, 25, 29, 30 (Landfill Section 4), and 34 (specific notation of "Landscape Berm")*. The Application materials are incorporated into the permit by reference and will be conditions of the permit upon approval by the Commission. *Draft Permit - Section VII - Standard Permit Conditions, Ex. ED-SO-8, p.70.*

Height and Proximity

As discussed in Section 20 - Site Operating Plan - Alternative Daily Cover, Protestants conflate and confuse the maximum height of the landfill over existing grades and the proximity of adjacent properties. The peak elevation of 736.00 msl. In the northern portion of the Site will be over 1000 feet from the closest neighboring property to the north. The toe of the landfill (where the elevation of the final cover meets the ground elevation) is a minimum buffer zone of at least 325 feet within and adjacent to the facility boundary on property owned or controlled by 130 Environmental Park. The vegetated screening berm will be between the toe of the landfill and the neighboring properties.

Alternative Daily Cover

OPIC's arguments regarding the proposed option for use of alternative daily cover are addressed in Section 20 - Site Operating Plan - Alternative Daily Cover above.

Applicable Rule

30 TAC §330.149 requires an odor management plan in the Site Operating Plan. The Odor Management Plan is contained in Section 8.10 - Odor Management Plan, of Part IV of the Application. *Ex. 130EP-5, pp.143-144.* The applicable rule does not require a calculation of the degree to which odors will be controlled or any details beyond those required under 30 TAC §330.149. As discussed in Section 20 - Site Operating Plan, the current and applicable rules do not require the detail sought by TJFA/EPICC.

The Applicant offered Martha A. O'Brien as its expert on odors. Ms. O'Brien testified that the Application satisfies all requirements regarding odors, odor control, and avoidance of odors. *Ex. App. O'Brien-1, p.2.* She also testified that if the 130 Park Environmental Landfill is developed and operated as set out in the Application, it will control odors so that nuisance odors will not be

released from the facility. *Ex. App. O'Brien-1, p.4*. Furthermore, Ms. O'Brien testified that odors from the proposed landfill will not interfere with nearby landowners' normal use of their properties. *Tr. p.971*. No other party presented a testifying expert of other evidence regarding whether the Odor Management Plan satisfies the requirements of TCEQ rules.

The Site Operating Plan in the Application includes an Odor Management Plan that addresses sources of odors and includes general instructions to control odors or sources of odors as required by the applicable rule. *Ex. 130EP-5 pp.143-144*. The Application contains ventilation and odor control measures for each storage, separation, processing, and disposal unit. *Ex. 130EP-2 pp.28-31, Ex. 130EP-5 pp.143-144, 147-151*. Among the wastes that will not be accepted at the Facility are medical waste, sewage, dead animals and/or slaughterhouse waste, sludge, grease trap waste, and grit trap waste. *Ex. 130EP-5 p.90*. Leachate and landfill gas condensate will not be recirculated at the Facility. *Ex. 130EP-5 p.153*. Odors associated with waste acceptance and disposal operations, and operation of the storage and processing areas, will be managed in accordance with provisions of the Odor Management Plan. *Ex. 130EP-5 pp.143-144*. The Odor Management Plan discusses wastes that require special attention due to potential odors. *Ex. 130EP-5 pp.143-144*.

The Application satisfies, and the 130 Environmental Park Landfill will satisfy, all applicable regulatory requirements regarding odors, odor controls and avoidance of nuisance odors. *Testimony of Martha O'Brien at Ex. O'Brien-1 p.2/l.40-42*. The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding odor.

22. WATER SUPPLY

Water will be supplied to the Facility by Polonia Water Supply Corporation. *Ex. 130EP-48*. Potable water (bottled water) will be provided for all employees and visitors at/near the scale house and/or maintenance building. *130EP-5 p.159*. The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding water supply.

TJFA/EPICC argues that 130 Environmental Park has not demonstrated that it has an adequate supply of water available in order to comply with these regulatory requirements. TJFA/EPICC bases its argument on there being no demonstration that Polonia is capable of providing the water required for the landfill. No such demonstration is required. As discussed above in Section 20 - Site Operating Plan, the current and applicable rules do not require that an applicant provide the level of detail TJFA/EPICC's suggested demonstration would require. The current rule provides that the Site Operating Plan must include "provisions for site management and the site operating personnel to meet the *general* and site-specific requirements" of Subchapter D. (*Emphasis added.*) The provision for the site operating personnel must include a description of the *general* instructions that they are to follow concerning the operational requirements of the subchapter. *30 TAC §330.127(3) (emphasis added)*.

TJFA/EPICC cites 30 TAC §330.221, which requires that an adequate supply of water under pressure must be available for firefighting purposes. The Site Operating Plan provides:

An adequate supply of water under pressure is available for firefighting purposes for the storage and entrance facilities located within the facility entrance area. These facilities include the Citizen's Convenience Center, Large Item Storage Area, and

the Used/Scrap Tire Storage Area. The supply of water under pressure is provided from the above ground water storage tank located adjacent the Transfer Station as provided under Registration No. 40269.

Ex. 130EP-5, p.133. No additional detail is required by the TCEQ rules. TJFA/EPICC argues that the transfer station is not “listed in the Site Operating Plan’s list of support facilities” TJFA/Closing Arguments, p.91. 130 Environmental Park is not aware of a list of support facilities in the Site Operating Plan or any rule of the TCEQ that requires one. The applicable rule requires that an adequate supply of water under pressure must be available for firefighting purposes. An adequate supply of water under pressure is available for firefighting purposes and is identified in the Site Operating Plan.

TJFA/EPICC also cites 30 TAC §330.249 which requires an owner or operator to provide potable water and sanitary facilities for all employees and visitors. The Site Operating Plan provides:

Potable water and sanitary facilities will be provided for all employees and visitors at/near the scale house and/or maintenance building. Bottled water will be provided for potable water. Sanitary facilities, consisting of portable sanitary facilities and/or constructed restrooms, will be provided. A private contractor will remove and properly dispose of all wastewater from sanitary facilities not managed in a properly permitted on-site sewage facility; wastewater from sanitary facilities will not be placed in the facility's contaminated water storage tank.

Ex. 130EP-5, p.159. No additional detail is required by the TCEQ rules. TJFA/EPICC argues that 130 Environmental Park “has in no way quantified the potable water needs of the facility”. *TJFA/EPICC Closing Arguments, p.92.* The applicable rule requires the owner or operator to provide potable water and sanitary facilities for all employees and visitors. 130 Environmental Park is not required to quantify the potable water needs of the facility and the TCEQ rules require no such quantification. The applicable rule requires an owner or operator to provide potable water facilities for all employees and visitors. Potable water facilities will be provided to all employees and visitors as described in the Site Operating Plan.

TJFA/EPICC argues that the draft permit should contain a special provision that prohibits the use of on-site groundwater as a water source at the facility. As discussed in Section 6 - Geology and Soils above, there is insufficient groundwater available for the facility. It is pointless to have such a special provision. The Site Operating Plan provides that water appropriate to the needs and requirements will be available as required by the TCEQ rules. The suggested special provision is unwarranted and unnecessary.

TJFA/EPICC also argues that the draft permit should contain a special provision that requires the Transfer Station to be constructed prior to construction of the landfill. This is also pointless. The Application and Site Development Plan identify a source of water under pressure. The TCEQ rules require that a source of water under pressure be provided and the above-ground water storage tank must be provided as a requirement of the landfill Application, which will become an operational requirement of the permit. *See, Draft Permit - VII. Standard Permit Conditions, A. Ex. ED-SO-8, p.70.* The suggested special provision is unwarranted and unnecessary.

TJFA/EPICC acknowledges that 130 Environmental Park has obtained a water service letter (or will serve letter) from Polonia Water Supply Corporation. The water service letter is in evidence as Ex. 130EP-48. The water service letter provides: "The 130 Environmental Park development is in the Polonia Water Supply Corporation CCN, and Polonia will service the development when all conditions of the tariff have been met." *Ex. 130EP-48.*

Water will be supplied to the Facility by Polonia Water Supply Corporation. *Ex. 130EP-48.* Potable water (bottled water) will be provided for all employees and visitors at/near the scale house and/or maintenance building. *130EP-5 p.159.* The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding water supply.

23. BUFFER ZONES

No other party filed closing arguments regarding buffer zones. However, many of the arguments made by other parties are based on asserted proximity of nearby residents. The buffer zones proposed for the 130 Environmental Park Facility and Site are greater than required by applicable rules.

Buffer zones, between the Facility boundary and the Landfill footprint and between the Facility boundary and waste storage or processing activities, will exceed the TCEQ-required minimum of 125 feet. *Ex. 130EP-1 pp.89, 131.* No solid waste unloading, storage, disposal, or processing operations will occur within any buffer zone, or right-of-way that crosses the Site, including the 125-foot buffer zone of the landfill. *Ex. 130EP-5 p.140.* The buffer zones will provide for safe passage of fire-fighting and other emergency vehicles. *Ex. 130EP-5 p.140.* Buffer zones will be marked with yellow markers (posts extending at least six feet above the ground surface) placed along each buffer zone boundary at all corners and between corners at intervals of 300 feet. *Ex. 130EP-5 pp.140-141.* The inundation area of the Plum Creek Conservation District easement for the Site 21 Reservoir extends onto the Site in the south and southeast, but does not extend to any area to be used for waste unloading, storage, processing, or disposal. *See Ex. 130EP-1 p.131, Ex. 130EP-6 p.38.* No solid waste unloading, storage, disposal, or processing operations will occur within any easement, buffer zone, or right-of-way that crosses the Site. *Ex. 130EP-5 p.140.*

The Facility will comply with the Easements and Buffer Zones Location Restriction in 30 TAC §330.543. *Ex. 130EP-1 p.837.* The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding easements and buffer zones.

24. SCREENING

No other party filed arguments regarding the proposed screening at the 130 Environmental Park Facility and Site. However, several arguments made by other parties are based on alleged visibility issues. As discussed in Section 4 - Land Use Compatibility above, visual screening at the 130 Environmental Park Facility and Site will be superlative.

Existing topography and vegetation will provide natural screening of deposited waste. *Ex. 130EP-1 p.131, Ex. 130EP-5 p.152.* Visual screening of deposited waste will be provided as part of normal waste disposal and cover placement operations and sequence of development. *Ex. 130EP-5 p.152.* Final cover will be placed as the landfill reaches final contours. *Ex. 130EP-5 p.152.* As the site is

developed, the visual effects of the disposal activities will be minimized through the use of screening provided by fencing, constructed berms, planted vegetation, and natural vegetation located within the buffer zone. *Ex. 130EP-5 p.152*. Visibility of the Facility will be limited by existing topography, naturally occurring tree lines, and the vegetated landscaping plan for the Facility (including an effective screening berm). *Ex. Worrall-1 p.6/l.15-33, p.10/l.30-p.11/l.12, and p.14/l.3-p.15/l.38; Ex. Worrall-10; Ex. 130EP-1 p.143*. The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding screening.

25. PERMIT DURATION

TCEQ's municipal solid waste rules state that "a registration or permit is normally issued for the life of the facility... When deemed appropriate a registration or permit may be issued for a specific period of time." *30 TAC §330.71(b) and (c)*. The projected life of the 130 Environmental Park Landfill facility is 44 years. *Ex. 130EP-1 p.44; Ex. 130EP-3 pp.9,14, and 53-54*.

TJFA/EPICC argue that a limited permit duration is supported by the floodplain and the Site 21 dam. TJFA/EPICC bases its argument on an alleged (but unsupported) history of extreme weather events and on an alleged (but unsupported) increased development in the area which it alleges could impact the floodplain boundaries.

As discussed in Section 16 - Surface Water and Drainage and Section 17 - Floodplains, the Application complies with all regulatory requirements related to surface water and floodplains. The Application demonstrates that the Facility will not result in adverse alteration of natural drainage patterns and the Application contains all information regarding surface water and drainage required by the TCEQ's rules. The Application demonstrates that the landfill unit will not be located in a 100-year floodplain and contains all information regarding floodplains required by the TCEQ's rules. TJFA/EPICC has not shown that historic weather events have had (or will have) any effect on natural drainage patterns. TJFA/EPICC has not shown that there will either be an increase in development or that an increase in development would have an effect on floodplains, the Site 21 Reservoir or other existing surface water drainage. TJFA/EPICC has therefore not shown that the 130 Environmental Park Facility fails to meet the standards of Chapter 330 or otherwise shown good cause to deviate from the TCEQ standard of issuing the permit for the life of the site.

It is appropriate and consistent with TCEQ's normal practice for the permit for the 130 Environmental Park Landfill facility to be issued for the life of the Facility. The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding permit duration.

26. CLOSURE PLAN

No other party filed arguments regarding the Closure Plan for the Facility.

The Application includes a Closure Plan for the Facility in Part III, Attachment H. *Ex. 130EP-5 pp.42-59*. The Closure Plan includes drawings showing the final constructed contour of the entire landfill, including internal drainage and side slopes, accommodation of surface drainage entering and departing the completed fill area, and areas subject to flooding due to a 100-year frequency

flood. *Ex. 130EP-5 pp.58-59.* The estimated largest area requiring final cover during the active life of the Landfill is approximately 75 acres. *Ex. 130EP-5 p.47.* The estimated maximum inventory of waste and operational cover at the Facility during its life is approximately 33.1 million cubic yards, which is the total volume of the Landfill. *130EP-5 p.47.* The Closure Plan specifies the procedures for closure of any portion or all of the Landfill. *Ex. 130EP-5 p.42-59.* The Closure Plan includes a description of the steps that will be undertaken to close the Landfill, a schedule for final closure, a description of the final cover system, and the methods used to install the final cover. *Ex. 130EP-5 p.42-59.* The final cover system will consist of an infiltration layer, a flexible membrane cover, a drainage layer on sideslopes, a cushion layer on topslopes, and an erosion control layer. *Ex. 130EP-5 pp.45, and 57-59.* The infiltration layer will be a minimum of 18 inches of compacted soil with a coefficient of permeability less than or equal to 1×10^{-5} cm/sec. *Ex. 130EP-5 pp.45 and 57-59.* The estimated cost of hiring a third party to close the largest area of the Landfill requiring final closure at any time during its active life is \$10,121,410.00. *Ex. 130EP-5 pp.51 and 70-97.* The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding closure plan.

27. POST-CLOSURE PLAN

No other party filed arguments regarding the Post-Closure Plan for the Facility.

The Application includes, in Part III Attachment I, a Post-Closure Plan addressing the ongoing monitoring and maintenance activities that will be conducted at the Site for 30 years following closure. *Ex. 130EP-5 pp.61-68.* The estimated cost of hiring a third party to conduct postclosure care activities in accordance with the Post-Closure Plan is \$6,794,348. *Ex. 130EP-5 pp.68, 70-97.* The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding postclosure plan.

28. FINANCIAL ASSURANCE

No other party filed arguments regarding Financial Assurance for the Facility.

TCEQ rules require the submission of cost estimates for closure of a municipal solid waste landfill facility with a new permit application. *30 TAC §330.503(a).* The Application includes a cost estimate for closure of the Facility. *Ex. 130EP-5 pp.51, 73-74, 79 and 84-89.* TCEQ rules require the owner or operator of a municipal solid waste landfill unit to establish financial assurance for closure of the unit in accordance with 30 TAC Chapter 37 (Financial Assurance for Municipal Solid Waste Facilities). *30 TAC §330.503(b).* TCEQ rules require the submission of cost estimates for post-closure care of a municipal solid waste landfill facility with a new permit application. *30 TAC §330.507(a).* The Application includes a cost estimate for post-closure care of the Facility. *Ex. 130EP-5 pp.68, 73, 75, 80 and 91-94.* TCEQ rules require the owner or operator of a municipal solid waste landfill unit to establish financial assurance for the costs of post-closure care of the unit in accordance with 30 TAC Chapter 37 (Financial Assurance for Municipal Solid Waste Facilities). *30 TAC §330.507(b).* TCEQ rules require that a copy of the required documentation for financial assurance be submitted at least 60 days prior to the initial receipt of waste at the Facility. *30 TAC §330.63(j).* 130 Environmental Park will submit a copy of the documentation required to demonstrate financial assurance as specified in 30 TAC Chapter 37, Subchapter R at least 60 days prior to the initial receipt of waste at the Facility. *Ex. 130EP-5 pp.77 and 96-97.* The

Application includes sufficient information and demonstrates compliance with TCEQ rules regarding financial assurance.

29. IMPACTS ON HEALTH, WELFARE, ENVIRONMENT, OR PHYSICAL PROPERTY OF NEARBY RESIDENTS AND PROPERTY OWNERS

TJFA/EPICC refers to its arguments in other sections of its Closing Arguments as basis for an allegation that 130 Environmental Park failed to meet the requirement of this section. 130 Environmental Park refers the ALJs to its responses in the other sections of this Response to Closing Arguments.

