SOAH DOCKET NO. 582-22-0844
TCEQ DOCKET NO: 2021-1000-MSW

IN THE MATTER OF THE	**§**	**BEFORE THE STATE OFFICE**
APPLICATION BY DIAMOND BACK	**§**	
RECYCLING AND SANITARY	**§**	**OF**
LANDFILL, LP FOR NEW MSW	**§**	
PERMIT NO. 2404	**§**	**ADMINISTRATIVE HEARINGS**

KNOX REAL PROPERTY DEVELOPMENT, LLC AND JASON HARRINGTON'S EXCEPTIONS TO THE PROPOSAL FOR DECISION

October 3, 2022

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KNOX REAL PROPERTY DEVELOPMENT, LLC AND JASON HARRINGTON'S EXCEPTIONS TO THE PROPOSAL FOR DECISION

TO THE HONORABLE COMMISSIONERS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY:

Protestants Knox Real Property Development, LLC ("Knox") and Jason Harrington ("Harrington") (collectively, "Protestants") submit these Exceptions to the Administrative Law Judge's ("ALJ") Proposal for Decision ("PFD") relating to the application by Diamond Back Recycling and Sanitary Landfill, LP ("Diamond Back" or "Applicant") for new MSW Permit No. 2404. For the reasons presented below, Protestants urge a denial of Diamond Back's application and requested permit.

I. SUMMARY

Protestants support the ALJ's ultimate recommendation of permit denial. That recommendation is well-founded and based upon clear deficiencies in the application with regard to the surface water drainage requirements of the TCEQ rules.

Even so, Protestants except to certain conclusions by the ALJ because the permit warrants denial for reasons that go well-beyond surface water drainage problems. In particular, Diamond Back has not demonstrated that the landfill is a compatible land use, nor has Diamond Back demonstrated that the construction and operation of the landfill will be protective of groundwater.

For these reasons, in addition to the surface water drainage deficiencies identified by the ALJ, Diamond Back's permit application should be denied.

II. EXCEPTIONS TO CONCLUSIONS ON REFERRED ISSUES OF LAND USE COMPATIBILITY AND GROUNDWATER PROTECTION[1]

A. The ALJ erred, as a matter of law, by not requiring Diamond Back to demonstrate that the proposed landfill is a compatible land use.

The Commission referred the issue of "whether the proposed facility is a compatible land use." Protestants bore *only* a burden of production on this issue, and Applicant bore the burden of proof.

The ALJ's conclusion that the landfill is a compatible land use rests entirely on a finding that Protestants did not rebut the *prima facie* presumption.[2] On this issue, the PFD lacks a substantive analysis. The ALJ committed legal error in concluding that Protestants had not rebutted the prima facie presumption. The burden of proof on this issue should be placed upon the *applicant*, and the permit should be denied in light of Applicant's failure to make this demonstration in addition to the other deficiencies in the application.

Knox and Harrington met their burden to produce evidence that the proposed facility is not a compatible land use. The application materials themselves reveal that five active oil wells exist within the permit boundary,[3] and the site is crisscrossed by hydrocarbon pipeline easements.[4] Knox and Harrington produced the testimony of Dr. Zornberg, who opined that the landfill units and operation were inconsistent with the pipeline easements and oil and gas development on site,[5] and

[1] In light of the ALJ's ultimately correct recommendation of permit denial, these exceptions highlight only limited areas of disagreement with the ALJ. A proper consideration of these issues even further requires permit denial. Such focus does not constitute waiver of any issue not briefed herein.
[2] PFD, p. 15.
[3] Admin. Record Tab D, Initial Submittal, Vol. 1, Fig. II.A.6 (PDF p. 99).
[4] Admin. Record Tab D, Initial Submittal, Vol. 1, Fig. II.A.12 (PDF p. 105).
[5] Ex. Knox-100, pp. 12-13, 16-19.

expressed the opinion that the applicant had not demonstrated compliance with 30 TAC § 330.61(h)[6] – precisely the regulation on which the ALJ asserted Protestants had not rebutted the prima facie presumption. The ALJ erroneously imposed a burden of proof upon Protestants, rather than a burden of production. The Commission should act consistently with its own precedent and reject such an erroneous analysis.

Knox went beyond Dr. Zornberg's testimony to present evidence of concerns expressed by the current holder of the mineral interest lease for the property – Aghorn Energy (Aghorn). Aghorn previously commented to TCEQ that it had experienced considerable difficulty with Diamond Back.[7] Aghorn noted that Diamond Back has previously operated in a manner that resulted in the placement of massive rocks dangerously close to wells, and directly on top of flow lines and power lines, which has resulted in the destruction of some of Aghorn's flowlines.[8] Aghorn noted that "there have already been considerable threats and risks to Aghorn's wells and equipment" as a result of Diamond Back's actions.[9] Aghorn emphasized that it was important to maintain access to its wells should an incident related to the presence of hydrogen sulfide occur.[10] Aghorn went on to comment:

> **Aghorn believes its ongoing oil and gas production operations render the site unsuitable for a landfill**. Aghorn is greatly concerned that Diamond Back's operations pose a great risk to Aghorn's operations, which in turn would pose a great threat to the area.[11]

Aghorn went on to note that the configuration of the landfill would interfere with Aghorn's ability to place additional drilling locations on and around the landfill site in compliance with spacing

[6] Ex. Knox-100, p. 40.
[7] Ex. Knox-5, p. 2.
[8] Ex. Knox-5, p. 2.
[9] Ex. Knox-5, p. 2.
[10] Ex. Knox-5, p. 3.
[11] Ex. Kinox-5, p. 4.

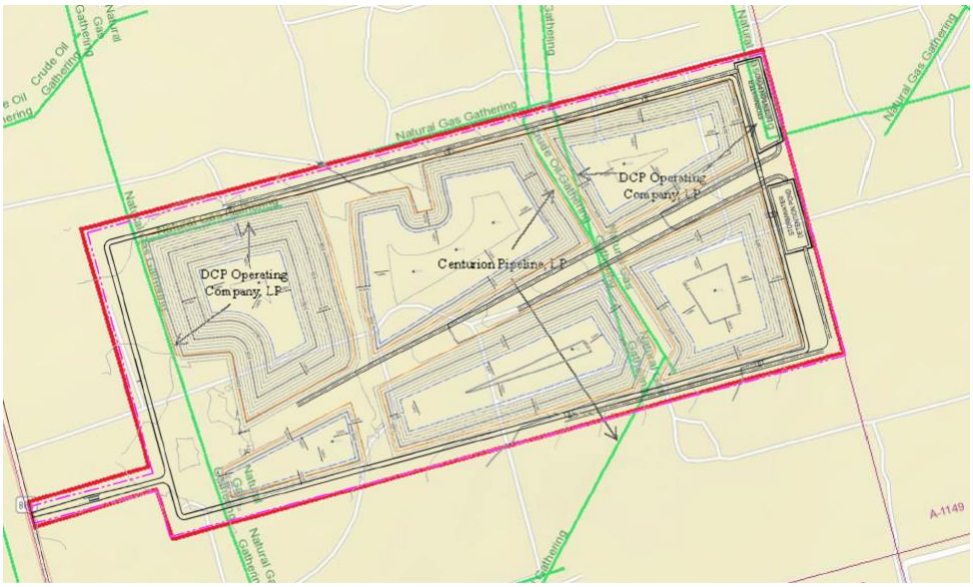
requirements imposed by the Texas Railroad Commission.[12] These comments have not been withdrawn, and by rule the Commission must consider these comments in its final action on the application.[13] The substantive consideration of *all* comments at the time of final decision is necessary for TCEQ to comply with applicable minimum federal requirements for implementation of a state program.[14] The ALJ has entirely ignored Aghorn's comments, despite the fact that they are in the evidentiary record.[15] The Commission cannot legally do the same.