TJFA/EPICC also argue that 130 Environmental Park did not adequately consider how the proposed Facility would impact PCCD's property rights. 130 Environmental Park refers the ALJs to Section 1 - Sufficiency of Property rights for a discussion of this issue. TJFA/EPICC further argues that the landfill poses a threat to PCCD's surface water and groundwater rights and authority. 130 Environmental Park refers the ALJs to Section 1 - Sufficiency of Property Rights and to Section 6 - Geology and Soils, Section 7 - Hydrogeology, Section 9 - Groundwater Monitoring, and Section 16 - Surface Water Drainage.

As specifically regards impacts on health, welfare, environment, or physical property of nearby residents and property owners, 130 Environmental Park provides the following. TCEQ's municipal solid waste rules provide standards for the design, permitting and operation of municipal solid waste facilities to protect human health and welfare, the environment, and physical property of nearby residents and property owners. *Health & Safety Code Sec. 361.002(a); 30 TAC §§330.1(a) and 330.61(h); Testimony of Kerry D. Maroney, P.E., R.P.L.S. at Ex. Maroney-1 p.5/l.38-41.* A facility permitted and operated in compliance with TCEQ's municipal solid waste rules will be protective of human health and welfare, the environment, and physical property of nearby residents and property owners. The 130 Environmental Park Landfill facility will be protective of human health and welfare, the environment, and physical property of nearby residents and property owners. The Application includes sufficient information and demonstrates compliance with TCEQ rules regarding impacts on health, welfare, environment, or physical property of nearby residents and property owners.

30. ENFORCEABILITY OF DRAFT PERMIT

TJFA/EPICC refers to other sections of its brief for its arguments that the access road is not included in the draft permit and the TCEQ would not be able to enforce any permit provisions that relate to accessing the site or maintenance of the access road and that it is not clear that TCEQ could prohibit Applicant from changing its proposed access route.

Caldwell County also refers to other sections of its Closing Arguments and argues that the testimony and evidence do not identify any provision within the TCEQ rules and regulations that provide enforcement authority to the TCEQ for entrance road outside of the permit boundary.

130 Environmental Park refers to Section 5 - Transportation and Traffic in response to TJFA/EPICC's and Caldwell County's arguments regarding enforceability of the draft permit as relates to the entrance road and site access.

The ED's expert witness, Mr. Steven Odil, testified that the TCEQ has jurisdiction to enforce the requirements for construction of the access road, control of mud accumulations on the access road, and other permit requirements outside of the permit boundary. *Tr. p.1923,1/16-19*. The TCEQ has the ability to enforce anything that the permit requires even when outside the permit boundary. *Tr. p.1923,1/25-p.1924,1/5*.

130 Environmental Park will be required to obtain (and provide the ED) its floodplain development permit (including floodplain crossings by the entrance road outside of the permit boundary) prior to commencement of physical construction. 130 Environmental Park will be required to implement all roadway improvements (including construction of the entrance road outside of the permit boundary) prior to the pre-opening inspection of the facility. The special provisions will be a condition required to be satisfied before 130 Environmental Park can operate the landfill and are therefore enforceable by the ED. (*See discussion in Section 31 - Permit Special Provisions below*.)

TCEQ is authorized to enforce the provisions of any permit it issues. *Water Code Sec. 7.002*. A permit issued by TCEQ based on the Application and the draft permit (including special provisions) is enforceable.

31. PERMIT SPECIAL PROVISIONS

Section IX of the draft permit includes two special provisions, as follow:

A. Before physical construction may commence, the permittee must provide the Executive Director with a floodplain development permit from the city, county, or other agency with jurisdiction over improvements authorized by this permit.

B. The facility must implement all roadway improvements specified in Part II, Appendix IIC of the permit application prior to the pre-opening inspection of the facility. *Ex. ED-SO-8 p.45*. No other permit special provisions are necessary.

TJFA/EPICC requests five additional special provisions:

- (1) Amend the application to include the access road. For the reasons set forth in Section 5 - Transportation and Traffic above, the requested special provision is unnecessary and inappropriate. 130 Environmental Park requests that this special provision be denied.
- (2) Require Applicant to haul in adequate soils for construction and operation. For the reasons set forth in Section 6 - Geology and Soils, the requested special provision is unnecessary and inappropriate. 130 Environmental Park requests that this special provision be denied.*
- (3) Require Applicant to seek a major amendment before it may be allowed to use Alternative daily cover. For the reasons set forth in Section 20 - Site Operating Plan (discussion of Alternative Daily Cover), the requested special provision is unnecessary and inappropriate. 130 Environmental Park requests that this special provision be denied.*
- (4) Require a minimum of six inches of earthen material suitable for daily cover be used daily, and require that the earthen material be hauled in, in adequate amounts by Applicant, since it has not demonstrated that suitable materials exist on site. For the reasons set forth in Section 20 - Site Operating Plan (discussion of Alternative Daily Cover), and in Section 6 - Geology and Soils the requested special provision is unnecessary and inappropriate. 130 Environmental Park requests that this special provision be denied.*
- (5) Prohibit clearing during all months of the year, except 3 summer months. For the reasons set forth in Section 14 - Endangered or Threatened Species above, the requested special provision

is unnecessary and inappropriate. 130 Environmental Park requests that this special provision be denied.

- (6) Include a 5-year permit term. For the reasons set forth in Section 25 - Permit Duration above, the requested special provision is unnecessary and inappropriate. 130 Environmental Park requests that this special provision be denied.

In addition to the reasons that these proposed special provisions should be denied as set forth in other parts of this Response to Closing Arguments, these requested special provisions should be denied because they are sought for anti-competitive reasons to increase the operating costs of the 130 Environmental Park Landfill by TJFA, which is an affiliated entity to Texas Disposal Systems Landfill, Inc. (TDS). Mr. Dennis Hobbs, President of TJFA, is employed by TDS, a solid waste disposal company that operates a municipal solid waste landfill to the north of the 130 Environmental Park Site. *Testimony of Dennis Hobbs, Transcript of Prehearing Conference, March 26, 2015 (PHC Tr.) p.30,1/5-17*. The President and owner of TDS is Bob Gregory. Mr. Gregory is also a member of TJFA, L.P. *PHC Tr. p. 33,1/16-23*. TJFA has entered and participated in hearings opposing applications for landfills for several of TDS's competitors. *PHC Tr. p.33,1/24-p.34,1/8*. Each of the identified special provisions would increase the demand for importation of soil. As Messrs. Hobbs and Gregory well know, importation of soil, in the quantities needed for construction and operations, including for cover, is very expensive. As demonstrated in Section 6 - Geology and Soils above, there is abundant soil available on the 130 Environmental Park Site that is suitable for liner construction and other site operations. The purpose behind these proposed special provisions is to run up the cost of constructing and operating the landfill to the competitive disadvantage of 130 Environmental Park and thereby to the competitive advantage of TDS.

Caldwell County does not request special provisions but the Application should be denied. For the reasons set forth throughout this Response to Closing Arguments, the Application complies with all applicable requirements. 130 Environmental Park requests that the Application be granted and the draft permit be issued with the special provisions contained therein (and described above).

PCCD requests four special provisions:

- (1) No construction or operation should begin without having a water supply agreement in place for necessary water for construction and operations. For the reasons set forth in Section 22 - Water Supply above, the requested special provision is unnecessary and inappropriate. 130 Environmental Park requests that this special provision be denied.
- (2) No operations should be authorized until there is a soil stockpile for fire suppression and cover in place that satisfies the quantity and placement requirements of TCEQ. For the reasons set forth in Section 10 - General Facility Design (discussion of Soil Stockpiles for Fire Suppression above, the requested special provision is unnecessary and inappropriate. 130 Environmental Park requests that this special provision be denied.
- (3) If monitoring of surface or groundwater quality reveals potential problems, operations will cease until the cause is determined and corrective action taken. For the reasons set forth in Section 16 - Surface Water and Drainage above, the requested special provision is unnecessary and inappropriate. 130 Environmental Park requests that this special provision be denied.
- (4) No interference with or adverse impacts on PCCD's easement rights are authorized. For the reasons set forth in Section 1 - Sufficiency of Property Rights, the requested special provision is unnecessary and inappropriate. 130 Environmental Park requests that this special provision

be denied. Specifically, the permit to be issued cannot and will not interfere with the property rights of any person. 30 TAC §§330.67(a).

OPIC requests that a special provision be added construction of an appropriate screening berm. For the reasons set forth in Section 21 - Odor, the requested special provision is unnecessary and inappropriate. 130 Environmental Park requests that this special provision be denied.

The ED argues that the use of special provisions is not uncommon and that the Commissioners and staff have used special provisions to:

- (1) add things to the permit based on the specifics of the application;
- (2) remind regional enforcement teams of pending requirements or improvements; and
- (3) allow for coordination with other agencies to occur without effecting MSW Permits timelines.

130 Environmental Park will be required to obtain (and provide the ED) its floodplain development permit (including floodplain crossings by the entrance road outside of the permit boundary) prior to commencement of physical construction. 130 Environmental Park will be required to implement all roadway improvements (including construction of the entrance road outside of the permit boundary) prior to the pre-opening inspection of the facility. The special provisions will be a condition required to be satisfied before 130 Environmental Park can operate the landfill and are therefore enforceable by the ED. (*See discussion in Section 18 - Local Regulations/Approvals above.*)

The ED argues that the conditional nature of the proposed special provisions of the draft permit ensure that the rule requirements will be met or the permit will be ineffective. The ED reviewed the Application, the draft permit, and the relevant testimony and recommends that the special provisions be allowed to remain as part of the permit. 130 Environmental Park agrees to and accepts the special provisions contained in the draft permit.

32. ASSESSMENT OF REPORTING AND TRANSCRIPTION COSTS

TJFA/EPICC argues that 130 Environmental Park received the most benefits from having a transcript, as it has a direct financial interest in the outcome of this matter. TJFA/EPICC further argues that EPICC is a citizen-run non-profit organization without the same financial resources as the Applicant in this matter and that TJFA has incurred substantial costs associated with drilling borings on the proposed landfill site.

TJFA and EPICC were represented by the same private law firm attorneys in connection with the contested case hearing, demonstrating these parties' ability to pay costs. In the contested case hearing, each of these parties presented direct case testimony and exhibits and cross-examined witnesses presented by other parties to the hearing. *Order No. 2; Tr. pp.1-2195*. TJFA and EPICC presented hearing evidence and witnesses jointly and were represented by the same attorneys in the contested case hearing. *Tr. pp.1-2195*.

The hearing transcript consists almost entirely of questions asked of witnesses by party representatives and the witnesses' answers to those questions. Approximately 90% of the transcript pages consist of questions/answers attributable to the Applicant, PCCD, Caldwell County, TJFA, and EPICC. (The remaining 10% is questions/answers attributable to the TCEQ Executive Director

and OPIC, parties against whom reporting and transcript costs may not be assessed.) *Tr. pp.1-2195; 30 TAC §80.23(d)(2)*. The approximate percentages of that 90% of the hearing transcript pages attributable to the Applicant, PCCD, Caldwell County, TJFA, and EPICC are: Applicant – 22%, PCCD – 6%, Caldwell County – 20%, TJFA and EPICC (combined because these parties shared attorneys and witnesses) – 52%. *Tr. pp.1-2195*.

Allocating the transcript costs among the above parties based on the above percentages is just and reasonable and results in the following allocation: Applicant – \$3,679.69, PCCD – \$1,003.55, Caldwell County – \$3,345.17, TJFA and EPICC – \$8,697.44. *Tr. pp.1-2195; Ex. 130EP-60*.

33. ADDITIONAL ISSUES

Site 21 Reservoir

Caldwell County argues that the Site 21 Reservoir and the proximity of the floodplain, as discussed in other parts of Caldwell County’s Closing Arguments make this proposed landfill development uncommon. Caldwell County’s arguments in this regard are addressed in other parts of its Closing Arguments and 130 Environmental Park refers the ALJs to its responses throughout this Response to Closing Arguments.

Transfer Station

TJFA/EPICC include in their Closing Arguments several references to the 130 Environmental Park Transfer Station, a Type V municipal solid waste transfer station authorized by TCEQ Registration No. 40269 (issued by TCEQ on February 5, 2015) with a facility boundary consisting of the same 519.746 acres as the Permit Boundary for the 130 Environmental Park Landfill. *Ex. 130EP-8; Ex. Welch-1 p.4/l.33-p.5/l.23*. Attachment 3 to this Response to Closing Arguments is Applicant’s Amended Proposed Findings of Fact and Conclusions of Law, which include as Findings of Fact 7 and 8 the following two new Background findings of fact related to the transfer station, and in which subsequent findings of fact are re-numbered. 130 Environmental Park, LLC respectfully requests that the ALJs include these two additional findings of fact in their Proposal for Decision.

7. The 130 Environmental Park Transfer Station is a Type V municipal solid waste transfer station authorized by TCEQ Registration No. 40269 (issued by TCEQ on February 5, 2015) with a facility boundary consisting of the same 519.746 acres as the Permit Boundary for the 130 Environmental Park Landfill.
8. The registration application for the 130 Environmental Park Transfer Station was filed with TCEQ on September 4, 2013 and was pending at TCEQ from that time until the registration was issued by TCEQ.

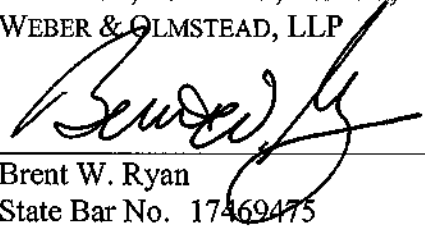
B. PRAYER

WHEREFORE, premises considered, 130 Environmental Park respectfully requests that the ALJs prepare a Proposal for Decision (1) recommending the granting of a permit to 130 Environmental Park with the provisions as set out in the Draft Permit prepared and recommended by the TCEQ Executive Director, (2) including as proposed findings of fact and conclusions of law those set out in Attachment 3 hereto: Applicant's Amended Proposed Findings of Fact and Conclusions of Law, (3) recommending assessment of reporting and transcription costs as set out in Section A. 32 above.

Respectfully submitted,

MCCELROY, SULLIVAN, MILLER,
WEBER & OLMSTEAD, LLP

By:

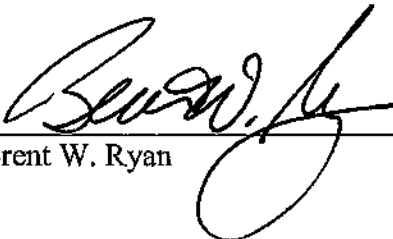


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CERTIFICATE OF SERVICE

On November 28, 2016, a true and correct copy of the foregoing was sent to each party representative via email and/or first-class mail, as shown on the attached service list. In addition, a Word version of the foregoing document was submitted to Ms. Hilary Aguirre at Hilary.Aguirre@soah.texas.gov.


Brent W. Ryan

SERVICE LIST

SOAH Docket No. 582-15-2082; TCEQ Docket No. 2015-0069-MSW
Application of 130 Environmental Park Landfill, LLC for Proposed Permit No. 2383

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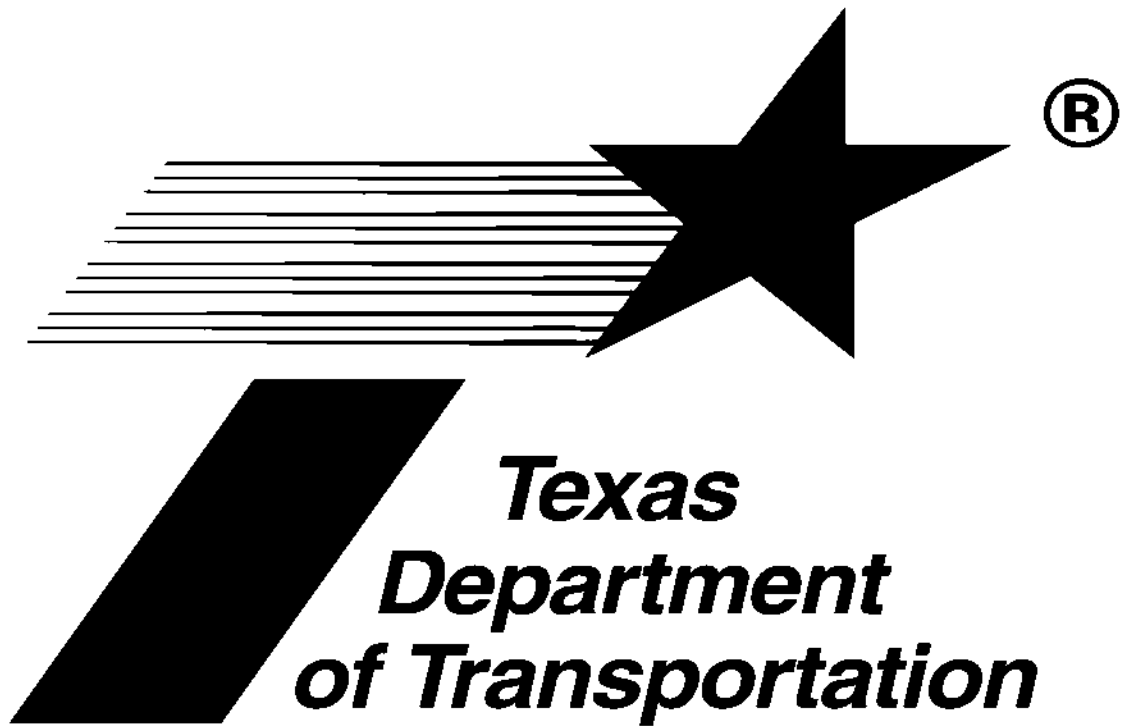
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ATTACHMENT 2

Hydraulic Design Manual



Revised July 2016

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Where:

t_{ch} = channel flow time (hr.)