There are many aspects of the proposed facility that render it incompatible with existing and anticipated land uses.

As an initial matter, the proposed landfill is incompatible with the conduct of oil and gas exploration in the area, and the infrastructure and access needed for such activities. Five active oil wells exist within the permit boundary.[16]

Beyond the unacceptable impacts that Diamond Back's proposed landfill will have on Aghorn as the on-site operator, Diamond Back has failed to demonstrate that the landfill is compatible with the hydrocarbon transportation infrastructure present at the site. Dr. Zornberg noted that an unusually large number of pipelines and utility easements traverse the proposed site.[17] According to Texas Railroad Commission records, several dedicated pipeline easements cross in near proximity or beneath the proposed waste footprints:

[12] Ex. Knox-5, p. 4.
[13] 30 TAC § 50.117(f).
[14] 40 C.F.R. § 239.6(b).
[15] Ex. Knox-5.
[16] Admin. Record Tab D, Initial Submittal, Vol. 1, Fig. II.A.6 (PDF p. 99).
[17] Ex. Knox-100, p. 10.



Relationship of Pipeline easements recognized by Railroad Commission to Waste Footprints[18]

The ALJ offers no analysis of this robust evidentiary record regarding the potential incompatibility of the landfill with active oil and gas operations at the landfill and oil and gas infrastructure at the landfill site. Instead, the ALJ summarily comments that TCEQ rules do not prohibit a landfill from being located on the same property as oil and gas production facilities, and that an applicant is not required to submit information related to oil and gas activities.

Knox is not arguing that landfills should be categorically prohibited on property with active oil and gas operations. Knox acknowledges that the Commission regularly issues permits in areas with oil and gas development, and under the proper circumstances such permits would be appropriate. The issue in this case is that the design of the landfill includes waste management units in critically close proximity to existing infrastructure, at a location with demonstrated intensive current and planned hydrocarbon development, without any specific operating conditions to address the co-location of such facilities. Diamond Back's history of damaging oil and gas

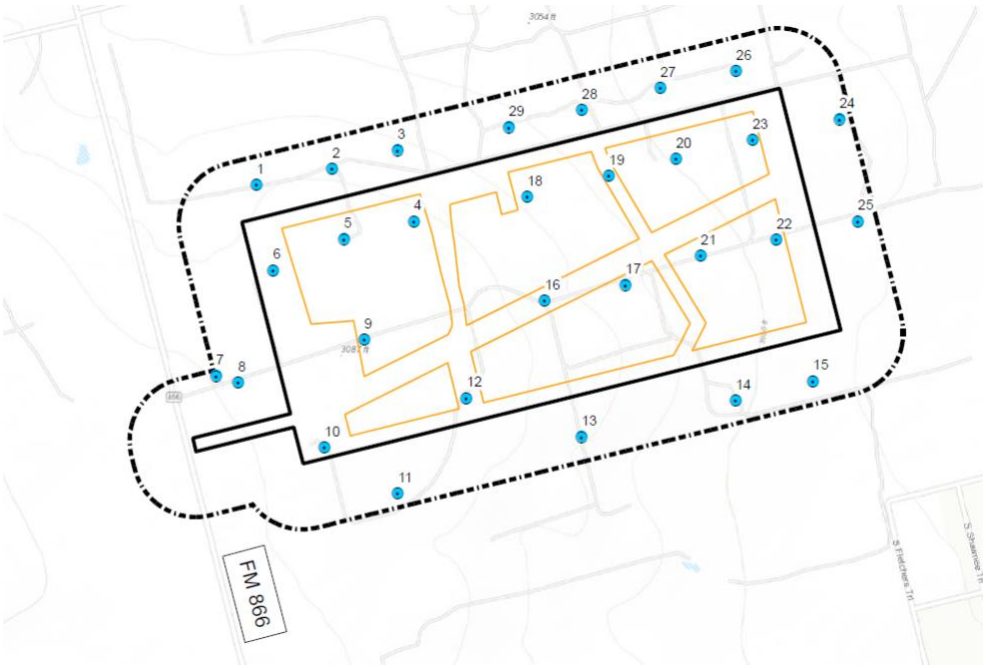
[18] Ex. Knox-110.

production facilities at the site only validates such concerns. This unique combination of factors justifies finding Diamond Back's proposed landfill incompatible with oil and gas development.

The PFD also misstates the Commission's rules, concluding that they do not require the submission of information relating to oil and gas activities. TCEQ rules require a demonstration that inactive oil or gas wells have been plugged,[19] and provide that **producing wells** may remain in their current state *if* they **are identified in the permit** and *if* they do not affect or hamper landfill operations.[20]

Commission rules provide that well density may be considered for assessment of compatibility.[21] This includes water wells, hydrocarbon production wells, and injection wells. There are 24 current or plugged oil wells on or within 500 feet of the proposed landfill.[22] The proposed landfill is in the area of a high density of oil and gas wells, in addition to a high density of water wells.

[19] 30 TAC § 330.61(l)(1).
[20] 30 TAC § 330.61(l)(2).
[21] 30 TAC § 330.61(h)(5).
[22] Admin. Record Tab D, Initial Submittal, Vol. 1, Figure II.A.6 (PDF p. 99).



Active and Plugged Oil and Gas Wells on or within 500 feet of landfill site.[23]

More than 200 current or former water wells are present within one mile of the site,[24] most of which are in residential areas.[25] Additionally, Aghorn notes that it also has injection wells in the vicinity of the landfill.[26] This density of wells heightens the vulnerability of the area to groundwater contamination, as each well provides a potential artificial pathway for contaminants if compromised. The density of water wells reflects a heightened reliance of persons in the area upon groundwater as the source of water for domestic use, and thus a heightened potential for impacts.