L_{ch} = channel flow length (ft)

S_{ch} = channel flow slope (ft/ft)

n = Manning's roughness coefficient $\frac{a}{R^{2/3}}$

R = channel hydraulic radius (ft), and is equal to $\frac{a}{P_w}$, where: a = cross sectional area (ft²) and P_w = wetted perimeter (ft), consider the uniform flow velocity based on bank-full flow conditions. That is, the main channel is flowing full without flow in the over-banks. This assumption avoids the significant iteration associated with other methods that employ rainfall intensity or discharges (because rainfall intensity and discharge are dependent on time of concentration).

Manning's Roughness Coefficient Values

Manning's roughness coefficients are used to calculate flows using Manning's equation. Values from American Society of Civil Engineers (ASCE) 1992, FHWA 2001, and Chow 1959 are reproduced in Table 4-7, Table 4-8, and Table 4-9.

Table 4-7: Manning's Roughness Coefficients for Open Channels

Type of channel	Manning's n
A. Natural streams	
1. Minor streams (top width at flood stage < 100 ft)	
a. Clean, straight, full, no rifts or deep pools	0.025-0.033
b. Same as a, but more stones and weeds	0.030-0.040
c. Clean, winding, some pools and shoals	0.033-0.045
d. Same as c, but some weeds and stones	0.035-0.050
e. Same as d, lower stages, more ineffective	0.040-0.055
f. Same as d, more stones	0.045-0.060
g. Sluggish reaches, weedy, deep pools	0.050-0.080
h. Very weedy, heavy stand of timber and underbrush	0.075-0.150
i. Mountain streams with gravel and cobbles, few boulders on bottom	0.030-0.050
j. Mountain streams with cobbles and large boulders on bottom	0.040-0.070
2. Floodplains	
a. Pasture, no brush, short grass	0.025-0.035
b. Pasture, no brush, high grass	0.030-0.050

Table 4-7: Manning's Roughness Coefficients for Open Channels

Type of channel	Manning's n
c. Cultivated areas, no crop	0.020-0.040
d. Cultivated areas, mature row crops	0.025-0.045
e. Cultivated areas, mature field crops	0.030-0.050
f. Scattered brush, heavy weeds	0.035-0.070
g. Light brush and trees in winter	0.035-0.060
h. Light brush and trees in summer	0.040-0.080
i. Medium to dense brush in winter	0.045-0.110
j. Medium to dense brush in summer	0.070-0.160
k. Trees, dense willows summer, straight	0.110-0.200
l. Trees, cleared land with tree stumps, no sprouts	0.030-0.050
m. Trees, cleared land with tree stumps, with sprouts	0.050-0.080
n. Trees, heavy stand of timber, few down trees, flood stage below branches	0.080-0.120
o. Trees, heavy stand of timber, few down trees, flood stage reaching branches	0.100-0.160
3. Major streams (top width at flood stage > 100 ft)	
a. Regular section with no boulders or brush	0.025-0.060
b. Irregular rough section	0.035-0.100
B. Excavated or dredged channels	
1. Earth, straight and uniform	
a. Clean, recently completed	0.016-0.020
b. Clean, after weathering	0.018-0.025
c. Gravel, uniform section, clean	0.022-0.030
d. With short grass, few weeds	0.022-0.033
2. Earth, winding and sluggish	
a. No vegetation	0.023-0.030
b. Grass, some weeds	0.025-0.033
c. Deep weeds or aquatic plants in deep channels	0.030-0.040
d. Earth bottom and rubble sides	0.028-0.035
e. Stony bottom and weedy banks	0.025-0.040
f. Cobble bottom and clean sides	0.030-0.050

Table 4-7: Manning's Roughness Coefficients for Open Channels

Type of channel	Manning's n
g. Winding, sluggish, stony bottom, weedy banks	0.025-0.040
h. Dense weeds as high as flow depth	0.050-0.120
3. Dragline-excavated or dredged	
a. No vegetation	0.025-0.033
b. Light brush on banks	0.035-0.060
4. Rock cuts	
a. Smooth and uniform	0.025-0.040
b. Jagged and irregular	0.035-0.050
5. Unmaintained channels	
a. Dense weeds, high as flow depth	0.050-0.120
b. Clean bottom, brush on sides	0.040-0.080
c. Clean bottom, brush on sides, highest stage	0.045-0.110
d. Dense brush, high stage	0.080-0.140
C. Lined channels	
1. Asphalt	0.013-0.016
2. Brick (in cement mortar)	0.012-0.018
3. Concrete	
a. Trowel finish	0.011-0.015
b. Float finish	0.013-0.016
c. Unfinished	0.014-0.020
d. Gunite, regular	0.016-0.023
e. Gunite, wavy	0.018-0.025
4. Riprap (n-value depends on rock size)	0.020-0.035
5. Vegetal lining	0.030-0.500

Table 4-8: Manning's Coefficients for Streets and Gutters

Type of gutter or pavement	Manning's n
Concrete gutter, troweled finish	0.012
Asphalt pavement: smooth texture	0.013
Asphalt pavement: rough texture	0.016

**SOAH DOCKET NO. 582-15-2082
TCEQ DOCKET NO. 2015-0069-MSW**

**APPLICATION OF § BEFORE THE STATE OFFICE
130 ENVIRONMENTAL PARK, LLC §
FOR PROPOSED § OF
PERMIT NO. 2383 §
§ ADMINISTRATIVE HEARINGS**

**ATTACHMENT 3 TO APPLICANT’S RESPONSE TO CLOSING ARGUMENTS
APPLICANT’S AMENDED PROPOSED FINDINGS OF FACT
AND CONCLUSIONS OF LAW**

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A. BACKGROUND FACTS

1. 130 Environmental Park, LLC (“130 Environmental Park”) has filed with the Texas Commission on Environmental Quality (“TCEQ”) Application No. 2383 (“the Application”) for a permit to construct and operate the 130 Environmental Park Landfill.
2. The 130 Environmental Park Landfill (“the Facility”) will be a new Type I municipal solid waste landfill facility located in Caldwell County and serving residences and businesses in Caldwell and surrounding counties.
3. The site on which the Facility will be constructed and operated (“the Site”, “the Permit Boundary”, or “the Facility Boundary”) consists of 519.746 acres located in northern Caldwell County, approximately 0.6 miles east of SH130 and 0.7 miles north of FM1185, more than two miles north of the city limits of Lockhart, Texas.
4. The Site is part of a 1,229.076-acre tract of land (“the Hunter Property”) owned by Cathy Moore Hunter.
5. 130 Environmental Park, LLC has entered into an agreement with Cathy Moore Hunter and will purchase the Hunter Property prior to the development and operation of the Facility.
6. The Facility will include a municipal solid waste landfill unit (“the Landfill”), with a waste management unit boundary (“the Landfill footprint”) of approximately 202 acres, a large item storage area, a reusable materials staging area, a citizen’s convenience center, a used/scrap tire storage area, a wood waste processing area, a leachate storage facility, and a truck wheel wash.
7. The 130 Environmental Park Transfer Station is a Type V municipal solid waste transfer station authorized by TCEQ Registration No. 40269 (issued by TCEQ on February 5, 2015) with a facility boundary consisting of the same 519.746 acres as the Permit Boundary for the 130 Environmental Park Landfill.
8. The registration application for the 130 Environmental Park Transfer Station was filed with TCEQ on September 4, 2013 and was pending at TCEQ from that time until the registration was issued by TCEQ.

9. 130 Environmental Park's mailing address is: 134 Riverstone Terrace, Suite 203, Canton, GA 30114.
10. 130 Environmental Park's telephone number is: (770) 720-2717.

B. PROCEDURAL HISTORY

11. The Application was filed with TCEQ on September 4, 2013.
12. As originally filed, the Application consisted of Parts I and II.
13. Parts I and II of the Application were declared administratively complete on September 27, 2014.
14. Parts III and IV of the Application were filed with TCEQ on February 18, 2014.
15. Parts III and IV of the Application were declared administratively complete on February 28, 2014.
16. In October 2014, the TCEQ Executive Director determined that the Application demonstrates compliance with the applicable regulatory requirements in TCEQ's rules at 30 TAC Chapter 305 ("Consolidated Permits") and Chapter 330 ("Municipal Solid Waste") and that the Application "meets the requirements of the Commission's rules and provides proper safeguards to protect public health and safety, and the environment", and declared the Application technically complete.
17. In October 2014, the TCEQ Executive Director prepared a draft permit based on the Application ("the Draft Permit"), a technical summary of the Application ("the Technical Summary"), and a compliance history report of the Applicant ("the Compliance History Report").
18. In October 2014, the TCEQ Executive Director issued his Preliminary Decision that "proposed MSW Permit No. 2383, for 130 Environmental Park, LLC, if issued, meets all statutory and regulatory requirements."
19. Pursuant to 30 TAC §55.210, the TCEQ Chief Clerk referred the Application directly to SOAH for a hearing on whether the Application complies with all applicable statutory and regulatory requirements.
20. On February 4, 2015, TCEQ issued a Notice of Hearing regarding the Application, which was published in the Lockhart Post-Register and the Caldwell County Guardian on February 19, 2015, and mailed as required on February 4, 2015 and February 23, 2015.
21. By way of memoranda dated March 13, April 1, and April 17, 2015, TCEQ transmitted portions of the administrative record to the State Office of Administrative Hearings.

22. On March 26, 2015, SOAH Administrative Law Judges Casey A. Bell and Sharon Cloninger held a preliminary hearing regarding the Application at the Caldwell County Judicial Center in Lockhart, Caldwell County, Texas.
23. At the preliminary hearing, the ALJs found that notice had been adequately provided and that both the Commission and SOAH have proper jurisdiction over this matter.
24. The following persons and entities were designated as parties to this proceeding: 130 Environmental Park, LLC (“130 Environmental Park” or “Applicant”), TCEQ Executive Director, TCEQ Office of Public Interest Counsel, Caldwell County, Plum Creek Conservation District (PCCD), Environmental Protection in the Interest of Caldwell County (EPICC), James Abshier, Claudia & Robert Brown, Joe Colley, Ann & Troyce Collier, Byron Friedrich, the King Family Trust, Brenda Martin, Frank Sughrue, Bill & Pam Young, TJFA, L.P. (TJFA), and Ben Pesl.
25. Pursuant to Order No. 1, the following parties were aligned as the Aligned Protestants: EPICC, James Abshier, Claudia & Robert Brown, Ann & Troyce Collier, Byron Friedrich, the King Family Trust, Brenda Martin, Frank Sughrue, and Bill & Pam Young.
26. Pursuant to Order No. 2, the following parties were aligned with the Aligned Protestants: TJFA, L.P. and Joe Colley.
27. Pursuant to Order No. 7, TJFA, L.P. was no longer aligned with the Aligned Protestants.
28. On April 9, 2015, the TCEQ Executive Director filed his Amended Response to Public Comment (“the RTCs”), addressing public comments that had been submitted to TCEQ regarding the Application.
29. During the preparation of the RTCs, the TCEQ Executive Director requested additional information from 130 Environmental Park, which was provided by way of a March 2015 supplement to the Application (“the March 2015 Supplement”).
30. During discovery in this proceeding, TJFA and EPICC sought “to enter the proposed landfill site and conduct geo-physical probes of Applicant’s existing piezometers, drill up to 15 borings on the site, perform in-situ testing of the soils on site, including tests of hydraulic conductivity, and collect samples to be tested at a lab.” 130 Environmental Park and Cathy Moore Hunter afforded TJFA and EPICC access to the Hunter Property to conduct the requested investigations, which were carried out during February and March 2016.
31. Also during February 2016, 130 Environmental Park conducted additional investigations of the Site, including soil borings and laboratory testing of collected soil samples.
32. Following the 2016 investigations, 130 Environmental Park submitted to TCEQ a May 2016 supplement to Attachments E (Geology Report) and F (Groundwater Sampling and Analysis Plan) of the Application (“the May 2016 Supplement”).

33. The hearing on the merits regarding the Application was conducted August 15 through 19 and August 22 through 26, 2016 by SOAH Administrative Law Judges Kerry Jo Qualtrough and Casey A. Bell at SOAH, 300 West 15th Street, Austin, Texas.

C. SPECIFIC ISSUE FINDINGS OF FACT

1. SUFFICIENCY OF PROPERTY RIGHTS

34. The current owner of the Site is Cathy Moore Hunter, a natural person.
35. 130 Environmental Park, LLC has entered into an agreement with Cathy Moore Hunter for the purchase of, and prior to the development and operation of the Facility will purchase, the Hunter Property, including the Site.
36. 130 Environmental Park will own and operate the Facility.
37. The Application includes an affidavit executed by the property owner and acknowledging that (1) the State of Texas may hold the property owner of record either jointly or severally responsible for the operation, maintenance, and closure and post-closure care of the Facility, (2) the owner of the Site has a responsibility to file in the deed records of Caldwell County an affidavit to the public advising that the Site will be used for a solid waste facility prior to the time that the Facility actually begins operating as a municipal solid waste landfill facility, and to file a final recording upon completion of disposal operations and closure of the landfill units in accordance with 30 TAC §330.19, and (3) the Facility owner or operator and the State of Texas shall have access to the Site during the active life and post-closure care period after closure of the Facility for the purpose of inspection and maintenance..
38. The Application includes a boundary metes and bounds description of the Site and a drawing of that description, signed and sealed by a registered professional land surveyor.
39. The identifying reference of the current ownership record for the Site is Volume 533, Page 637 in the Official Public Records of Real Property of Caldwell County, Texas.
40. The Application complies with TCEQ's rules regarding property rights.

2. EVIDENCE OF COMPETENCY

41. 130 Environmental Park has not owned or operated a solid waste site in Texas within the last ten years.
42. 130 Environmental Park does not have a direct financial interest in any solid waste site other than the proposed Facility.
43. The Application includes the names of the principals and supervisors of 130 Environmental Park's organization, together with previous affiliations with other organizations engaged in solid waste activities.

44. The Application contains the number and size of each type of equipment to be dedicated to facility operation.
45. 130 Environmental Park will provide sufficient equipment to conduct site operations in accordance with the landfill design and permit condition.
46. 130 Environmental Park will employ a licensed solid waste facility supervisor and qualified equipment operators in compliance with TCEQ's rules before commencing operations.
47. The Application complies with TCEQ's rules regarding evidence of competency.

3. COMPLIANCE HISTORY

48. In a Compliance History Report prepared on October 3, 2014, the TCEQ Executive Director evaluated the compliance history of the Facility and classified the Facility and 130 Environmental Park.
49. There was no compliance information about the Facility at the time the Executive Director developed the compliance history.
50. The compliance history classification for 130 Environmental Park and the Facility is designated as "unclassified".
51. TCEQ's compliance history rules do not prohibit the permitting of the Facility.

4. LAND USE COMPATIBILITY

52. The Application includes a map showing the boundary of the Facility, actual uses within the Site and within one mile of it, including the location of residences, commercial establishments, ponds or lakes, and access roads serving the Facility.
53. The Application includes maps showing the locations of drainage, pipeline, and utility easements within the Site.
54. There is no zoning within two-miles of the Site.
55. John Worrall, 130 Environmental Park's expert witness on land use matters, prepared an updated land use map (updated as of September 2015).
56. 4083 acres (93.1%) of the land within one mile of the Site is open and agricultural use land, the predominant land within one-mile.
57. 234 acres (5.3%) of the land within one mile of the Site is residential use land (all single family residential, with 143 residences).
58. The nearest residence is approximately 185 feet west of the Facility boundary and approximately 345 feet west of the Landfill footprint.