The facility is also in close proximity to a significant number of residences. There are 114 single family residences and 118 mobile homes located within one mile of the proposed permit boundary.[27] This increases the potential for odor produced at the facility to interfere with the use

[23] Admin. Record Tab D, Initial Submittal, Vol. 1, Figure II.A.6 (PDF p. 99).
[24] Admin. Record Tab D, Initial Submittal, Vol. 1, Figure I.A.4 (PDF p. 52).
[25] Compare *Id.* with Admin. Record Tab D, Vol. 1, Figure II.A.2 (PDF p. 95).
[26] Ex. Knox-5, p. 5.
[27] Admin. Record Tab D, Initial Submittal, Vol. 1, p. II-12 (PDF p. 82).

and enjoyment of residential property, and also heightens the potential for heavy vehicle traffic to impair the use of area roadways for light vehicle access to residences.

These circumstances create sufficient concern to warrant a comprehensive land use compatibility analysis in order to address the question of whether the landfill is a compatible land use posed by the Commission to SOAH. No such analysis has been performed or provided. Diamond Back has simply failed to meet its burden of proof to demonstrate that the landfill is a compatible land use. The ALJ has made no finding otherwise.

B. The ALJ's conclusion that the landfill is protective of groundwater is contrary to the TCEQ rules.

Diamond Back has not provided a thorough characterization of groundwater, including seasonal and temporal fluctuations of flow. Thus, Diamond Back has not demonstrated compliance with TCEQ rules governing the minimum requirements of a groundwater characterization, and the permit application should be denied.

The ALJ's analysis of Diamond Back's groundwater characterization focuses on 30 TAC § 330.3, which defines "seasonal high water level" as the "highest measured or calculated water level in an aquifer during investigations for a permit application and/or any groundwater characterization studies at a facility."[28] While admitting that the gathering of groundwater sampling over the span of four months may not meet the common meaning of "seasonal variation," the ALJ finds that the Commission is bound to accept the highest water level reading taken by the applicant as the definitive characterization of seasonal high water levels.

The ALJ's conclusion here is contrary to the regulatory context. TCEQ rules within Subchapter J specifically provide that a groundwater monitoring system "must be installed that

[28] 30 TAC § 330.3(143).

consists of a sufficient number of monitoring wells, installed at appropriate locations and depths, to yield **representative** samples from the uppermost aquifer as defined in § 330.3."[29] To this end, Subchapter J continues on to require that:

> **The design of a [groundwater] monitoring system shall be based on site-specific technical information that *must* include a thorough characterization of**: aquifer thickness; groundwater flow rate; **groundwater flow direction, *including seasonal and temporal fluctuations in flow***; effect of site construction and operations on groundwater flow direction and rates; **and thickness, stratigraphy, lithology, and hydraulic characteristics of saturated and unsaturated geologic units** and fill materials overlying the uppermost aquifer, materials of the uppermost aquifer, and materials of the lower confining unit of the uppermost aquifer.[30]

Importantly, the Executive Director's staff in this matter frankly admitted that Diamond Back's limited water level measurements did not demonstrate the degree of seasonal variations in groundwater. The Executive Director's geologist Mamadou Balde testified that the data presented by Diamond Back "may or may not" indicate what the seasonal variations in the gradients of groundwater beneath the site would be.[31] Application of the burden of proof upon an applicant requires that the applicant provide more than a characterization of groundwater that "may or may not" be accurate.

III. EXCEPTION TO RECOMMENDED ALLOCATION OF TRANSCRIPT COSTS

The ALJ's recommendation regarding the allocation of transcript costs is contrary to Commission precedent and should be rejected. Consistent with a recent Commission landfill permit denial, Diamond Back should be assessed 100% of the transcript costs.

As an initial matter, the ALJ's recommendation on the allocation of transcript costs makes no consideration of whether Diamond Back requested that the transcript be expedited. A request

[29] 30 TAC § 330.403(a).
[30] 30 TAC § 330.403(e)(1) (emphasis added).
[31] Tr. Vol. 4, p. 164.

to expedite a transcript has a significant impact on the cost of the transcript – potentially doubling or tripling the cost. Knox and Harrington made no request that the transcript be expedited. Certainly, all expenses associated with any request by Diamond Back that the transcript be expedited should be borne by Diamond Back. To the knowledge of Knox's counsel, there is no Commission precedent whatsoever for the assessment of the costs to expedite a transcript on parties that did not request the expedition of the transcript.

The ALJ does not accurately characterize the relative benefit of the transcript to the parties. An applicant gains greater benefit from the existence of a transcript since the applicant bears the burden of proof. The ALJ's allocation of the transcript costs makes no recognition of this disproportionate procedural benefit accruing to Diamond Back. Further, in this case, Diamond Back engaged a court reporter with apparently no experience in TCEQ matters that initially provided only Diamond Back with a copy of the transcript, and the transcript was not made available to the other parties (including OPIC and the ED) until a full week later, and only after Knox undertook the expense of filing a motion seeking to require filing of the transcript with the TCEQ. The ALJ's recommendation results in Protestants bearing *more* of the cost for a transcript that they were given *less* opportunity to review.

The allocation of transcript costs recommended by the ALJ is contrary to Commission precedent, as it punishes Knox and Harrington for constructive participation during the permitting process. In recommending that all transcript costs be borne by the applicant when recommending denial of a landfill application by Blue Flats Disposal, L.L.C. in light of adverse drainage impacts, SOAH recognized that the equities of the TCEQ permitting process weigh heavily against assessment of transcript costs on the public:

> **The applicant is the only party that could anticipate a direct, new benefit from the outcome of the proceeding** (*i.e.*, authorization to operate a new facility); other parties could at best hope for preservation of the status quo that antedated the initiation of the application. Moreover, **in proceedings that may result in impact upon environmental conditions and upon publicly owned resources (such as surface water), public participation should not be discouraged by assessment of costs, absent strong countervailing factors**.[32]

In 2019, the Commission continued to follow this approach in the matter of an application by Altair Disposal Services, LLC for a new hazardous waste permit. There, in an order signed by Chairman Niermann, the Commission assessed 100% of transcript costs against the applicant when denying the application even though the applicant had prevailed on several issues and the protestants included entities with significant financial resources such as the Lower Colorado River Authority and a gravel mining company.[33]

There are no strong countervailing factors that would justify assessing 70% of the transcript costs upon Knox and Harrington. In fact, the circumstances warrant avoiding the imposition of additional costs upon Knox and Harrington. Knox and Harrington expended significant resources engaging highly qualified experts to evaluate the Application to raise issues in the comment process and the contested case hearing process. Ultimately, Knox and Harrington's position that the permit should be denied as expressed in comments has been validated. The contested case hearing was necessitated by the failure of the Executive Director and Diamond Back to meaningfully consider input provided by Knox during the comment period.