59. 65 acres (1.5%) of the land within one mile of the Site is water bodies: stock tanks and the Site 21 Reservoir.
60. 5 acres (0.1%) of the land use within one-mile of the Site is commercial/industrial use land (5 establishments).
61. The nearest business establishment is approximately 4,000 feet southwest of the Site and more than 6,500 feet from the Landfill footprint.
62. There are no schools, day care centers, churches, hospitals, cemeteries, recreational areas or sites having exceptional aesthetic quality within one-mile of the Site.
63. Within one mile of the Site there are five archaeological sites and three historic sites. There are no historically significant sites or archaeologically significant sites within one mile of the Site.
64. Within 500 feet of the Site there are no water wells and three dry hole oil/gas wells, one of which is located within the Facility Boundary but approximately 1,800 feet from the Landfill footprint.
65. Growth trends within five-miles of the Site are shown on a map in the Application.
66. Within five-miles of the Site, 2000 to 2010 population growth was less than 5%, except to the south where northern Lockhart lost population.
67. The presence of the State Highway 130 Toll Road (SH 130) is the primary factor influencing growth trends in the area of the Site.
68. Growth trends will continue from the north into the area within a five-mile radius of the Site.
69. The area within one mile of the Site is sparsely populated.
70. The Facility will have ready access to a major transportation network without the need to use local roads and impact local properties.
71. The growth rate in the vicinity of the Site is relatively low as compared to the very high growth rate of the Metropolitan Statistical Area in which the facility is located.
72. The Facility design includes substantial set-backs and buffer zones that exceed TCEQ standards.
73. Visibility of the Facility will be limited by existing topography, naturally occurring tree lines and the vegetated landscaping plan for the Facility (including an effective screening berm).
74. The Facility design provides a visually compatible shape and massing of the landfill itself.

75. The Facility will be compatible with surrounding land uses.

5. TRANSPORTATION AND TRAFFIC

76. All vehicles traveling to and from the Facility will use northbound U.S. Highway 183 (US 183) north of its intersection with Farm to Market Road 1185 (FM 1185), and the entrance road (or driveway) for the Facility.

77. The entrance road for the Facility will extend from the east side of US 183 north of its intersection with FM 1185, through the entrance gate, to the Permit Boundary, and continue past the scale house and scales, the citizen's convenience center, and the truck wheel wash.

78. Roadways within one mile of the Facility that will be used by 130 Environmental Park for entering or leaving the Facility are shown on general locations maps in Part II of the Application: US 183, State Highway 130 (SH130), and the grade-separated intersections of FM 1185 and Schuelke Road with US 183, all of which are hard-surfaced paved roads with asphalt pavement; and the entrance road for the Facility, which will be 40-foot wide and use the same section of asphalt pavement as US 183.

79. A traffic impact analysis for the Facility was prepared by John Denholm, P.E.

80. Following several communications with the Texas Department of Transportation (TxDOT), the final version of the traffic impact analysis ("the TIA") was submitted to TxDOT in October 2014 and approved by TxDOT in November 2014.

81. The volumes of background (non-Facility) vehicular traffic on access roads within one mile of the proposed Facility, both existing and expected, during the life of the proposed Facility are set out in the TIA.

82. Reasonable projections of the volume of traffic expected to be generated by the Facility on the access roads within one mile of the proposed Facility are set out in the TIA.

83. Vehicles traveling to and from the Facility and will consist of waste route collection trucks, waste transfer trucks, small waste load vehicles, recycling trucks, miscellaneous trucks, and passenger cars.

84. The number of vehicles traveling to and from the Facility on a daily basis is projected to increase each year from the time the Facility begins operations (Year 1) until the time the 130 Environmental Park Landfill reaches capacity (estimated to be Year 44).

85. The projected numbers of each type of vehicle traveling to and from the Facility on a daily basis in Year 1/Year 44 are: waste route collection trucks (110/216), waste transfer trucks (15/29), small waste load vehicles (25/49), recycling trucks (40/78), miscellaneous trucks (4/8) and passenger cars (40/79). The total projected number of vehicles traveling to and from the Facility on a daily basis is 234 in Year 1 and 459 in Year 44.

86. Projected total vehicular traffic volumes on access roads within one mile of the proposed Facility during the expected life of the proposed Facility are set out in the TIA.
87. The Facility will contribute a minimal amount (approximately 3.5%) of the total traffic on US 183 in the area of the Site.
88. The existing roadway infrastructure, including northbound US 183, has adequate capacity to accommodate the traffic generated by the Facility.
89. Based in part on the TIA, TxDOT issued a driveway permit authorizing the construction and connection to northbound US 183 of the entrance road for the Facility.
90. As part of its review and consideration of the driveway permit request for the entrance road for the Facility, TxDOT considered issues related to structural integrity of the public roadways and the entrance road.
91. The Facility entrance road connection to northbound US 183 will include a northbound right turn deceleration lane as coordinated with, and recommended and permitted by, TxDOT. No other roadway improvements are necessary to accommodate Facility traffic.
92. The proposed location of the Facility entrance road will provide adequate sight distance for vehicles exiting onto US 183.
93. 130 Environmental Park coordinated with TxDOT regarding traffic and location restrictions.
94. The roads to be used by 130 Environmental Park to access the Facility will be available and adequate.
95. The Application includes documentation of coordination with the Federal Aviation Administration for compliance with airport location restrictions.
96. There is no airport within a six-mile radius of the Site.
97. The Facility will comply with the Airport Safety Location Restriction in 30 TAC §330.545.

6. GEOLOGY AND SOILS

98. The Geology Report was prepared, signed, and sealed by John Michael Snyder, P.G., a qualified groundwater scientist.
99. The Geology Report identifies sources and references for the information in it.
100. The Geology Report includes portions of published map series, including the Geologic Map of Texas, the Geologic Atlas of Texas, and mapping from the USGS Geologic Database of Texas, all of which are regional geologic maps.

101. The Geology Report includes a description of the generalized stratigraphic column in the area of the Site, with specific information on each geologic unit.
102. The Geology Report includes a regional stratigraphic cross-section.
103. The Geology Report includes a description of the geologic processes active in the vicinity of the Site, including information about faulting and subsidence.
104. The Geology Report includes the results of investigations of subsurface conditions at the proposed location of the Landfill.
105. The Geology Report describes forty-three borings drilled on the Site on behalf of 130 Environmental Park in mid to late 2013 and in 2016 during boring programs supervised by John Michael Snyder, P.G. to investigate, characterize, and test soils and to characterize groundwater (the "Soil Borings").
106. Seventeen additional borings were drilled and completed as piezometers to investigate and measure levels of groundwater at the Site.
107. The Soil Borings were drilled to depths of up to 127 feet below ground surface (bgs) using established field exploration methods, including rotary drilling with drilling fluid introduced when the material became too hard to drill dry.
108. All of the Soil Borings were at least five feet deeper than the elevation of the deepest excavation proposed for the Landfill. Eighteen of the 2013 Soil Borings and four of the 2016 Soil Borings were drilled to a depth at least 30 feet below the deepest excavation planned at the Landfill.
109. Samples were collected from the Soil Borings using Shelby tubes and split spoons and, in several borings where the presence of occasional cobbles and pebbles in the shallow subsurface clay prevented pushing tubes, samples at depths of 1 to 7 feet bgs were collected from auger cuttings.
110. The number and locations of the Soil Borings were sufficient to establish subsurface stratigraphy, to obtain adequate samples for soil testing, and to determine geotechnical properties of the soils and rocks beneath the Facility.
111. The Soil Borings were properly plugged and abandoned.
112. The Geology Report includes boring logs, maps, and tables that provide detailed information for all of the Soil Borings and piezometers.
113. The Geology Report includes narrative discussions describing John Michael Snyder, P.G.'s interpretations of the subsurface stratigraphy based upon the field investigation work conducted at the Site.

114. The Geology Report includes cross-sections, prepared from the Soil Borings and piezometers, depicting the generalized strata in the subsurface at the Facility.
115. The Geology Report includes laboratory report data describing the characteristics and geotechnical properties of soil samples from Stratum I, Stratum II, and Stratum III, based on geotechnical tests performed in accordance with industry practice and recognized procedures, including permeability, sieve analysis, Atterberg limits, and moisture content.
116. The Geology Report includes discussion with conclusions about the suitability of the soils and strata for the uses for which they are intended.
117. Regional stratigraphy includes geologic units of the Cretaceous Gulf Series Navarro Group, the Paleocene Midway and Eocene Wilcox Group and Quaternary deposits of the Leona Formation.
118. The Site is located on an outcrop of the Midway Group. The Midway in the area consists primarily of dense, silty, fat clay (high plasticity inorganic clay) and, based on published literature, is between 400 and 600 feet thick beneath the Site.
119. Beneath the Midway there are several hundred feet of low permeability clays, marls, and limestones of the Navarro, Taylor, Eagle Ford, and Austin formations.
120. Silty fat clay is by far the dominant material encountered in all of the Soil Borings.
121. Based upon the field investigation work conducted at the Site, the subsurface stratigraphy consists of three strata (beginning at the surface and continuing downward): Stratum I is up to ten feet thick and consists primarily of brown to tan, silty fat clay with occasional discontinuous occurrence of small rock pieces, including cobbles (larger than about 3 inches), pebbles (between about ¼ inch and 3 inches) and some gravel (smaller than pebbles). Stratum II ranges in thickness from about 30 to 60 feet and consists of weathered silty fat clay. Weathering effects are indicated primarily by color from tan near the upper parts to tan and gray and eventually to gray as it transitions to the unweathered dark gray clay below. Stratum III consists of hard, dense, dark gray silty fat clay, up to 77 feet of which was encountered in the Soil Borings.
122. The Geology Report includes laboratory report data describing the characteristics and geotechnical properties of soil samples from Stratum I, Stratum II, and Stratum III based on geotechnical tests performed in accordance with industry practice and recognized procedures, including permeability, sieve analysis, Atterberg limits, and moisture content.
123. Permeability (hydraulic conductivity) tests were performed on samples from the strata that will form the bottom and sides of the landfill excavations. Tested permeabilities ranged from 5.9×10^{-8} cm/sec in Stratum I material to an average of 1.5×10^{-8} in Stratum III material.

124. The Geology Report includes discussion with conclusions about the suitability of the soils and strata for the uses for which they are intended. The soils at the Site will be suitable for use in construction and operation of the proposed Facility.
125. Analyses of the landfill slope stability show that the factors of safety against slope failure exceed the recommended factors of safety for all conditions analyzed. The soils at the Site will provide adequate support for the proposed landfill.
126. The May 2016 Supplement to the Application presents information from borings drilled in 2016 that is consistent with the information obtained from borings drilled during the original subsurface investigation in 2013.
127. The May 2016 Supplement includes minor revisions to several 2013 boring and piezometer locations and elevations, and several tables and drawings.
128. The Application contains complete and accurate information about geology and groundwater required by 30 TAC § 330.63(e) and (f).
129. The information provided by 130 Environmental Park in the Application (including March 2015 and May 2016 supplements) complies with the requirements of 30 TAC Chapter 330 regarding geology.
130. The Geology Report complies with all applicable TCEQ requirements concerning geology reports.

7. HYDROGEOLOGY

131. The Geology Report includes a description of the regional aquifers in the vicinity of the Site.
132. Regional aquifers that supply groundwater to wells in Caldwell County are the Carrizo-Wilcox and the Leona formations.
133. The Wilcox Formation crops out east of the Site and in a northeast trending belt across Caldwell County. The Carrizo Formation occurs east and southeast of the outcrop of the Wilcox, approximately 12 miles southeast of the Site. The aquifer portions of these two formations is collectively known as the Carrizo- Wilcox.
134. The Carrizo- Wilcox is characterized by the Texas Water Development Board (TWDB) as a major aquifer.
135. Most groundwater produced in northern Caldwell County is from wells tapping the Carrizo-Wilcox Formation, located east of the site.
136. The primary outcrop of the Leona Formation, from which some groundwater is produced, is located several miles south of the Site.

137. The Leona Formation is not characterized by the TWDB as either a major or minor aquifer.
138. Leona Formation material is not present at the Site.
139. Published literature shows no aquifers located beneath the Site.
140. There is very little groundwater present in the silty clays and shales that make up the geologic formations at the Site down to a depth of several hundred feet below the ground surface.
141. Groundwater was not encountered during drilling in any of the forty-three Soil Borings prior to the introduction of drilling fluid.
142. Water level readings were taken in each of the seventeen piezometers every month from October 2013 until May 2016. Water has been observed in only three of the seventeen piezometers, all screened at the interface between Stratum II and Stratum III; one of those has been dry since November 2013, another one has been dry since August 2015.
143. Small amounts of groundwater occur at the Site in the shallow weathered silty fat clay (Stratum II), just above its interface with the underlying hard, dark gray unweathered clay (Stratum III) that is present across the Site.
144. The zone of groundwater occurrence at the Site is not characterized as a major or minor aquifer by the Texas Water Development Board and there are no known wells completed in this zone within one mile of the Site.
145. Groundwater at the Site does not occur in sufficient amounts to supply usable quantities to wells that could support industrial, irrigation, domestic, or livestock use.
146. The volume of water observed in piezometers on the Site would be sufficient for sampling and analysis in accordance with TCEQ Municipal Solid Waste rules and, as a result, the zone of groundwater occurrence on the Site satisfies the criteria used by the TCEQ Municipal Solid Waste Permits Section for characterization as an aquifer.
147. The zone of groundwater occurrence in the shallow weathered silty fat clay (Stratum II), just above its interface with the underlying hard, dark gray unweathered clay (Stratum III) is the uppermost aquifer at the Site.
148. There are no lower aquifers that are hydraulically connected to the uppermost aquifer beneath the Facility.
149. Other than the zone of groundwater occurrence in the Stratum II weathered silty fat clay just above its interface with the underlying Stratum III unweathered Midway clay, the field investigation work at the Site showed no aquifers are present beneath the Site.
150. The lack of weathering effects in the deeper, unweathered clay (Stratum III) results in Stratum III functioning as an aquitard or lower confining unit to the groundwater in the

above weathered clay, thus creating a pathway for groundwater to move at the interface of Stratum II and Stratum III.

151. The structural contour map of the top of Stratum III shows a strong resemblance to the surface topography. Groundwater flow from the landfill footprint area may occur to the northwest, west, southwest, south, southeast, and east.
152. The groundwater velocities in Stratum II are estimated at 0.01 to 0.04 feet per year.
153. The Groundwater Sampling and Analysis Plan complies with all applicable TCEQ MSW regulatory requirements concerning groundwater sampling and analysis plans.
154. The Facility will comply with the Groundwater Location Restriction in 30 TAC §330.549.
155. The information provided by 130 Environmental Park in the Application (including March 2015 and May 2016 supplements) complies with the requirements of 30 TAC Chapter 330 regarding hydrogeology.

8. FAULTS

156. A fault study of the Site area, based on the criteria in 30 TAC §330.555, was conducted by John Michael Snyder, P.G., a licensed professional geoscientist qualified to evaluate faulting, and found no evidence of faulting.
157. The area of the Site is not experiencing withdrawal of crude oil, natural gas, sulfur, etc. or significant amounts of groundwater.
158. The area of the Site is not subject to differential subsidence and there is no evidence of subsidence in the area.
159. Locations of known (mapped) faults within several miles of the Site are shown on the portions of regional geology maps included in the Geology Report and are all located more than 200 feet from the proposed landfill waste management unit boundary.
160. The faults located in the area of the Site are documented to have last moved 5 to 56 million years ago, well before the Holocene Epoch (the most recent 11,700 years).
161. There is no active faulting or fault that has had displacement in Holocene time in the area of the Site or within one-half mile of the Site.
162. The municipal solid waste landfill unit at the Facility will not be located within 200 feet of a fault that has had displacement in Holocene time.
163. The Facility will comply with the Fault Areas Location Restriction in 30 TAC §330.555.

9. GROUNDWATER MONITORING

164. Any groundwater that may be present at the Site will move through the subsurface very slowly.
165. Groundwater that may be present at the Site could move more readily in the Stratum II weathered clay than in the unweathered clay material in Stratum III.
166. In the unlikely event any contaminants were to migrate out of the Landfill and enter groundwater, that groundwater could move slowly downward and outward from the Landfill in the weathered Stratum II material above the unweathered material in Stratum III.
167. A groundwater monitoring system for the Facility has been designed by John Michael Snyder, P.G. and is described in the Groundwater Sampling and Analysis Plan in the Application.
168. The point of compliance groundwater monitoring system for the Facility will include twenty-five groundwater monitoring wells located downgradient from the Landfill footprint, around the northwest, west, southwest, south, southeast, and east perimeter of the Landfill, and spaced no more than 600 feet apart.
169. The groundwater monitoring system for the Facility will include one groundwater monitoring well located upgradient from (northeast of) the Landfill footprint.
170. The groundwater monitoring wells will be constructed with well screens (perforated portion of the pipe in the well where water can enter the well to be collected for laboratory analysis) starting at the interface of the weathered Stratum II/unweathered Stratum III materials and extending upward for twenty feet.
171. The downgradient monitoring wells will be located at depths and locations to allow for the detection of contaminants in the uppermost aquifer.
172. The Groundwater Sampling and Analysis Plan complies with all applicable TCEQ municipal solid waste regulatory requirements concerning groundwater sampling and analysis plans.
173. The information provided by 130 Environmental Park in the Application (including March 2015 and May 2016 supplements) complies with the requirements of 30 TAC Chapter 330 regarding monitoring systems and other features whose designs depend on the geologic and hydrogeologic characteristics of the Site, including groundwater monitoring systems.

10. GENERAL FACILITY DESIGN

174. Access to the Facility will be controlled by a perimeter fence consisting of barbed wire, woven wire, wooden fencing, plastic fencing, pipe fencing, or other suitable material located along the facility boundary and a locking gate at the Site entrance.

175. The fencing and gate at the Facility will prevent the entry of livestock, protect the public from exposure to potential health and safety hazards, discourage unauthorized public access to the disposal operations, and discourage unauthorized entry or uncontrolled disposal of solid waste or prohibited materials.
176. A gate constructed of suitable fencing materials will be located on the entrance road of the Facility and will be locked when the landfill is not accepting waste.
177. The Application contains a generalized process design and working plan of the overall facility.
178. The Application contains a flow diagrams indicating the storage, processing, and disposal sequences for the various types of wastes received at the Facility.
179. The Application contains schematic view drawings showing the various phases of collection, separation, processing, and disposal as applicable for the types of wastes and feedstocks received at the Facility.
180. The Application contains ventilation and odor control measures for each storage, separation, processing, and disposal unit.
181. The Application contains generalized construction details of all storage and processing units, including slabs and subsurface supports, and locations and engineering design details of all containment dikes or walls.
182. Grease, oil, and sludge will not be accepted or stored at the Facility.
183. The Application describes how all liquids resulting from the operation of solid waste processing facilities will be disposed of.
184. Processing facilities will be designed to facilitate proper cleaning by controlling surface drainage in the vicinity of the facility to prevent surface water runoff onto, into, and off the treatment area and constructing walls and floors in operating areas of masonry, concrete, or other hard-surfaced materials.
185. The surface water drainage design will manage runoff and runoff during the peak discharge from the 25-year, 24-hour storm event to minimize surface water running onto, into, and off waste processing and storage areas and prevent the off-site discharge of waste and feedstock material, including, but not limited to, processed or stored materials.
186. The Facility has been designed to keep contaminated surface water (water that may have come into contact with waste) separated from uncontaminated stormwater runoff. Contaminated water will not be discharged to the surface water management system to be constructed at the Site.
187. Surface or groundwater that has become contaminated will be handled, stored, treated, and disposed of in accordance with 30 TAC §330.207.

188. The design and operation of the Facility, including waste processing and storage facilities, and the surface water management system, will prevent the discharge of solid waste, pollutants, dredged or fill material, and nonpoint source pollution that would violate any of the provisions referenced in 30 TAC §330.15(h).
189. Because all contaminated water will be managed in a controlled manner, groundwater will be protected.
190. Prior to commencing Facility operations, 130 Environmental Park will submit a notice of intent (NOI) under the stormwater permitting requirements of TCEQ's rules, qualifying the facility to operate pursuant to a general stormwater discharge permit (TPDES General Permit No. 050000).
191. The Site Operating Plan in the Application includes a Species Protection Plan that provides criteria for the protection of endangered or threatened species that have the potential to occur within the Hunter Property.
192. There are no site-specific conditions that require special design considerations.

11. WASTE MANAGEMENT UNIT DESIGN

193. The Facility will have all weather access from US Highway 183, a publically owned route.
194. The Facility will have all weather access from the entrance of the facility to unloading areas used during wet weather.
195. The Facility access roads will be constructed of crushed stone, gravel, concrete rubble, masonry rubble, wood chips, or other similar materials to provide access to the disposal area during all weather conditions.
196. Tracking of mud onto public roads will be minimized by the all-weather surfaces of the Facility access roads and the entrance road and a truck wheel wash.
197. The development method for the 130 Environmental Park landfill will be a combination of area-excavation fill followed by aerial fill to the proposed landfill completion height.
198. The elevation of deepest excavation will be 501.9 feet msl.
199. The maximum elevation of final cover will be 736 feet msl.
200. The maximum elevation of disposed waste will be 731.5 feet msl. *Ex.*
201. The total volume available for waste disposal will be approximately 33.1 million cubic yards (waste and daily cover), which will provide an estimated 44 years of site life.
202. The Application contains calculations and assumptions for the waste volume, rate of deposition, and site life estimate.

203. The Application contains landfill unit cross-sections consisting of plan profiles across the Facility that accurately depict the proposed depths of all fill areas within the Facility.
204. The landfill unit cross-sections show boring logs obtained from the soils report on the profiles.
205. Stratum I, Stratum II, and Stratum III materials will form the sides of the landfill unit excavations, and Stratum II, and Stratum III materials will form the bottom of the landfill unit excavations. Stratum III materials extend at least 30 feet below the lowest elevation of the landfill unit excavations.
206. Construction and design details of compacted perimeter or toe berms are included on the fill cross-sections.
207. The Application contains a liner quality control plan prepared in accordance with 30 TAC Chapter 330, Subchapter H.

12. UNSTABLE AREAS

208. The logs of the Soil Borings and laboratory data from soil samples did not indicate the presence of poor foundation conditions such as soft clay or loose sand beneath the Landfill. The hand penetrometer values and unit dry weight results indicate that the subsurface clays are hard.
209. The settlement and heave analyses presented in the Application show that the landfill components will not undergo detrimental differential settlement.
210. The slope stability analyses presented in the Application show that landfill components will be stable.
211. Evidence of mass movement of natural formations of earthen material on or in the vicinity of the Site was not observed at the Site, in the Soil Borings, or on geologic maps.
212. Evidence of karst terrain was not observed at the Site, in the Soil Borings, or on geologic maps of the area.
213. The Site is not located in an unstable area.
214. The Facility will comply with the Unstable Areas Location Restriction in 30 TAC §330.559.

13. LANDFILL GAS MONITORING

215. The Application includes a Landfill Gas Management Plan (LFGMP) as required by 30 Tex. Admin Code § 330.63(g).

216. The LFGMP describes the mechanisms to be employed at the Facility for quarterly monitoring of landfill gas, including a detailed description of monitoring procedures.
217. The LFGMP includes a perimeter methane monitoring system consisting of 33 permanent monitoring probes.
218. The LFGMP includes provisions for continuous methane monitors to be located in structures within the Facility boundary.
219. There are no underground utility lines or easements that enter or exit the Facility boundary.
220. Any future underground utility trench that crosses the Facility Boundary will be monitored regularly.
221. The LFGMP includes procedures and standards for methane monitoring.
222. Soil conditions, hydrogeologic and hydraulic conditions surrounding the facility, the location of facility structures and property boundaries, and the provisions of 30 TAC §330.371 were considered in determining the type and frequency of methane monitoring.
223. The LFGMP describes the actions that the Facility must take if methane levels are detected in excess of the prescribed limits.
224. The LFGMP includes a back-up plan to be used if any installed LFG monitoring probes or continuous monitoring devices become unusable or inoperative.
225. The LFGMP provides for including applicable documentation, including monitoring records for landfill gas monitoring probes, in the site operating record.
226. Landfill gas monitoring will continue for a period of 30 years after certification of final closure of the Facility, or until 130 Environmental Park receives written TCEQ authorization to reduce the program.
227. The information provided by 130 Environmental Park in the Application (including March 2015 and May 2016 supplements) complies with the requirements of 30 TAC Chapter 330 regarding monitoring systems and other features whose designs depend on the geologic and hydrogeologic characteristics of the Site, including landfill gas systems.
228. The Application includes adequate provisions to manage landfill gas in compliance with TCEQ rules.

14. ENDANGERED OR THREATENED SPECIES

229. The Application contains an evaluation of endangered or threatened species for the Hunter Property conducted by Russell Marusak, a qualified biologist.

230. The United States Fish and Wildlife Service and the Texas Parks and Wildlife Department were contacted for locations and specific data relating to endangered and threatened species.
231. Five threatened or endangered species have the potential to occur within the Hunter Property: the wood stork, the golden orb, the Texas pimpleback, the Texas horned lizard, and the timber rattlesnake.
232. The wood stork, the golden orb, the Texas pimpleback, the Texas horned lizard, and the timber rattlesnake are not federally listed threatened or endangered species and therefore no critical habitat has been designated for any of them.
233. The Site Operating Plan in the Application includes a Species Protection Plan that provides criteria for the protection of endangered or threatened species that have the potential to occur within the Hunter Property.
234. The Facility and its operation will not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species.
235. The Facility will comply with the Endangered or Threatened Species Location Restriction in 30 TAC §330.551.

15. WETLANDS

236. The Application includes a wetlands determination under applicable federal, state, and local laws and identifies wetlands located within the Facility Boundary.
237. The U.S. Army Corps of Engineers issued a June 20, 2014 letter approving the wetlands jurisdictional determination and authorizing construction of the roadway crossings of streams associated with the entrance road for the Facility pursuant to Nationwide Permit 14.
238. The Application includes a discussion of wetlands in accordance with 30 TAC §330.553 and each of the demonstrations set out therein.
239. The federal definition of “wetlands” in 33 CFR §328.3(c)(4) is “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”
240. The applicable state definition of “wetlands” is nearly identical to the federal definition, but does not include a man-made wetland of less than one acre.
241. The state definition of “wetlands” does not conflict with the federal definition in a situation like municipal solid waste permitting.

242. There are 20 areas, totaling 1.46 acres in size, of “federal definition” wetlands located within the Facility Boundary.
243. There are 12 areas, totaling 0.68 acres in size, of “federal definition” wetlands located within the proposed Landfill footprint, each of which is a man-made wetland of less than one acre.
244. There are no “state definition” wetlands located within the proposed Landfill footprint.
245. The Landfill will not be located in “state definition” wetlands.
246. No municipal solid waste storage or processing facilities at the Facility will be located in wetlands.
247. There is no requirement applicable to the Facility under Clean Water Act, §404 or state wetlands laws to rebut the presumption that a practicable alternative to the Landfill is available that does not involve wetlands.
248. The construction and operation of the Landfill will not cause or contribute to violations of any applicable state water quality standard.
249. The construction and operation of the Landfill will not violate any applicable toxic effluent standard or prohibition under the Clean Water Act, §307.
250. The construction and operation of the Landfill will not jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat.
251. The construction and operation of the Landfill will not violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary.
252. The Landfill will not cause or contribute to significant degradation of “federal definition” or “state definition” wetlands.
253. The Application demonstrates the integrity of the Landfill and its ability to protect ecological resources.
254. There is no requirement applicable to the Facility under Clean Water Act, §404 or state wetlands laws to take steps to attempt to achieve no net loss of wetlands.
255. The Facility will comply with the Wetlands Location Restriction in 30 TAC §330.553.
256. The Application satisfies, and the Facility will satisfy, all applicable TCEQ municipal solid waste regulatory requirements regarding wetlands.

16. SURFACE WATER AND DRAINAGE

257. The Application includes a map showing wells, springs, and surface water bodies within one mile of the Site.
258. The Site is located in the San Marcos River drainage basin.
259. An unnamed tributary to Dry Creek traverses the Site in a northwest to southeast direction.
260. Dry Creek traverses the Hunter Property east and southeast of the Site in a northeast to southwest direction.
261. A dam located on Dry Creek approximately 3,000 feet south of the Site and operated and maintained by Plum Creek Conservation District (PCCD) impounds water in the Soil Conservation Service (SCS) Site 21 Reservoir, also known as Plum Creek Watershed Retarding Structure No. 21.
262. The unnamed tributary to Dry Creek enters the Site 21 Reservoir south of the Site.
263. Dry Creek exits the Site 21 Reservoir to the south and enters Plum Creek approximately six miles south of the Site. Plum Creek flows generally in a northwest to southeast direction, and enters the San Marcos River approximately 23 miles downstream from the Site.
264. Surface topography of the Site area generally slopes to the south toward Dry Creek or its unnamed tributaries and ultimately to the Site 21 Reservoir.
265. Surface water from the landfill footprint area flows to the south into the Site 21 Reservoir, either via the unnamed tributary, Dry Creek, or the Site 21 Reservoir.
266. The Application includes a facility surface water drainage report with facility surface water drainage design information, narrative discussion, drawings, and calculations that demonstrate how the facility is designed to meet the drainage requirements of 30 TAC §§330.63(c), 330.303, and 330.305.
267. The surface water drainage design report includes analyses of the existing conditions, postdevelopment conditions, and design of the surface water management system including final cover drainage facilities, drainage swales, downchutes, perimeter drainage channels, detention and sedimentation ponds and outlet structures, and also includes an erosion and sediment control plan for all phases of Facility development.
268. The surface water drainage design report includes drawings showing the off-site and on-site drainage areas, in both the existing (prior to Facility development) and postdeveloped (after Facility development) conditions.
269. The surface water drainage design report includes calculations and designs of surface water collection, drainage, and detention facilities to manage the water volume resulting from a 24-hour, 25-year storm.

270. All uncontaminated surface water from the Landfill footprint area will be routed through the Facility detention and sedimentation ponds before entering Dry Creek or its tributary.
271. Surface water entering the facility boundary from the north will be conveyed around the Landfill footprint and will exit the Facility Boundary on the south.
272. The Facility run-on control system will prevent flow onto the active portion of the Landfill and treatment areas during the peak discharge from at least a 25-year rainfall event.
273. The Facility runoff management system from the active portion of the landfill to collect and control at least the water volume resulting from a 24-hour, 25-year storm.
274. The surface water drainage design will manage runoff and runoff during the peak discharge from the 25-year, 24-hour storm event to minimize surface water running onto, into, and off waste processing and storage areas and prevent the off-site discharge of waste and feedstock material, including, but not limited to, processed or stored materials.
275. The surface water drainage design report includes a description of the methods and calculations used to estimate peak flow rates and runoff volumes: United States Army Corps of Engineers (COE) HEC-HMS computer program, the Rational Method, the Universal Soil Loss Equation, and the methods defined in the TxDOT *Hydraulic Design Manual*, October 2011, all approved by the Executive Director.
276. The surface water drainage design report includes drainage analyses, including 25-year peak discharge, volume, and peak velocity, for both the existing and postdeveloped conditions.
277. The surface water drainage design report includes existing and postdeveloped conditions comparison of peak discharge, volume, and peak velocity, for both the existing and postdeveloped conditions.
278. The postdevelopment stormwater discharge points are consistent with the existing site configuration.
279. Development of the Facility will not adversely alter peak flow rates, velocities, or runoff volumes.
280. Existing drainage patterns will not be adversely altered by development of the Facility.
281. The top surfaces and external embankment slopes of the Landfill are designed to minimize erosion and soil loss during all phases of landfill operation, closure, and post-closure care.
282. Estimated peak velocities for top surfaces and external embankment slopes will be less than the permissible non-erodible velocities under similar conditions.
283. Potential soil loss will not exceed the permissible soil loss for comparable soil-slope lengths and soil-cover conditions.

284. The surface water protection and erosion control practices will provide long-term, low maintenance geotechnical stability to the final cover.
285. The Facility has been designed to keep contaminated surface water (water that may have come into contact with waste) separated from uncontaminated stormwater runoff. Contaminated water will not be discharged to the surface water management system to be constructed at the Site.
286. Because all contaminated water will be managed in a controlled manner, groundwater will be protected.
287. Surface or groundwater that has become contaminated by contact with the working face of the Landfill or with leachate will be handled, stored, treated, and disposed of in accordance with 30 TAC §330.207.
288. The design and operation of the Facility, including the Landfill, waste processing and storage facilities, and the surface water management system, will prevent the discharge of solid waste, pollutants, dredged or fill material, and nonpoint source pollution that would violate any of the provisions referenced in 30 TAC §330.15(h).
289. Prior to commencing Facility operations, 130 Environmental Park will submit a notice of intent (NOI) under the stormwater permitting requirements of TCEQ's rules, qualifying the facility to operate pursuant to a general stormwater discharge permit (TPDES General Permit No. 050000).

17. FLOODPLAINS

290. The Application includes the portion of the relevant Federal Emergency Management Agency (FEMA) floodplain map (Map Number 48055C1025E; effective date: 6-19-2012) that encompasses the Site and surrounding area.
291. The FEMA floodplain map in the Application shows (as Zone A) the 100-year floodplain in the area of the Site.
292. The Facility Boundary, the Hunter Property Boundary, the proposed Landfill Footprint, and the Limits of Landfill Grading have been added to the FEMA floodplain map in the Application.
293. The FEMA floodplain map in the Application shows that the 100-year floodplain extends onto portions of the Site, but the Landfill Footprint is outside the 100-year floodplain.
294. The Application includes a detailed flood study (flood control analysis) of the Site and surrounding area.
295. The methods employed in the detailed flood study, including the use of United States Corps of Engineers HEC-HMS and HEC-RAS computer programs (used in the hydrologic and

hydraulic analyses, respectively), are reasonable and appropriate, and consistent with and in compliance with, TCEQ municipal solid waste regulatory requirements.