The ALJ errs in reasoning that Knox and Harrington should be assessed 70% of the transcript costs because Knox and Harrington prevailed on "only" one of fifteen issues. As an

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[32] *In the Matter of the Application of Blue Flats Disposal, L.L.C., for Proposed Permit No. MSW-2262,* SOAH Docket No. 582-98-1390, Proposal for Decision (Oct. 2, 2000), p. 59. (Attachment A to this brief.)

[33] *An Order denying the application of Altair Disposal Services, LLC, for a new noncommercial [sic] hazardous waste landfill in Colorado County, Texas*, TCEQ Docket No. 2018-0013-IHW, Final Order (Sep. 27, 2019), p. 12. (Attachment B to this brief.)

initial matter, Knox and Harrington maintain that they should have prevailed on more than one issue, as explained in the arguments above. Moreover, the ultimate question in this proceeding is whether the permit should be granted. On that ultimate question, Knox and Harrington prevailed at the hearing stage. Knox and Harrington worked in good faith prior to the hearing on the merits to narrow the issues litigated, by fully engaging in the discovery process. To this end, Knox and Harrington agreed to summary disposition of issues related to the odor control plan, landfill gas management plan, and wetland delineation, as well as endangered and threatened species. On the remaining issues, the ALJ does not dispute that Knox and Harrington forwarded plausible, good-faith arguments. That is the standard (the presentation of non-frivolous, plausible, good-faith arguments) which SOAH and TCEQ have previously applied in considering whether the allocation of transcript costs should be assessed upon protestants.[34] The ALJ has presented no reason why the Commission should apply a new standard in this case for the allocation of transcript costs.

For these reasons, Diamond Back should be assessed 100% of the transcript costs in this matter.

IV. CONCLUSION

Knox and Harrington support the ALJ's recommendation that Diamond Back's permit be denied, and respectfully request the Commission deny the application and permit requested by Diamond Back. Knox and Harrington further contend that the permit application is deficient in numerous respects not recognized by the ALJ, including Diamond Back's failure to demonstrate

[34] *An Order denying the application of Far Hills Utility District for proposed TPDES Permit No. WQ0014555001,* TCEQ Docket No. 2005-1899-MWD (Sep. 7, 2007), p. 5 (Assessing 93% of transcript costs upon applicant in permit denial, based, in part, upon findings of fact that, "The extent of participation by all the parties was appropriate, and none of the parties unduly burdened the transcript with frivolous arguments or unnecessary questioning of witnesses[,]" and "All parties had plausible, good-faith arguments for the issues they raised."). (Attachment C to this brief.)

that the proposed landfill is a compatible land use, and Diamond Back's failure to demonstrate that the proposed landfill will be protective of groundwater.

Respectfully submitted,

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CERTIFICATE OF SERVICE

By my signature, below, I certify that on October 3, 2022, a true and correct copy of the foregoing document was served upon the following parties via electronic service.

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ATTACHMENT A

SOAH DOCKET NO. 582-98-1390
TNRCC DOCKET NO. 98-0415-MSW

IN THE MATTER OF THE APPLICATION OF BLUE FLATS DISPOSAL, L.L.C., FOR PROPOSED PERMIT NO. MSW-2262	§ § § § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

PFD EXECUTIVE SUMMARY

Blue Flats Disposal, L.L.C. ("BFD"), has filed an applications, pursuant to Chapter 361 of the Texas Health & Safety Code, for a permit to construct and operate a Type I municipal solid waste landfill on a 140-acre site adjacent to U.S. Interstate Highway 20, six miles east of the City of Gordon in Palo Pinto County, Texas. The ALJs recommend that the application be denied.

PARTICIPATING PARTIES

Applicant:	Blue Flats Disposal, L.L.C. (represented by Kerry Russell and Chesley Blevins, Attorneys)
Executive Director ("ED"):	(represented by Anthony Tatu and Suzanne Dupree, Staff Attorneys)
Public Interest Counsel ("PIC"):	(represented by Katie Price and Kyle Lucas, Attorneys)
Opposing Parties:	Roger Fawcett and Fawcett, Ltd. ("Fawcett") (represented by Helen Gilbert, Robert Glasgow and Susan Potts, Attorneys)
	Citizens to Save Palo Pinto County ("CSPPC"), Patricia Blackmon, Gem and Susan Brierton, Ruby Finch, Robert and Jerrie Rexroat, Robert E. Richards,

and James Roberts (represented by Kelley Haragan, David Frederick and Richard Lowerre, Attorneys)

ISSUES

1. Does the application satisfy regulatory requirements relating to land use compatibility?

Applicant: The application meets requirements relating to land use compatibility.

PIC and Opposing: Proposed landfill is not compatible with agricultural and recreational uses of surrounding land.

ED: The application meets Commission's land use compatibility requirements.

ALJs' Recommendation: Accept position of Applicant and ED.

2. Does the application satisfy regulatory requirements relating to groundwater monitoring and protection?

Applicant: Application and draft permit satisfy groundwater monitoring and protection requirements.

PIC and Opposing: Monitoring system lacks point of compliance wells for potential groundwater migration pathway to the south.

ED: Staff review indicated that application and draft permit satisfy groundwater monitoring and protection requirements.

ALJs' Recommendation: Accept position of PIC and Opposing Parties.

3. Does the application satisfy regulatory requirements relating to drainage design?

Applicant: The application meets regulatory requirements related to drainage design because proposed landfill will not significantly alter natural drainage patterns.

PIC and Opposing: Natural drainage patterns will be significantly altered at the south and northeast boundaries of the proposed landfill site.

ED: Staff review indicated that application satisfies regulatory requirements.

ALJs' Recommendation: Applicant failed to establish that natural drainage patterns will not be significantly altered south and northeast of the site.

4. Does the application satisfy regulatory requirements relating to endangered species?

Applicant: The application satisfies endangered species regulations.

PIC and Opposing: With respect to the Texas Horned Lizard, the application fails to satisfy regulatory requirements.

ED: Staff review indicated that application satisfied such requirements.

ALJs' Recommendation: Accept general position of PIC and Opposing Parties.

5. Does the application satisfy regulatory requirements relating to operating plans?

Applicant: The application satisfies all such regulatory requirements.

PIC and Opposing: The application contains inadequate operating plans relating to fire protection, endangered species protection, disease vector control, and windblown waste.

ED: Staff review indicated that operating plans are adequate.

ALJs' Recommendation: Accept position of PIC and Opposing Parties with respect to fire protection, endangered species protection, and disease vector control. Otherwise, operating plans meet regulatory requirements.

6. Does the application satisfy regulatory requirements relating to compliance with the regional solid waste plan?

Applicant: Such requirements satisfied by statement of relevant Council of Governments that application complies with regional solid waste plan.

PIC and Opposing: BFD's proof of compliance applied only to its prior, withdrawn application; BFD failed to prove compliance for its current pending application

ED: Staff review indicated compliance with regional solid waste plan.

ALJs' Recommendation: Accept position of PIC and Opposing parties.