296. The detailed flood study determined the 100-year floodplain water surface elevations and the extent of the 100-year floodplain at the Site and in the area around it for the existing and postdeveloped conditions.
297. The detailed flood study shows that the Landfill Footprint will be outside the 100-year floodplain.
298. The detailed flood study shows that waste processing and/or storage units at the Facility will not be located in any 100-year floodplain.
299. Waste disposal operations at the Facility will not be located in a 100-year floodway.
300. The Landfill will not be located in any 100-year floodplain.
301. Waste processing and/or storage units at the Facility will not be located in any 100-year floodplain.
302. The proposed municipal solid waste management units at the Facility will not be located in any 100-year floodplain.
303. The Facility will be in compliance with the Floodplains Location Restriction in 30 TAC §330.547.

18. LOCAL REGULATIONS/APPROVALS

304. The Capital Area Council of Governments (“CAPCOG”) and TCEQ have adopted a regional solid waste management plan (“the Regional Plan”) that covers ten counties in Central Texas, including Caldwell County.
305. The Application includes documentation that Parts I and II of the Application were submitted for review to CAPCOG for compliance with the regional solid waste management plan.
306. CAPCOG conducted a conformance review of the Application and determined that it is in conformance with the CAPCOG regional solid waste management plan.
307. The Application and the Facility are in conformance with the Regional Plan.
308. On December 9, 2013, the Caldwell County Commissioners Court adopted the Caldwell County Solid Waste Disposal Ordinance, Section III of which identifies an 18.232-acre area of the County in which “[t]he processing or disposal of municipal or industrial solid waste or the operation of a solid waste facility is not prohibited”, and Section IV of which states, “The processing or disposal of municipal or industrial solid waste or the operation of a solid waste facility is prohibited in the following areas within Caldwell County, Texas: All portions of Caldwell County, Texas not included in Section III above.”

309. When the Caldwell County Commissioners Court adopted the Caldwell County Solid Waste Disposal Ordinance, the Application for the 130 Environmental Park Landfill permit was pending at TCEQ.
310. When the Caldwell County Commissioners Court adopted the Caldwell County Solid Waste Disposal Ordinance, the County sought to prohibit the processing or disposal of municipal or industrial solid waste in an area of the County for which an application for a permit or other authorization under Chapter 361 had been filed with and was pending before TCEQ.
311. The existence of the Caldwell County Solid Waste Disposal Ordinance does not prevent TCEQ from granting the Application and issuing the permit sought by way of the Application.

19. WASTE ACCEPTANCE PLAN

312. Solid wastes to be accepted at the Facility include municipal solid waste, special wastes, and Class 2 and 3 industrial wastes.
313. Limiting parameters for waste to be accepted at the Facility include: a concentration of 1,500 mg/kg total petroleum hydrocarbons, the levels for Class 1 industrial solid waste provided in 30 TAC §335.521(a)(1), the presence of free liquids, the presence of regulated hazardous waste, the presence of polychlorinated biphenyls, the presence of radioactive waste, and the presence of chlorinated fluorocarbons.
314. Waste contributed to the Facility is expected to come from residences and businesses in Caldwell County and surrounding Texas counties.
315. The Facility will serve an estimated population equivalent of approximately 470,000 persons to 922,000 persons during the life of the Facility.
316. The estimated maximum annual waste acceptance rate for the Facility projected for five years is as follows: Year 1 - 429,000 tons; Year 2 - 435,778 tons; Year 3 - 442,663 tons; Year 4 - 449,658 tons; Year 5 - 456,762 tons.

20. SITE OPERATING PLAN

317. Part IV of the Application is the Site Operating Plan for the Facility.
318. 130 Environmental Park will provide notice of construction of a new waste disposal area or cell in the form of a Soil Liner Evaluation Report (SLER) and a Geosynthetics Liner Evaluation Report (GLER), to the Executive Director for review 14 days prior to the placement of waste.
319. 130 Environmental Park will maintain the operating record for the Facility on site.

320. 130 Environmental Park will record and retain in the site operating record those items listed in Table 2-1 of the Site Operating Plan within seven working days following completion or receipt of analytical data.
321. 130 Environmental Park will maintain the site operating record in an organized format, where information is easily locatable and retrievable.
322. 130 Environmental Park will furnish the site operating record to the Executive Director upon request, and will make it available on site for inspection by the Executive Director.
323. 130 Environmental Park will retain all information contained within the site operating record of the Facility and all plans required for the Facility for the life of the Facility including the postclosure care period.
324. 130 Environmental Park will require personnel training and maintain records in accordance with 30 TAC § 335.586(d) and (e).
325. The Facility will be staffed with qualified and experienced personnel.
326. 130 Environmental Park will maintain personnel operator licenses issued in accordance with TCEQ Rules, Chapter 30, Subchapter F.
327. 130 Environmental Park will maintain documentation of the annual waste acceptance rate for the Facility as part of the site operating record.
328. The Site Operating Plan describes the personnel training programs for the Facility, including a description of all minimum training requirements based on subject matter.
329. The Site Operating Plan includes provisions related to training employees, including training for record keeping, license requirements, detection, prevention of disposal of prohibited waste, fire protection and response, site inspection, site safety, site access, and maintenance.
330. Facility personnel will receive training through a combination of classroom instruction and on-the-job training in procedures relevant to the position for which they are employed.
331. Facility personnel will receive training appropriate to individual needs as well as specific job duties and responsibilities.
332. Facility personnel will be properly trained to identify any prohibited wastes, and to perform random inspections and know what to do in the event prohibited wastes are identified.
333. 130 Environmental Park will maintain records including the quarterly solid waste summary reports and the annual solid waste summary report as required by 30 TAC § 330.675.
334. The maximum estimated waste acceptance rate will reach 841,803 tons per year or about 2,943 tons per day.

335. 130 Environmental Park will provide sufficient equipment to conduct site operations in accordance with the landfill design and permit condition.
336. The Site Operating Plan includes the minimum number, size, type, and function, of the equipment to be utilized at the Facility based on the estimated waste acceptance rate.
337. Backup equipment will be provided from contractors or local rental companies in the event of a breakdown or maintenance to avoid interruption of waste services.
338. All incoming loads will be visually monitored at the gatehouse and working face.
339. The Site Operating Plan provides procedures, including a screening program, for the detection and prevention of the disposal of prohibited wastes.
340. The Site Operating Plan's detection and prevention program includes training for site personnel to know in detail what the prohibited wastes are, how to perform a random inspection, how to control site access, and what procedures are required in the event of identification of prohibited wastes.
341. The detection and prevention program includes the following steps: random inspections of incoming loads; records of all inspections; training for appropriate facility personnel to recognize prohibited waste, regulated hazardous waste and PCB waste; notification to TCEQ of any incident involving the receipt or disposal of regulated hazardous waste or PCB waste at the landfill; provisions for remediation of the incident; and identification and sampling to ensure no free liquids (as determined by the paint filter test) will be accepted.
342. Lead acid storage batteries are prohibited and will not be accepted at the Facility.
343. Do-it-Yourself (DIY) used motor vehicle oil is prohibited and will not be accepted at the Facility, except that it may be accepted if the mixing or commingling of used oil with solid waste that is to be disposed of in a landfill is incidental to, and the unavoidable result of, the mechanical shredding of motor vehicles, appliances, or other items of scrap, used, or obsolete metals.
344. Used oil filters from internal combustion engines will not be accepted at the Facility unless crushed or processed to remove oil as provided in 30 Tex. Admin. Code § 330.171(d).
345. Whole used or scrap tires will not be intentionally or knowingly accepted for disposal unless processed prior to disposal in a manner acceptable to the Executive Director.
346. Refrigerators, freezers, air conditioners, and any other items containing chlorinated fluorocarbons (CFC) will not be knowingly accepted for disposal unless all the CFC contained in an item is captured and sent to an approved CFC disposal site or recycling facility.
347. Bulk or noncontainerized liquid waste will not be accepted for disposal unless the waste is household waste other than septic waste.

348. Containers holding liquid waste will not be accepted for disposal unless: the container is a small container similar in size to that normally found in household waste, the container is designated to hold liquids for use other than storage, or the waste is household waste.
349. Regulated hazardous waste as defined in 30 TAC § 330.3 is prohibited and will not be accepted at the Facility.
350. Polychlorinated biphenyls (PCB) wastes are prohibited from and will not be accepted at the Facility except as permitted under 40 CFR Part 761.
351. Radioactive substances as defined in Chapter 336 are prohibited from and will not be accepted at the Facility except as authorized in 30 TAC Chapter 336 or that are subject to an exception of the Texas Department of Health Services.
352. The Facility will not accept for disposal medical waste, sewage, dead animals and/or slaughterhouse waste, sludge, grease trap waste, grit trap waste, liquid waste from municipal sources, municipal hazardous waste from conditionally exempt small quantity generators, or out-of-state wastes.
353. The Facility will not accept contaminated soil that exceeds 1,500 parts per million (ppm) total petroleum hydrocarbons or a constituent of concern exceeding levels in §335.521(a)(1), Table 1.
354. The Facility will not accept Class 1 industrial solid wastes, except for wastes that are Class 1 only because of asbestos content.
355. 130 Environmental Park will notify TCEQ if prohibited wastes are received and/or disposed of in the landfill.
356. The Site Operating Plan provides adequate controls for screening of prohibited wastes.
357. The Site Operating Plan contains general and specific instructions for site operations and site safety.
358. A stockpile of earthen material will be maintained in the vicinity of the landfill working face so that it is available at all times to extinguish a fire.
359. The total volume of earthen material available from the stockpile will be sized to cover the working face with a minimum six-inch layer of earthen material.
360. The landfill equipment identified in Table 4-1 of the Site Operating Plan is sufficient to cover the active working face with a minimum six-inch soil layer from the earthen material stockpile within one hour of detecting a fire.
361. The Site Operating Plan contains calculations demonstrating the adequacy of the earthen material and to demonstrate that the type and number of equipment listed in the Site Operating Plan will be able to transport the volume of earth required.

362. The Site Operating Plan contains a fire protection plan that identifies the fire protection standards to be used at the Facility and how personnel are trained.
363. The Site Operating Plan contains an adequate fire protection plan.
364. Public access to the Facility will be controlled by a perimeter fence located along the Facility boundary and a gate located on the entrance road.
365. Access to the landfill from US183 is limited to the entrance road through the gatehouse area.
366. The Application contains adequate provisions for control of access.
367. Unloading of solid waste will be confined to as small an area as practical.
368. A trained staff person will be on duty during operating hours at each area where waste is being unloaded to direct and observe the unloading of solid waste.
369. The Application provides adequate provisions for the unloading of waste.
370. The Facility may accept waste from public and private haulers from 3:00 a.m. to 5:00 p.m. (14 hours) on Monday through Friday and from 5:00 a.m. to 12:00 p.m. (7 hours) on Saturday.
371. Other Facility operations (including construction, earthmoving, monitoring, transportation of construction materials, heavy equipment operation, and other non-waste acceptance operations) may be conducted 24 hours per day, seven days per week.
372. A sign will be displayed at the gated entrance to the Facility.
373. The Facility sign will comply with all requirements of 30 TAC § 330.137.
374. The working face will be maintained and operated in a manner to control windblown solid waste.
375. Solid waste unloading, storage, disposal, or processing operations will not occur within any easement, buffer zone, or right-of-way that crosses the Site.
376. No solid waste disposal will occur within 25 feet of the centerline of any utility line or pipeline easement, unless otherwise authorized by TCEQ.
377. Landfill markers and benchmark will be installed and maintained as required by 30 TAC § 330.143(b).
378. Signs will be posted at the entrance gate and gatehouse notifying haulers that vehicles hauling waste to the Facility must be enclosed or provided with a tarpaulin, net, or other

means to properly secure the load and that this requirement will be enforced by applying surcharges or other similar measures.

379. Spilled materials will be cleaned up once per day for US183 and TX 130 (two miles north of the site entrance and two miles south of the site entrance) and FM1185 and Schuelke Road (between southbound and northbound US183).
380. 130 Environmental Park will consult with officials of TxDOT concerning the cleanup of state highways and right-of-ways.
381. A storage area for large items and white goods may be provided, should these items be accepted.
382. Large items and white goods will be recycled to prevent a nuisance and to preclude discharge of fluids, but will not be stored in excess of 180 days.
383. Refrigerators, freezers, air conditioning units, or other items containing chlorinated fluorocarbon (CFC) refrigerant will be handled in accordance with 40 Code of Federal Regulations (CFR) §82.156(f), as amended.
384. On-site populations of disease vectors will be controlled by minimizing the size of the active working face; placing daily, intermediate, and final cover; adhering to the ponded water plan; the use of other approved methods when needed; and following the detailed procedures described in the Site Operating Plan.
385. 130 Environmental Park will employ a licensed professional to apply pesticides to ensure that proper chemicals are used and that they are properly applied should daily operations not control vectors.
386. All-weather roads will extend between the Facility and US183 and within the Facility to the unloading area(s) designated for wet-weather operation.
387. The all-weather surface entrance, access, and internal roads; speed bumps along the main access roads between the fill areas and the gatehouse; weekly grading; and a truck wheel wash station will minimize the tracking of mud onto public roads.
388. Should mud or other associated debris be tracked onto US183, the material will be removed daily.
389. Dust on the landfill haul roads and access roads will be controlled by periodic spraying from a water truck to prevent nuisance conditions.
390. The Site entrance road, landfill haul road, and access roads will be maintained in a clean and safe condition.
391. Litter and debris will be picked up daily and returned to the active working face.

392. Grading equipment will be used weekly to control mud and to minimize depressions, ruts, and potholes.
393. Salvaging will not be allowed to interfere with prompt sanitary disposal of solid waste or to create public health nuisances.
394. Salvaged materials will be considered as potential recycled materials. Salvaged items will be removed from the Site on an as-needed basis, but will not be stored in excess of 180 days, to prevent the items from becoming a nuisance, to preclude the discharge of pollutants from the area, and to prevent an excessive accumulation of the material at the site.
395. Special wastes received at the Site will not be salvaged.
396. Pesticide, fungicide, rodenticide, or herbicide containers will not be salvaged unless they are salvaged through a state-supported recycling program.
397. Scavenging will be prohibited at all times and not allowed.
398. There is one dry hole oil/gas well located within the Facility Boundary, but it is approximately 1,800 feet from the Landfill footprint.
399. 130 Environmental Park will provide written notification to the TCEQ Executive Director within 30 days after discovery should any unknown abandoned water, crude oil, or natural gas wells, or other well associated with mineral recovery, be discovered within the Facility Boundary.
400. Any unknown well found within the Landfill footprint will be plugged and abandoned.
401. A copy of the well plugging report for any water well found during Facility development will be submitted to the appropriate state agency and to the Executive Director within 30 days after the well is discovered.
402. Within 30 days after plugging of any abandoned crude oil or natural gas wells or other wells associated with mineral recovery, the 130 Environmental Park will provide the Executive Director with written certification that such wells have been properly capped, plugged, and closed in accordance with all applicable rules and regulations of the Railroad Commission of Texas. *Ex.*
403. Incoming waste will be spread in layers and thoroughly compacted by repeated passes of a landfill compacter weighing in excess of 40,000 pounds so each layer of solid waste will be thoroughly compacted.
404. The Site Operating Plan describes the daily cover that will be used at least once every 24 hours at the Facility as a means to control disease vectors, fire, odor, windblown litter and scavenging. *Ex.*

405. The Site Operating Plan describes how intermediate cover of soils and/or vegetative growth, or other suitable erosion control mechanisms, will be used at the Facility for all areas that will receive additional waste but may be inactive for more than 180 days.
406. The Site Operating Plan explains that alternative daily cover may be used only after the same has been proposed to and authorized by TCEQ.
407. The Site Operating Plan describes the final cover for the Landfill, including an explanation of the components of the final cover, slope range and drainage control, with reference to Part III of the Application, Attachment H - Closure Plan; Attachment D8 - Final Cover Quality Control Plan.
408. The Site Operating Plan addresses erosion of cover, and explains procedures for repairs in the event of cover erosion.
409. The cover application record, with the required elements, will be maintained on site and available for appropriate inspection.
410. The Site Operating Plan includes adequate provisions for cover, in compliance with TCEQ's rules.
411. The Site Operating Plan contains a ponding prevention plan that identifies techniques to be used at the Facility to prevent the ponding of water over waste, an inspection schedule to identify potential ponding sites, corrective actions to remove ponded water, and general instructions to manage water that has been in contact with waste.
412. Ponding of water over waste will be prevented
413. The Site Operating Plan provides adequate controls for ponded water.
414. Special wastes may be accepted at the Facility.
415. Requests for approval to accept special wastes will be submitted by the generator to the TCEQ Executive Director or 130 Environmental Park.
416. Approval for acceptance and disposal of special wastes at 130 Environmental Park will be waste-specific.
417. 130 Environmental Park will not accept the following special wastes: untreated medical waste, dead animals, slaughterhouse waste, municipal hazardous waste from a conditionally exempt small quantity generator, sewage sludge, grease trap waste, grit trap waste, or liquid wastes from municipal sources. The facility will not accept contaminated soil that exceeds 1,500 parts per million (ppm) or a constituent of concern exceeding levels in 30 TAC § 335.521 (a)(1), Table 1.
418. The Facility may accept the following wastes without prior written authorization: empty containers, non-regulated asbestos-containing materials, and regulated asbestos containing

materials.

419. Class 1 industrial solid waste requiring Executive Director approval pursuant to §330.173 will not be accepted, except regulated asbestos containing material that has been designated Class 1 industrial solid waste due to its asbestos content.
420. 130 Environmental Park will not recirculate leachate and landfill gas condensate.
421. 130 Environmental Park will not discharge contaminated water from the facility without specific written authorization from TCEQ.
422. All water coming in contact with waste or contaminated soils will be treated as contaminated water and managed following the procedures set forth in the Leachate and Contaminated Water Management Plan in the Application.
423. The Site Operating Plan describes operations for storage areas for large items and white goods within the waste disposal footprint or near the citizen's convenience center.
424. The large item storage area will receive approximately one ton of large items and white goods per day and have a maximum amount of 180 tons of material stored at one time.
425. The large item storage area, when located within the waste disposal footprint, will be placed only over areas that have received intermediate cover.
426. Surface water runoff from the large item storage area will be contained by placement of earth containment berms to preclude discharge from this area. Containment and diversion berms will be placed, and runoff from the area managed, consistent with the Leachate and Contaminated Water Plan.
427. The large items and white goods stored at the storage area near the citizen's convenience area will be transferred into steel roll-off containers for storage until transported to an off-site recycler or disposed of.
428. Containers at the citizen's convenience area will be covered with tarps during a rainfall event to prevent contaminated water from being generated.
429. The Site Operating Plan describes operations for a reusable materials staging area.
430. Inert materials such as brick, concrete, etc., and non-inert materials such as asphalt may be received and staged at the facility for use as roadbase materials for facility access roads and staging areas or erosion control in drainage structures.
431. Asphalt pavement will not be used for erosion control in drainage structures.
432. The reusable materials staging area will receive approximately 250 tons of inert materials per day and have a maximum amount of 2,000 tons stored at one time.

433. The reusable materials staging area will receive approximately 50 tons of non-inert material per day and have a maximum of 500 tons stored at one time.
434. 130 Environmental Park will provide a recyclable materials storage and staging area for source-separated recyclable materials, including asphalt and other materials.
435. The Site Operating Plan describes operation of a citizen's convenience center at the Facility.
436. The Site Operating Plan describes how containers located in the citizen's convenience center will be managed and provides a description of waste stream processing in the center.
437. 130 Environmental Park will not intentionally or knowingly accept whole used or scrap tires for disposal unless processed prior to disposal in a manner acceptable to the Executive Director.
438. The Site Operating Plan describes how the Facility will manage scrap tires and a description of scrap tire processing.
439. The Site Operating Plan describes operations for scrap tires to be accepted from the public or from community clean-up efforts and stored in containers or trailers prior to shipment off-site.
440. The Site Operating Plan describes operations for a wood waste processing area.
441. The Site Operating Plan describes operations for a leachate and landfill gas condensate facility.
442. Leachate and landfill gas condensate will be pumped from the leachate sumps directly to transport trucks or to an existing on-site leachate storage facility through a leachate forcemain.
443. The leachate storage facility consists of two 250,000-gallon steel storage tanks, which will be installed individually as needed based on leachate generation.
444. The calculations in the Application demonstrate that the secondary containment at the leachate storage facility, consisting of reinforced concrete slab and walls, provides containment volume for 110 percent of the volume of one leachate storage tank and precipitation from the 25-year, 24-hour storm event with 12 inches of freeboard.
445. The maximum amount of leachate that may be stored on Site at any time is 500,000 gallons.
446. The maximum amount of time leachate will be stored during the postclosure condition is 12 months and the average amount of time is 6 months.
447. The Site Operating Plan describes operations for a truck wheel wash station.

- 448. Water from the wheel wash will be collected and stored in a concrete settlement basin for reuse in the wheel wash.
- 449. Periodically, the settlement basin of the truck wheel wash station will be drained and the sediment will be removed from the basin, or the sediment within the settlement basin will be solidified in place and then removed from the basin.
- 450. The wash water of the truck wheel wash station may be hauled to an authorized off-site facility for treatment and disposal if not solidified in place.
- 451. The sediment from the truck wheel wash station, following solidification and passing the paint filter test, may be disposed of in the Landfill.
- 452. The maximum amount of sediment stored in the truck wheel wash is approximately 100 cubic yards.
- 453. The sediment from the truck wheel wash station will not be stored in excess of 90 days and the average length of time sediment will be stored is 30 days.

21. ODOR

- 454. The Site Operating Plan in the Application includes an Odor Management Plan that addresses sources of odors and includes general instructions to control odors or sources of odors.
- 455. The Application contains ventilation and odor control measures for each storage, separation, processing, and disposal unit.
- 456. Among the wastes that will not be accepted at the Facility are medical waste, sewage, dead animals and/or slaughterhouse waste, sludge, grease trap waste, and grit trap waste.
- 457. Leachate and landfill gas condensate will not be recirculated at the Facility.
- 458. Odors associated with waste acceptance and disposal operations, and operation of the storage and processing areas, will be managed in accordance with provisions of the Odor Management Plan.
- 459. The Odor Management Plan discusses wastes that require special attention due to potential odors.
- 460. The Application satisfies, and the 130 Environmental Park Landfill will satisfy, all applicable regulatory requirements regarding odors, odor controls and avoidance of nuisance odors.

22. WATER SUPPLY

- 461. Water will be supplied to the Facility by Polonia Water Supply Corporation.

462. Potable water (bottled water) will be provided for all employees and visitors at/near the scale house and/or maintenance building.

23. BUFFER ZONES

463. Buffer zones, between the Facility boundary and the Landfill footprint and between the Facility boundary and waste storage or processing activities, will exceed the TCEQ-required minimum of 125 feet.
464. No solid waste unloading, storage, disposal, or processing operations will occur within any buffer zone, or right-of-way that crosses the Site, including the 125-foot buffer zone of the landfill.
465. The buffer zones will provide for safe passage of fire-fighting and other emergency vehicles.
466. Buffer zones will be marked with yellow markers (posts extending at least six feet above the ground surface) placed along each buffer zone boundary at all corners and between corners at intervals of 300 feet.
467. The inundation area of the Plum Creek Conservation District easement for the Site 21 Reservoir extends onto the Site in the south and southeast, but does not extend to any area to be used for waste unloading, storage, processing, or disposal.
468. No solid waste unloading, storage, disposal, or processing operations will occur within any easement, buffer zone, or right-of-way that crosses the Site.
469. The Facility will comply with the Easements and Buffer Zones Location Restriction in 30 TAC §330.543.

24. SCREENING

470. Existing topography and vegetation will provide natural screening of deposited waste.
471. Visual screening of deposited waste will be provided as part of normal waste disposal and cover placement operations and sequence of development.
472. Final cover will be placed as the landfill reaches final contours.
473. As the site is developed, the visual effects of the disposal activities will be minimized through the use of screening provided by fencing, constructed berms, planted vegetation, and natural vegetation located within the buffer zone.
474. Visibility of the Facility will be limited by existing topography, naturally occurring tree lines, and the vegetated landscaping plan for the Facility (including an effective screening berm).

25. PERMIT DURATION

475. TCEQ's municipal solid waste rules state that "a registration or permit is normally issued for the life of the facility... When deemed appropriate a registration or permit may be issued for a specific period of time."
476. The projected life of the 130 Environmental Park Landfill facility is 44 years.
477. It is appropriate for the permit for the 130 Environmental Park Landfill facility to be issued for the life of the Facility.

26. CLOSURE PLAN

478. The Application includes a Closure Plan for the Facility in Part III, Attachment H.
479. The Closure Plan includes drawings showing the final constructed contour of the entire landfill, including internal drainage and side slopes, accommodation of surface drainage entering and departing the completed fill area, and areas subject to flooding due to a 100-year frequency flood.
480. The estimated largest area requiring final cover during the active life of the Landfill is approximately 75 acres.
481. The estimated maximum inventory of waste and operational cover at the Facility during its life is approximately 33.1 million cubic yards, which is the total volume of the Landfill.
482. The Closure Plan specifies the procedures for closure of any portion or all of the Landfill.
483. The Closure Plan includes a description of the steps that will be undertaken to close the Landfill, a schedule for final closure, a description of the final cover system, and the methods used to install the final cover.
484. The final cover system will consist of an infiltration layer, a flexible membrane cover, a drainage layer on sideslopes, a cushion layer on topslopes, and an erosion control layer.
485. The infiltration layer will be a minimum of 18 inches of compacted soil with a coefficient of permeability less than or equal to 1×10^{-5} cm/sec.
486. The estimated cost of hiring a third party to close the largest area of the Landfill requiring final closure at any time during its active life is \$10,121,410.00.

27. POST-CLOSURE PLAN

487. The Application includes, in Part III Attachment I, a Post-Closure Plan addressing the ongoing monitoring and maintenance activities that will be conducted at the Site for 30 years following closure.

488. The estimated cost of hiring a third party to conduct postclosure care activities in accordance with the Post-Closure Plan is \$6,794,348.

28. FINANCIAL ASSURANCE

489. TCEQ rules require the submission of cost estimates for closure of a municipal solid waste landfill facility with a new permit application.

490. The Application includes a cost estimate for closure of the Facility.

491. TCEQ rules require the owner or operator of a municipal solid waste landfill unit to establish financial assurance for closure of the unit in accordance with 30 TAC Chapter 37 (Financial Assurance for Municipal Solid Waste Facilities).

492. TCEQ rules require the submission of cost estimates for post-closure care of a municipal solid waste landfill facility with a new permit application.

493. The Application includes a cost estimate for post-closure care of the Facility.

494. TCEQ rules require the owner or operator of a municipal solid waste landfill unit to establish financial assurance for the costs of post-closure care of the unit in accordance with 30 TAC Chapter 37 (Financial Assurance for Municipal Solid Waste Facilities).

495. TCEQ rules require that a copy of the required documentation for financial assurance be submitted at least 60 days prior to the initial receipt of waste at the Facility.

496. 130 Environmental Park will submit a copy of the documentation required to demonstrate financial assurance as specified in 30 TAC Chapter 37, Subchapter R at least 60 days prior to the initial receipt of waste at the Facility.

29. IMPACTS ON HEALTH, WELFARE, ENVIRONMENT, OR PHYSICAL PROPERTY OF NEARBY RESIDENTS AND PROPERTY OWNERS

497. TCEQ's municipal solid waste rules provide standards for the design, permitting and operation of municipal solid waste facilities to protect human health and welfare, the environment, and physical property of nearby residents and property owners.

498. A facility permitted and operated in compliance with TCEQ's municipal solid waste rules will be protective of human health and welfare, the environment, and physical property of nearby residents and property owners.

499. The 130 Environmental Park Landfill facility will be protective of human health and welfare, the environment, and physical property of nearby residents and property owners.

30. ENFORCEABILITY OF DRAFT PERMIT

500. TCEQ is authorized to enforce the provisions of any permit it issues.

501. A permit issued by TCEQ based on the Application and the draft permit is enforceable.

31. PERMIT SPECIAL PROVISIONS

502. Section IX of the draft permit includes two special provisions, as follow:

A. Before physical construction may commence, the permittee must provide the Executive Director with a floodplain development permit from the city, county, or other agency with jurisdiction over improvements authorized by this permit.

B. The facility must implement all roadway improvements specified in Part II, Appendix IIC of the permit application prior to the pre-opening inspection of the facility.

503. No other permit special provisions are necessary.

32. ASSESSMENT OF REPORTING AND TRANSCRIPTION COSTS

504. The hearing on the merits regarding the Application was conducted August 15 through 19 and August 22 through 26, 2016 by SOAH Administrative Law Judges Kerry Jo Qualtrough and Casey A. Bell at SOAH, 300 West 15th Street, Austin, Texas.

505. Pursuant to Order No. 1, the Applicant arranged for and paid a court reporter to report and transcribe the hearing on the merits and delivered the original and one copy of the transcript to each of the ALJs and two copies to the TCEQ's Chief Clerk, including electronic copies on disc in text format.

506. The cost of reporting, preparing, and delivering the transcripts delivered to the ALJs and the TCEQ Chief Clerk was \$16,725.85, calculated by adding the following amounts shown on the invoices: Hourly Reporting Fee, After Hours Reporting Fee, Original & One Copy – Regular Delivery, 5/6ths of the Additional Format of Transcript (for the five electronic copies of the transcript delivered to SOAH and TCEQ), Delivery fee, and Administrative Fee; not including the following amounts shown on the invoices: Rough Draft – Daily, and 1/6th of the Additional Format of Transcript (for the one electronic copies of the transcript delivered to the Applicant).

507. The Applicant, PCCD, Caldwell County, TJFA, EPICC, the Executive Director, and OPIC all participated substantially in the contested case hearing and benefitted from having a transcript for use in preparing written closing arguments and responses. The other parties to this proceeding did not participate in the contested case hearing.

508. The Applicant, PCCD, Caldwell County, TJFA and EPICC were each represented by private law firm attorneys in connection with the contested case hearing, demonstrating these parties' ability to pay costs.

509. In the contested case hearing, Applicant, PCCD, Caldwell County, TJFA and EPICC presented direct case testimony and exhibits and cross-examined witnesses presented by other parties to the hearing.

510. The hearing transcript consists almost entirely of questions asked of witnesses by party representatives and the witnesses' answers to those questions, and approximately 90% of the transcript pages consist of questions/answers attributable to the Applicant, PCCD, Caldwell County, TJFA, and EPICC (the remaining 10% is questions/answers attributable to the TCEQ Executive Director and OPIC, parties against whom reporting and transcript costs may not be assessed).
511. The approximate percentages of that 90% of the hearing transcript pages attributable to the Applicant, PCCD, Caldwell County, TJFA, and EPICC are: Applicant – 22%, PCCD – 6%, Caldwell County – 20%, TJFA and EPICC (combined because these parties shared attorneys and witnesses) – 52%.
512. Allocating the transcript costs among the above parties based on the above percentages is just and reasonable and results in the following allocation: Applicant – \$3,679.69, PCCD – \$1,003.55, Caldwell County – \$3,345.17, TJFA and EPICC – \$8,697.44.

33. ADDITIONAL ISSUES

513. Part I of the Application includes the information required by, and complies with the requirements of, 30 TAC §281.5.
514. Part I of the Application includes the information required by, and complies with the requirements of, 30 TAC §305.45.
515. Part I of the Application includes the information required by, and complies with the requirements of, 30 TAC §330.59.
516. Part II of the Application describes the existing conditions and character of the Site and surrounding area, and includes the information required by and complies with the requirements of 30 TAC §330.61.
517. Parts I and II of the Application include information relating to land-use compatibility under the provisions of Texas Health and Safety Code, §361.069.
518. Part III of the Application includes design information, detailed investigative reports, schematic designs of the facility, and required plans and consists of the documents required by 30 TAC §330.63.
519. Part IV of the Application includes the Site Operating Plan that discusses how the owner or operator will conduct daily operations at the facility and consists of the information required by 30 TAC §330.65.
520. The Application includes data of sufficient completeness, accuracy, and clarity to provide assurance that operation of the Facility will pose no reasonable probability of adverse effects on the health, welfare, environment, or physical property of nearby residents or property owners.

521. 130 Environmental Park provided the number of copies of the Application required by 30 TAC §330.57(e) and requested by the Executive Director.
522. 130 Environmental Park prepared the Application in conformance with Texas Occupations Code, Texas Engineering Practice Act, Chapter 1001 and Texas Geoscience Practice Act, Chapter 1002.
523. The responsible engineers sealed, signed, and dated the title page of each bound engineering report or individual engineering plan in the Application and each engineering drawing as required by Texas Engineering Practice Act, §15c, and in accordance with 22 TAC §137.33 (relating to Sealing Procedures).
524. The responsible geoscientist sealed, signed, and dated applicable items as required by Texas Geoscience Practice Act, §6.13(b), and in accordance with 22 TAC §851.156 (relating to Geoscientist's Seals).
525. The Application is prepared in the format required by, and complies with the requirements of, 30 TAC §§305.45 and 330.57(g).
526. The Application drawings are prepared in the format required by, and comply with the requirements of TCEQ rules including 30 TAC §§330.57(h) and 330.61(c) and (d).
527. The Application includes general topographic maps in the format required by, and in compliance with, TCEQ rules including 30 TAC §330.61(e).
528. The Application includes an aerial photograph in the format required by, and in compliance with, TCEQ rules including 30 TAC §330.61(f).
529. The Application includes the information required by, and in compliance with, the provisions of 30 TAC §281.5.
530. The Application forms are signed and notarized.
531. 130 Environmental Park has paid all required application fees.
532. The Application includes a Certificate of Fact wherein the Texas Secretary of State verifies the legal status of 130 Environmental Park.
533. The Application includes a Notice of Appointment signed by the President and Manager of 130 Environmental Park. *Ex.*
534. The Application includes attachments of technical reports and supporting data required by TCEQ rules.
535. The Application includes a list of adjacent and potentially affected landowners and their addresses along with a map locating the property owned by these persons.