7. Does the application satisfy regulatory requirements relating to financial assurance and closure costs?

Applicant: The application satisfies regulatory requirements concerning closure and closure-cost estimates; financial assurance not required until 60 days prior to receiving waste.

PIC and Opposing: Closure plans are inadequate; highest possible closure costs underestimated; closure costs not calculated in current dollars.

ED: Staff review indicated closure plans adequate and costs properly estimated.

ALJs' Recommendation: Accept closure plans and cost estimates, but recommend updating estimates to current dollars. If Commission grants permit, financial assurance must be provided 60 days before receiving waste.

8. Does the application satisfy regulatory requirements relating to wetlands?

Applicant: No regulatory wetlands on the site; application meets wetland regulatory requirements.

Opposing: Take no position concerning wetlands.

PIC: Man-made stock pond on site may constitute a regulatory wetland.

ED: Agrees with Applicant.

ALJs' Recommendation: Accept position of Applicant and ED.

9. Does the application satisfy regulatory requirements relating to existing conditions?

Applicant: The application satisfies regulatory requirements concerning existing conditions.

PIC and Opposing: Application failed to describe sandstone-quarrying operations conducted on the site for several years.

ED: The application satisfies existing-condition requirements.

ALJs' Recommendation: Accept position of Applicant and ED.

10. Do various alleged defects in form, certification, and listing of adjacent landowners invalidate the application?

Applicant: The application contains no defects, or alternatively, alleged defects are harmless. Mr. Fawcett not on landowners list because he bought property after application filed; he had notice of application and participated fully in the hearing.

Opposing: Signature by new manager invalid; defective engineer seals on some documents; Mr. Fawcett omitted from landowners list.

PIC: Takes no position.

ED: The application contains no material defects.

ALJs' Recommendation: Accept position of Applicant and ED; if Commission grants permit, recommend engineer seals be reviewed by ED and corrected by BFD if found defective.

11. Should the duration of any permit issued to BFD be limited to a predetermined term of years rather than to the actual operating life of the facility?

Applicant: The Commission should grant a permit for the life of the facility.

Opposing: If a permit granted, it should be limited to five years, subject to renewal, to promote use of improved technologies and to deter violations of regulations.

PIC: Takes no position.

ED: Permit should be granted for the life of the facility.

ALJs' Recommendation: If the Commission grants a permit, it should be for the life of the facility.

12. What is the proper allocation of transcript costs?

Applicant: CSPPC should pay a portion of transcript costs because it exceeded its allotted time at hearing and raised unfounded objections to the application.

Opposing: BFD should pay all costs.

ED and PIC: No position stated.

ALJ's Recommendation: BFD should pay all transcript costs except for transcript copies ordered by participants other than agency parties and the ALJs.

SOAH DOCKET NO. 582-98-1390
TNRCC DOCKET NO. 98-0415-MSW

IN THE MATTER OF THE APPLICATION OF BLUE FLATS DISPOSAL, L.L.C., FOR PROPOSED PERMIT NO. MSW-2262	§ § § § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

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IN THE MATTER OF THE APPLICATION OF BLUE FLATS DISPOSAL, L.L.C., FOR PROPOSED PERMIT NO. MSW-2262	§ § § § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

PROPOSAL FOR DECISION

I. INTRODUCTION

Blue Flats Disposal, L.L.C. ("BFD"), has filed with the Texas Natural Resource Conservation Commission ("Commission" or "TNRCC") an application, pursuant to Chapter 361 of the Texas Health & Safety Code[1] ("the Code"), for a permit to construct and operate a Type I municipal solid waste landfill on a 140-acre site adjacent to U.S. Interstate Highway 20 ("I-20"), six miles east of the City of Gordon in Palo Pinto County, Texas.

Under the authorization sought, the facility would accept general municipal solid wastes. It could also receive Class II or III industrial solid wastes and/or special wastes, but only if handled in accordance with 30 TEXAS ADMINISTRATIVE CODE ("TAC") §§ 330.136 and 330.137 and in accordance with the facility's specific Site Development Plan. Although the site is adjacent to a railway line, the permit presently sought would not authorize receipt of wastes by rail. Total designed capacity of the landfill is approximately 11,800,000 cubic yards of deposited wastes. The applicant estimates the operating life of the facility at 23 years and expects to receive wastes from a 10-county region including Palo Pinto, Comanche, Eastland, Erath, Hood, Jack, Parker, Stephens, Somervell, and Young Counties.

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[1] Chapter 361 of the Code is the Texas Solid Waste Disposal Act. TEX. HEALTH & SAFETY CODE ANN. ch. 361 (Vernon 2000). TNRCC rules implementing the Act appear at 30 TAC ch. 330.

BFD is a limited liability company formed in the State of Texas on April 29, 1996. The entity has no previous history of operating a municipal solid waste facility.

TNRCC's Executive Director ("ED") concluded that the applicant has met its burden of proof in demonstrating compliance with the regulatory prerequisites for issuance of the requested permit. Accordingly, the ED recommended issuance of the draft permit prepared by staff for the BFD facility.

II. RECOMMENDATION

The Administrative Law Judges ("ALJs") find that BFD has failed to demonstrate its full satisfaction of several regulatory requirements, as described in detail below. Briefly, BFD has not proposed a sufficiently extensive monitoring well system to cover all major potential pathways for groundwater leaving the site; has failed to demonstrate that the proposed facility will not significantly alter natural drainage patterns; has failed to satisfy all requirements for protection of threatened or endangered species; has proposed inadequate operating plans with respect to fire protection, endangered species, and disease vector control; and has failed to provide a proper showing of compliance with the regional solid waste plan. Accordingly, the ALJs recommend that the application be denied.

III. PROCEDURAL HISTORY

The present application was filed with TNRCC in September of 1996. (A prior, very similar application for the same site was submitted to TNRCC in 1995 but was withdrawn in January of 1996.) TNRCC staff declared the present application administratively complete on October 28, 1996, and technically complete on December 4, 1997. The matter was subsequently referred to the State Office of Administrative Hearings ("SOAH"). On September 2, 1998, a preliminary hearing upon the application was conducted in Gordon, Texas, by Bill Zukauckas, an ALJ with SOAH.

The following were designated as parties: the applicant (represented by Kerry Russell and Chesley Blevins, attorneys); the ED (represented by Anthony Tatu and Suzanne Dupree, staff attorneys); TNRCC's Public Interest Counsel (represented by Katie Price and Kyle Lucas, attorneys); and 15 individuals or other entities opposing the application (collectively, "Protestants"). The Protestants were aligned in two groups for hearing. One group included Citizens to Save Palo Pinto County ("CSPPC"), Brian Birk, Patricia Blackmon, Gem and Susan Brierton, Mrs. Ruby Finch, Robert and Jerrie Rexroat, Robert E. Richards, James Roberts, and Mike and Susan Ruff (generally represented by Kelly Haragan, David Frederick and Richard Lowerre, attorneys). The other group included Roger Fawcett, Judy Fawcett, and X-O Ranch Co., Inc. (represented by Helen Gilbert, Robert Glasgow and Susan Potts, attorneys).[2]

Fawcett, Ltd., subsequently was substituted as a party for X-O Ranch Co., Inc. Brian Birk, Judy Fawcett, and Mike and Susan Ruff subsequently relinquished their party status.

The initial discovery and procedural schedule was extended by several months upon successive agreements among the parties, in order to accommodate preparation for hearing and settlement discussions. In August and September of 1999, the schedule was further extended by the need to review amendments to the application made by BFD. These changes (relating to the design of drainage control structures, quarrying of sandstone at the site, and other matters) were ruled to be minor amendments, requiring no additional public notice.

In October of 1999, the case was reassigned from ALJs Zukauckas and Bob Jones to ALJs Mike Rogan and Tom Walston. Additional continuances were allowed to accommodate the parties' conduct of a suit in a Palo Pinto County district court relating to the landfill site's initially proposed access route, then to consider another amendment of the application changing that disputed access route. The ALJs again determined that this amendment was minor.

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[2] The group including the Fawcetts is often referred to herein simply as "Fawcett." The group including CSPPC is often referred to simply by that acronym.

The evidentiary hearing was held in Austin, Texas, on June 7 through 9, 12 through 16, 19 and 20, 2000. After the parties submitted briefs and arguments, responses, and proposed Findings of Fact and Conclusions of Law, the record in the proceeding was closed on August 18, 2000.

IV. ISSUES

1. Does the application satisfy regulatory requirements relating to land use compatibility?

The ALJs recommend a conclusion that the application satisfies such requirements.

BFD's site occupies, for the most part, the southern slope of a roughly 120-ft.-high ridge adjacent to I-20 in southern Palo Pinto County. As depicted in the application's maps, the facility would cover an area of about 3,000 ft. by 2,000 ft., with its longer axis running along the southern boundary of the site, parallel to I-20 and the Union Pacific Railroad. This southern boundary lies about 375 ft. north of I-20,[3] which is the county's principal east-west highway, and less than 100 ft. north of the Union Pacific, which is the principal railway line between Dallas and El Paso.

The primary economic activity in Palo Pinto County is ranching, and the land surrounding the proposed site is predominantly rangeland, along with some cropland. BFD itself owns some 1,100 additional acres adjoining the site to the west and north. Only three occupied residences have been identified within one mile of the site boundary. (The closest is directly across I-20 from the site, just over a quarter of a mile away) No schools, cemeteries, historical sites, licensed daycare facilities, or significant archeological sites exist within that radius. The nearest non-agricultural commercial buildings are gas stations and restaurants along I-20, more than two miles from the site. The site is outside the corporate and extraterritorial limits of the nearest incorporated municipality (the City of Gordon) and thus is not subject to zoning restrictions.

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[3] Measurement is from the shoulder of the nearest lane of the highway, the north-side access road.

Testimony indicated that outdoor recreation and tourism are steadily becoming more important sources of income in the area. According to Patricia Blackmon, rancher and president of CSPPC, tourism is now the county's third largest industry. Two camping and recreational vehicle sites are located within three miles of the proposed landfill, while Lake Palo Pinto lies approximately four miles to the north. The area shelters abundant deer, turkey, quail, and dove. Many local ranchers lease parts of their lands for hunting, which is often more lucrative to these landowners than their ranching activities. In addition, historical restorations in the old mining town of Thurber (about seven miles southwest of the site) and in other parts of the county draw visitors to the area.

The final cover for the landfill is designed and would be authorized to reach a maximum elevation of 1,072 ft. above mean sea level ("msl"). Under existing conditions, the highest portion of the ridge within the site boundaries is slightly above 1,030 ft. msl. BFD's project would thus raise the overall silhouette of the site's landforms by 30 to 40 ft. Much of the area now sloping downward from the ridge line would undergo an even greater increase in elevation, in some instances more than 100 ft.

John Worrall, BFD's land planning consultant, sought to depict the appearance of various stages in the project's development by using computer assisted design ("CAD") techniques to superimpose simulations of the contours designed for the landfill's earthen cover upon photographs of the existing site. From immediately across I-20, the view of the completed facility in a CAD photo resembles a half-mile-long wall, closing off a significant arc of the horizon. In a photo taken along I-20, just over a mile west of the site, however, the facility has little visibility. Mr. Worrall also testified that no "sites having exceptional aesthetic quality" exist within a mile of the proposed facility and that the mounded, ridge-like form of the planned landfill would be "sympathetic" with (or blend into) the surrounding topography of hills and ridges.

Several landowners in the vicinity testified to general expectations that the proposed facility would interfere with agricultural and recreational uses of the surrounding land. Ms. Blackmon, who raises thoroughbred horses and leases tracts for hunting on property immediately across I-20 from the site, specifically embodied those concerns. She predicted that she would be unable to continue raising

thoroughbreds–which she characterized as high-strung and delicately balanced animals–in such proximity to BFD's facility. A thoroughbred would be panicked by the noise of landfill operations and would probably die if it ate windblown trash, she said. Her hunting lessees already have notified her, moreover, that they will find another hunting area if BFD's landfill is built.

The Protestants concluded, in the words of CSPPC's closing argument, "A mountain of trash on I-20, the arterial into Palo Pinto County, is simply not compatible with the wildlife and historic tourism that the county depends upon to supplement its ranching income and to preserve the rural, open space character of the county."

The PIC agreed that BFD has failed to demonstrate the compatibility of the proposed facility with surrounding land uses, given the evident aesthetic impact of the completed landfill, which will be higher than any other natural or manmade feature of the nearby landscape. Additionally, the PIC faulted BFD for considering only the growth patterns of the City of Gordon, while ignoring those of the town of Santo, which is located approximately the same distance from the site.

In response, the ED argued that the application is satisfactory, under a proper evaluation of the specific factors set out in 30 TAC § 330.53(b)(8), which addresses land-use compatibility. That rule states:

> (8) Land Use. A primary concern is that the use of any land for a municipal solid waste site not adversely impact human health or the environment. The impact of the site upon a city, community, group of property owners or individuals shall be considered in terms of compatibility of land use, zoning in the vicinity, community growth patterns, and other factors associated with the public interest. To assist the Executive Director in evaluating the impact of the site on the surrounding area, the applicant shall provide the following:
>
> (A) zoning at the site and in the vicinity . . . .;
>
> (B) character of surrounding land uses withing one mile of the proposed facility;
>
> (C) growth trends of the nearest community with directions of major development;

> (D) proximity to residences and other uses (*e.g.*, schools, churches, cemeteries, historic structures and sites, archaeologically significant sites, sites having exceptional aesthetic quality, etc.). Give the approximate number of residences and business establishments within one mile of the proposed facility, including the distances and directions to the nearest residences and businesses; and
>
> (E) description and discussion of all known wells within 500 feet of the proposed site.