536. The Application includes a report of a Cultural Resources Survey conducted by AR Consultants, Inc.
537. No area within the Site is eligible for listing on the National Register of Historic Places or warrants designation as a Texas State Antiquities Landmark.
538. The Application includes the Texas Historical Commission's concurrence that no area within the Site is eligible for listing on the National Register of Historic Places.
539. The Site is not located in a seismic impact zone.
540. The Facility will not be located in a coastal area or on an island or peninsula.
541. The Site is not located inside the boundaries of a national forest.
542. The Facility will comply with the Type I and Type IV Landfill Permit Issuance Prohibited Location Restriction in 30 TAC §330.563.
543. The Application includes all information required by the Executive Director and TCEQ rules.

E. CONCLUSIONS OF LAW

1. The Commission has jurisdiction over the disposal of municipal solid waste and the authority to issue this permit under Tex. Health & Safety Code §361.061.
2. Notice was provided in accordance with Tex. Health & Safety Code §361.0665, 30 TAC §§39.405 and 39.501, and Tex. Gov. Code §§2001.051-.052.
3. SOAH has jurisdiction to conduct a hearing and to prepare a PFD in contested cases referred by TCEQ under Tex. Gov. Code §2003.047.
4. The Executive Director determined that 130 Environmental Park, LLC ("130 Environmental Park") submitted an administratively and technically complete permit application, as required by Tex. Health & Safety Code §§361.066 and 361.068, that demonstrated that it will comply with all relevant aspects of the Application and design requirements as provided in 30 TAC §§330.57 and 330.63.
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 TAC §80.1 *et seq.*; the State Office of Administrative Hearings, specifically 1 TAC §155.1 *et seq.*; and Tex. Health & Safety Code ch. 361, subch. C.
6. The burden of proof was on 130 Environmental Park, in accordance with 30 TAC §80.17(a). 130 Environmental Park, LLC met its burden with respect to all issues.

7. The evidence in the record is sufficient to meet the requirements of applicable law for issuance of a permit based on the Draft Permit, including Tex. Health & Safety Code ch. 361 and 30 TAC ch. 330.
8. The 130 Environmental Park Facility, if constructed and operated in accordance with the Solid Waste Disposal Act, 30 TAC ch. 330, and the permit required by this Order, will not adversely affect the health, welfare, or physical property of the people or the environment.
9. The Draft Permit No. MSW-2383, as prepared by the Executive Director, includes all matters required by law.
10. The approval of the Application and issuance of Permit No. MSW-2383 will not violate the policies of the State of Texas, as set forth in Texas Health and Safety Code §361.002(a), to safeguard the health, welfare, and physical property of the people of Texas, and to protect the environment by controlling the management of solid waste.
11. The contents of the permit to be issued to the Facility meet the requirements of the Texas Solid Waste Disposal Act, Tex. Health & Safety Code §§361.086(b) and 361.087.
12. 130 Environmental Park provided the information required under TCEQ's rules to demonstrate evidence of competency under 30 TAC §330.59(f).
13. 130 Environmental Park's compliance history ranking was properly classified as "unclassified" under 30 TAC ch. 60.
14. The Application includes sufficient information and demonstrates compliance with TCEQ rule requirements regarding property rights in 30 TAC §330.67.
15. The TCEQ is not prohibited by Tex. Health & Safety Code §361.122 from issuing Permit No. MSW-2383.
16. The Application adequately demonstrates how the Facility will comply with the TPDES program under the federal Clean Water Act Section 402, as amended, as required by 30 TAC §330.61(k)(3).
17. As required by 30 TAC §330.61(i)(4), and (i)(5), 130 Environmental Park has submitted documentation of coordination with the FAA for compliance with airport location restrictions, and TxDOT for traffic and location restrictions.
18. 130 Environmental Park has submitted wetland determinations required by applicable federal, state, and local laws as required by 30 TAC §330.61(m).
19. The Application conforms to the applicable requirements of the Texas Engineering Practice Act, Tex. Occ. Code ch. 1001, and the Texas Geoscience Practice Act, Tex. Occ. Code ch. 1002, as provided in 30 TAC §330.57.

20. Part I of the Application meets the requirements of 30 TAC §§281.5, 305.45, 305.57(c)(1) and 305.59.
21. Part II of the Application meets the requirements of 30 TAC §§305.45, 330.57(c)(2), and 305.61, and 330.543 through 330.563.
22. Part III of the Application, the Site Development Plan, meets the requirements of 30 TAC §§330.57(c)(3) and 330.63.
23. Part IV of the Application, the Site Operating Plan (“SOP”), meets the requirements of 30 TAC §§330.57(c)(4), 330.65, and 330.121-330.249.
24. 130 Environmental Park has shown that it will comply with the operational prohibitions and requirements in 30 TAC §§330.15 and 330.121-330.249.
25. 130 Environmental Park submitted a geology report that complies with 30 TAC §330.63(e).
26. The Application meets the requirements of 30 TAC §§330.63(f)(4), 330.401, 330.403, 330.405, and 330.407, concerning groundwater protection.
27. The groundwater sampling and analysis plan meets the requirements set forth in 30 TAC §330.63(f) and Subchapter J of Chapter 330.
28. 130 Environmental Park has demonstrated that existing drainage patterns will not be adversely altered as a result of the proposed landfill development, as required by 30 TAC §§330.63(c)(1)(D)(iii) and 330.305(a).
29. The landfill gas monitoring system complies with 30 TAC §330.159.
30. 130 Environmental Park has demonstrated compliance with applicable TPDES stormwater permitting requirements.
31. 130 Environmental Park has demonstrated compliance with the location restrictions set forth in 30 TAC §§330.543, 330.545, 330.547, 330.549, 330.551, 330.553, 330.555, 330.557, 330.559, 330.561, and 330.563.
32. 130 Environmental Park has submitted information regarding closure and post-closure that demonstrates compliance with the requirements of 30 TAC §§ 330.63(h) and (i), 330.457, 330.461, 330.463, and 330.465.
33. The Soils and Liner Quality Control Plan complies with 30 TAC §§ 330.63(d)(4)(G) and 330.339.
34. 130 Environmental Park is not proposing to site a new MSW landfill or lateral expansion within five miles of an airport serving turbojet or piston-type aircraft, as confirmed in

correspondence with the FAA and in compliance with 30 TAC §§330.61(i)(5) and 330.545.

35. The Facility will be compatible with surrounding land uses.
36. The existence of the Caldwell County Solid Waste Disposal Ordinance does not prevent TCEQ from granting the Application and issuing the permit sought by way of the Application pursuant to Tex. Health & Safety Code §§363.112(d) and 364.012(f).
37. Solid waste management activities at the Facility will conform with the applicable regional solid waste management plan, pursuant to Tex. Health & Safety Code §363.066.
38. The methods specified in the SOP comply with the MSW rules to prevent the creation of any nuisance, as defined by 30 TAC §330.3(95).
39. The buffer zones established by 130 Environmental Park between the edge of fill and the Facility boundary are compliant with the MSW rules, including 30 TAC §§330.141(b) and 330.543(b).
40. 130 Environmental Park has provided sufficiently detailed information regarding the operational methods to be utilized at the Facility when using daily cover and its preventative effect on vectors, fires, odors, windblown waste and litter, and scavenging, as required by 30 TAC §330.165(a).
41. The methods specified in the SOP for the control of windblown waste and litter comply with the MSW rules, including 30 TAC §§330.127 and 330.139.
42. 130 Environmental Park has provided adequate information related to transportation in compliance with 30 TAC §330.61(i).
43. The roads to be used by 130 Environmental Park to access the Facility will be available and adequate.
44. The operating hours proposed in the Application (waste acceptance hours from 3:00 a.m. to 5:00 p.m. (14 hours) on Monday through Friday and from 5:00 a.m. to 12:00 p.m. (7 hours) on Saturday, and transportation of materials and heavy equipment operation hours 24 hours per day, seven days per week) are appropriate pursuant to 30 TAC §330.135.
45. The proposed groundwater monitoring system will adequately monitor the groundwater beneath the Facility and protect human health and the environment in compliance with 30 TAC §§330.63(f)(4), 330.401, 330.403, 330.405, and 330.407.
46. Parts I and II of the Application comply with applicable regulatory requirements of 30 TAC ch. 330.

47. Parts I and II of the Application comply with applicable regulatory requirements of 30 TAC §§281.5, 330.59, and 330.61.
48. Section 1 - Existing Conditions Summary of Part II of the Application complies with applicable regulatory requirements of 30 TAC §330.61(a).
49. Section 2 - Waste Acceptance Plan of Part II of the Application complies with applicable regulatory requirements of 30 TAC §330.61(b).
50. Section 3 - General Location Maps and Appendix IIA of Part II of the Application comply with applicable regulatory requirements of 30 TAC §330.61(c)-(f) and (l)(1).
51. Section 4 - Facility Layout Maps and Appendix IIA of Part II of the Application comply with applicable regulatory requirements of 30 TAC §330.61(d)(1)-(9).
52. Section 5 - General Topographic Map and Drawing IIA.2 of Appendix IIA of Part II of the Application comply with applicable regulatory requirements of 30 TAC §330.61(e).
53. Section 6 - Aerial Photograph of Part II of the Application complies with applicable regulatory requirements of 30 TAC §330.61(f).
54. Sections 7 - Land Use Map and Appendix IIB of Part II of the Application and Exhibit Worrall-3 p.8 - Updated Land Use Analysis comply with applicable regulatory requirements of 30 TAC §330.61(g).
55. Sections 8 - Impact on Surrounding Area, Appendix IIB - Land Use Analysis of Part II of the Application and Exhibit Worrall-3, Updated Land Use Analysis comply with applicable regulatory requirements of 30 TAC § 330.61(h).
56. Section 9 - Transportation, Appendix IIC - Transportation Study, and Appendix IIIH - Federal Aviation Administration Documentation of Part II of the Application comply with applicable regulatory requirements of 30 TAC §§330.61(i) and 330.545.
57. Section 10 - General Geology and Soils Statement of Part II, and Attachment E of Part III of the Application comply with applicable regulatory requirements of 30 TAC §§330.61(j), 330.555, 330.557 and 330.559.
58. Section 11 - Groundwater and Surface Water of Part II and Attachment F of Part III of the Application comply with applicable regulatory requirements of 30 TAC §§330.61(k) and 330.549.
59. Section 12 - Abandoned Oil and Water Wells of Part II of the Application complies with applicable regulatory requirements of 30 TAC §§330.61(l).
60. Section 13 - Floodplains and Wetlands, Drawing IIA.11, Drawing IIA.21, Appendix IID,

Appendix IIG, and Appendix IIJ of Part II of the Application comply with applicable regulatory requirements of 30 TAC §§330.61(m), 330.547 and 330.553.

61. Section 14 - Endangered or Threatened Species and Appendix IIE of Part II and Appendix IVC of Part IV of the Application comply with applicable regulatory requirements of 30 TAC §§330.61(n) and 330.551.
62. Section 15 - Texas Historical Commission Review and Appendix IIF of Part II of the Application comply with applicable regulatory requirements of 30 TAC §§330.61(c)(12), 330.61(h)(4) and 330.61(o).
63. Section 16 - Council of Governments and Local Government Review Request and Appendix III of Part II of the Application comply with applicable regulatory requirements of 30 TAC §§330.61(p)
64. Commission rules 30 TAC §§330.549, 330.561, and 330.563 are not applicable to the Facility, based on its location.
65. Part III - Site Development Plan of the Application complies with applicable regulatory requirements of 30 TAC §§330.15, 330.63, 330.171, 330.303, 330.305, 330.307, 330.331, 330.333, 330.371, 330.401-330.421, 330.457, 330.459, 330.461, 330.463, 330.465, 330.503, and 330.507.
66. Attachment A - Site Development Plan Narrative of Part III of the Application complies with applicable regulatory requirements of 30 TAC §330.63(b).
67. Attachment B - General Facility Design of Part III of the Application complies with applicable regulatory requirements of 30 TAC §330.63(b).
68. Attachment C - Facility Surface Water Drainage Report of Part III of the Application complies with applicable regulatory requirements of 30 TAC §§330.63(c) and 330.301 - 330.307.
69. Attachment D - Waste Management Unit Design of Part III of the Application complies with applicable regulatory requirements of 30 TAC §330.63(d) 330.331, 330.337, 330.339, 330.341, and 330.457.
70. Attachment E - Geology Report of Part III of the Application and Exhibit 130EP-7, Supplement May 2016 comply with applicable regulatory requirements of 30 TAC §§330.57(f)(2), 330.63(e), 330.61(j)(2), 330.555, 330.557, and 330.559.
71. Attachment F - Groundwater Sampling and Analysis Plan of Part III of the Application and Exhibit 130EP-7, Supplement May 2016 comply with applicable regulatory requirements of 30 TAC §§330.330.63(f), 330.403, 330.405, 330.407, 330.409, 330.421 and 30 TAC ch. 330 subch. J.

72. Attachment G - Landfill Gas Management Plan of Part III of the Application complies with applicable regulatory requirements of 30 TAC §§330.63(g), 330.371, and 30 TAC ch. 330 subch. U.
73. Attachment H - Closure Plan of Part III of the Application complies with applicable regulatory requirements of 30 TAC §§330.63(h), 330.171(c)(3)(C), 330.457, 330.459, 330.461, and 330.503(a).
74. Attachment I - Postclosure Plan of Part III of the Application complies with applicable regulatory requirements of 30 TAC §§330.63(i), 330.331 - 330.333, 330.371, 330.401 - 330.421, 330.459, 330.463(b), 330.465, 330.951 - 330.964.
75. Attachment J - Cost Estimates for Closure and Post Closure Care complies with applicable regulatory requirements of 30 TAC §§330.63(j), 330.501 - 330.507, and 30 TAC ch. 37, subch. R.
76. The SOP in Part IV of the Application complies with applicable regulatory requirements in 30 TAC §330.65, and 30 TAC ch. 330, subch. D and subch. E.
77. The SOP in Part IV of the Application is designed to make the Facility protective of human health, welfare, property and the environment.
78. Section 1 - Introduction of Part IV of the Application complies with the applicable regulatory requirements of 30 TAC §330.65, 330.121, 330.123, and 330.127.
79. Section 2 - Recordkeeping Requirements of Part IV of the Application complies with applicable regulatory requirements of 30 TAC §330.125.
80. Section 3 - Personnel and Training complies with the regulatory requirements of 30 TAC §§330.127 and 335.586.
81. Section 4 - Equipment of Part IV of the Application complies with the applicable regulatory requirements of 30 TAC §330.127(2).
82. Section 5 - Detection and Prevention of Disposal of Prohibited Wastes of Part IV of the Application complies with the regulatory requirements of 30 TAC §330.127(5).
83. Section 6 - General Instructions of Part IV of the Application complies with the regulatory requirements of 30 TAC §330.127(6).
84. Section 7 - Fire Protection Plan of Part IV of the Application complies with the regulatory requirements of 30 TAC §330.129.
85. Section 8 - Operational Procedures of Part IV of the Application complies with the regulatory requirements of 30 TAC §330.131 - 330.175.

86. The engineering, design, and operational plans and drawings in the Application ensure that the Facility is designed and operated in a manner protective of human health, welfare, property, and the environment.
87. The subsurface investigations of the Facility were conducted to ensure that the Site is suitable for construction and operation of a landfill that will not adversely impact human health, welfare, property, or the environment.
88. Pursuant to the authority of, and in accordance with, applicable laws and regulations, the requested permit should be granted.
89. No transcript costs may be assessed against the Executive Director or OPIC because the TCEQ's rules prohibit the assessment of any cost to a statutory party who is precluded by law from appealing any ruling, decision, or other act of the Commission. 30 TAC §80.23(d)(2).
90. Factors to be considered in assessing transcript costs include: the party who requested the transcript; the financial ability of the party to pay the costs; the extent to which the party participated in the hearing; the relative benefits to the various parties of having a transcript; the budgetary constraints of a state or federal administrative agency participating in the proceeding; and any other factor which is relevant to a just and reasonable assessment of the costs. 30 TAC§ 80.23(d)(2).
91. Reasonable assessment of hearing transcript costs against parties to the contested case proceeding is: 130 Environmental Park – \$3,679.69, Plum Creek Conservation District – \$1,003.55, Caldwell County – \$3,345.17, TJFA and EPICC (jointly and severally) – \$8,697.44.