According to the ED, the proposed facility conforms with the specifically determinable elements of this rule. It is subject to no zoning requirements. Few residences and none of the other listed structures or sites exist within a mile radius. The City of Gordon reflects no positive growth trends. No usable wells have been identified within the specified radius. Further, the ED insisted that these relatively objective factors are the "controlling issues" that dictate an overall determination upon the acceptability of a facility's land use impact.

With respect to Ms. Blackmon's concerns for the safety of her thoroughbreds, the ED noted that Ms. Blackmon's property is presently subjected to daily noise from continual highway traffic and from intermittent train whistles. The ED also asserted that BFD's operating plan adequately addresses windblown waste.

The ALJs expect that BFD's landfill, if constructed, would be a rather jarring intrusion upon those landowners in the immediately surrounding area (which is today a generally scenic and pastoral landscape). That immediate area, however, already experiences considerable intrusion and noise from the transportation corridor created by I-20 and the railroad. The ALJs also believe that the scope of legitimate inquiry into land-use compatibility is not as circumscribed as the ED's argument seems to suggest; in other words, it is not inevitably confined to a determination of whether a facility would have significant impacts upon nearby land uses that are relatively prominent and *intensive*. The pertinent rule is clearly broad enough to allow consideration of such "other factors" as the potential impact upon more diffuse land uses, including ranching or hunting. Still, based on the record in this case, the ALJs cannot conclude that the existence of the proposed landfill would seriously hamper, in objective terms, the ability of adjoining landowners or others in this sparsely

inhabited area to continue their present economic or domestic activities. The fact that some may be subjectively distressed by the proposed landfill's lack of harmony with its surroundings (particularly its visual intrusion) is not sufficient basis, in this case, for finding a lack of compliance with regulations relating to land use compatibility.

The ALJs acknowledge that the PIC arguably has identified a technical shortcoming in the evaluation of "growth trends of the nearest community," as required by Rule 330.53(b)(8)(C). Based on the scale of the Palo Pinto County Traffic Map submitted with BFD's application, the community of Santo, some six miles to the east of the site, actually is slightly closer to the site boundary, by straight-line distance, than is Gordon (although it is several miles farther away by public road). While BFD provided evidence that Gordon's estimated population (465) had not changed from 1990 to 1998, it offered no information about the population or growth of Santo. (However, the Texas Department of Transportation's Official Travel Map for the year 2000 lists Santo's estimated population as 312.[4]) Because the two population centers are virtually equidistant from the site, because the record indicates that Gordon is the nearest *incorporated* settlement, and because the record reflects little growth overall in the portion of the county surrounding the site, the ALJs believe that BFD has at least substantially complied with the rules' requirements for evaluating growth trends.

2. Does the application satisfy regulatory requirements relating to groundwater monitoring and protection?

The ALJs recommend a conclusion that the application fails to satisfy such requirements, on the basis that the proposed "point of compliance" for the facility must be extended to encompass the southern boundary of the site.

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[4] The ALJs take official notice of the contents of this state publication.

A crucial objective of landfill regulation is to prevent any subterranean movement of water from carrying contaminants beyond the boundaries of a facility. The pertinent rules and statutes generally reflect the premise that this objective is best met by monitoring and protecting the aquifers underlying a facility. This case is somewhat anomalous, however, in that no aquifer exists beneath BFD's proposed site (nor, for the most part, beneath any of Palo Pinto County).[5]

The subsurface at the site consists primarily of thick layers of relatively impermeable shale inter-bedded with sandstone and limestone–a structure classified geologically as the Mingus Formation of Upper Pennsylvanian sediments.[6] In most of the surrounding area, the bedding planes of this formation tilt slightly downward toward the northwest. This orientation (a slope of about one-half degree, or 30 to 50 ft. per mile) is described as the "regional dip." Any water entering a stratum within the formation would be expected, typically, to move downgradient through that stratum–*i.e.*, in the downward direction of the regional dip (assuming, that is, that such water was able to move at all). Consistent with this geological structure, BFD has proposed a line of monitoring wells near the northern and western edges of the site, which would intercept, in theory, any water migrating out of the facility along the bedding planes of the Mingus Formation. In BFD's view (affirmed by the ED), this proposed monitoring system would satisfy the requirements of 30 TAC § 330.231 (which calls for groundwater monitoring that is based upon a thorough characterization of a site's geology).

Based upon the geological information available for BFD's site, however, the Protestants and PIC have questioned (1) whether BFD, by proposing to construct a landfill in an area of relatively impermeable formations that lacks an aquifer, has conformed with 30 TAC § 330.231 or with the general regulatory scheme applicable to the project; (2) whether BFD's proposal ignores other potential pathways for the migration of contaminated groundwater; and (3) whether BFD has failed

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[5] All parties agreed that the limited and laterally discontinuous areas of groundwater beneath the site (which are characteristic of the Mingus Formation in general) do not constitute an "aquifer"–defined by 30 TAC § 330.2(6) as "a geological formation, group of formations, or portion of a formation capable of yielding significant quantities of groundwater to wells or springs." Evidence indicates that the four pockets of groundwater BFD identified beneath the site would not yield water of generally usable quantity or quality.

[6] The capstone at the top of the site's ridge consists of Dobbs Valley Sandstone, a subclassification of the Mingus Formation.

to address properly a particular site condition (the presence of crude oil) that may require special design considerations. These issues are discussed in sequence below.

A. General suitability of site and monitoring well system.

The Protestants, particularly the CSPPC group, reasoned that, because no aquifer exists in the area, BFD could not possibly satisfy 30 TAC § 330.231, which requires installation of a monitoring well system sufficient to yield "representative samples" of groundwater from the "uppermost aquifer" beneath the site.[7] This monitoring is required to encompass a specific "point of compliance," which is defined by 30 TAC § 330.2(99) as "A vertical surface located no more than 500 ft. from the hydraulically downgradient limit of the waste management unit boundary, extending down through the uppermost aquifer underlying the regulated units, and located on land owned by the owner of the permitted facility." Again, CSPPC noted that the lack of a relevant aquifer makes the point of compliance established by BFD (*i.e.*, at the site boundary that is downgradient along the regional dip of the Mingus Formation) clearly inconsistent with the literal terms of this rule.[8]

Further, CSPPC complained that, because the Mingus Formation is relatively impermeable and exhibits very low conductivity,[9] BFD could not "ensure" the detection of any leakage from the landfill into the formation–as required by 30 TAC § 330.231(a)(2)--within a reasonable period of time. All evidence in the record indicates that groundwater would move very slowly, if at all, through the unweathered Mingus Formation. In probably the most striking example cited at the hearing, Becky Richards, a hydrogeology consultant for BFD, estimated that water hypothetically

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[7] For purposes of this case, the crux of Rule 330.231 is contained in § 330.231(a)(2), which states: "The downgradient monitoring system shall include monitoring wells installed to allow determination of the quality of groundwater passing the relevant point of compliance as defined in § 330.2 of this title . . . The downgradient monitoring system shall be installed to ensure the detection of groundwater contamination in the uppermost aquifer."

[8] Similarly, CSPPC argued that BFD had failed to comply with the requirement of 30 TAC § 330.231(e) for a thorough characterization of "groundwater flow rate" and "groundwater flow direction"; in the absence of an aquifer, BFD did not find that these elements could be meaningfully determined.

[9] Measurements of hydraulic conductivity in the unweathered portion of the formation ranged from 1.5×10^{-7} to 1×10^{-9} centimeters per second ("cm/sec"). This conductivity is thus generally equal to (or even less than) the level required for a landfill's recompacted soil liner material.

leaking from the landfill 1,200 ft. upgradient from BFD's proposed line of monitoring wells would not reach those wells for about 35,000 years.[10] Although, in the scenario described by Ms. Richards, contaminated water would not leave the site before theoretically being detected, the fact that natural conditions would so drastically retard groundwater movement toward that point where monitoring wells could finally sample the water represents, by CSPPC's reasoning, not an admirable containment of such contamination, but rather a failure, as a practical matter, to ensure its timely detection.

In closing argument, the ED responded, "Protestants are effectively arguing that this site is too good. To deny this application and require the Applicant to locate the landfill at a site with more permeable soils and more groundwater simply would not make sense. The record shows that the proposed site is naturally protective, and it is unlikely that contamination, should it occur, would ever leave the site."

Acknowledging that TNRCC rules generally are designed to regulate sites above aquifers, hydrogeology experts for both the ED and applicant nonetheless concluded that such rules reasonably can be interpreted and extrapolated to apply, as well, when a site poses no need for protecting any aquifer beneath it. Dr. Robert Kier, a geologist testifying for BFD, stated that the proposed monitoring well system provides the functional equivalent of a "point of compliance" as specified in the rules. Dr. Kier testified that periodic samples from each of the monitoring wells to be maintained adjacent to the facility will be statistically analyzed according to BFD's formal Ground Water Sampling and Analysis Plan ("GWSAP"), ensuring that the migration of contaminants past any of the wells can be detected by a comparison of past and present readings from that well.

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[10] The estimate was based upon assumptions that the stratum transmitting the fluid exhibited porosity of 3 percent and conductivity of 1×10^{-7} cm/sec and that the dip of the formation is about 1 percent (which is slightly greater than the actual dip of the Mingus Formation, on a regional basis).

CSPPC conceded in closing argument that its position on this issue "may not sound like common sense." At least in terms of the group's effort to portray the proposed site's natural advantages as theoretical deviations from the mandates of the rules, the ALJs must agree. The provisions of law may at times need to be interpreted and applied counter-intuitively, but the ALJs are reluctant to believe that they should ever be interpreted in such a counter-productive manner as this. The record reflects that, in general, the site's lack of an underlying aquifer and its relatively impermeable subsurface matrix contribute markedly to its suitability; certainly, these features do not in themselves render the site unusable or inadequately characterized.

The ALJs are thus generally in accord with the following statement by the ED (insofar, that is, as it applies to the migration of fluids along the regional dip): "The Applicant has met the regulatory requirements of 30 TAC § 330.231 by designing a groundwater monitoring system which could detect contamination in ground water. The fact that the geologic conditions at the site are such that it is unlikely that contamination would move off the site does not mean that the Applicant's design does not meet the regulatory requirements." The ALJs perceive that, in accordance with regulatory demands, all landfill designs must seek to avoid the leakage and migration of fluids. In the normal lifespan of any monitoring well, then, the detection of contamination should be a relatively unusual event. The fact that, in this case, contaminated fluids may be even less likely than usual to reach the designated monitoring wells (and much slower to reach them, as well) is a desirable condition, not a failure of compliance. In context, the logical adaptation of the rules urged by BFD and the ED is only reasonable. Provisions of the rules relating to the protection of an aquifer should be read as applicable only where an aquifer actually exists, not as defining the existence of an aquifer to be a prerequisite for a permit.

CSPPC has implied, though, that the *structure* of the rules shows an intention to apply wholly different monitoring requirements to sites with and without underlying aquifers. According to this interpretation, while provisions that define the more "standard" system of monitoring wells refer consistently to aquifers and are therefore applicable only where an aquifer is present, 30 TAC §

330.231(c) provides for alternative methods of detection (*e.g.*, sensors installed in or beneath a landfill liner) and therefore would logically be applicable in other situations, including those where no aquifer exists. However, in fact, the pertinent text of Rule 330.231(c) reads as follows:

> The executive director may approve an alternative design for a groundwater monitoring system that uses other means in conjunction with monitoring wells to ensure detection of groundwater contamination *in the uppermost aquifer* from an MSWLF unit. . . .[emphasis added]

Thus, the distinction suggested by CSPPC does not exist. Rule 330.231(c) is as applicable to sites with underlying aquifers as are any other provisions of the rules. The rule provides no example of a structural parallelism that would distinguish between the proper treatment of sites with and without aquifers.

Moreover, in at least one key point, the text of the rules explicitly reflects a willingness to forego the detailed examination of certain groundwater characteristics where the aquifer in question is so deep and so insulated from surface impacts as to be beyond realistic concern–that is, in situations fundamentally analogous to the complete *absence* of an aquifer. Specifically, in the outline of requirements for the subsurface investigation portion of a site's geology report, 30 TAC § 330.56(d)(5)(A)(ii) provides:

> Borings shall be sufficiently deep to allow identification of the uppermost aquifer and underlying hydraulically interconnected aquifers. Borings shall penetrate the uppermost aquifer and all deeper hydraulically interconnected aquifers and be deep enough to identify the aquiclude at the lower boundary. . . . If no aquifers exist within 50 feet of the elevation of the deepest excavation, at least one test hole shall be drilled to the top of the first perennial aquifer beneath the site, if sufficient data does not exist to accurately locate it. The Executive Director may accept data equivalent to a deep boring on the site to determine information for aquifers more than 50 feet below the site. Aquifers more than 300 feet below the lowest excavation and where estimated travel times for constituents to the aquifer are in excess of 30 years plus the estimated life of the site, need not be identified through borings.

In this case, no aquifer exists within 300 ft. below the proposed excavation, and groundwater travel time from the proposed landfill to any aquifer exceeds that specified in the rule. The applicant thus

would not be required to identify or characterize in detail an aquifer below such depth, even if one existed at this site. By logical necessity, the applicant likewise would not be required to monitor directly any such unidentified aquifer.

Even though logic and the general structure of the rules do support BFD's overall concept of adapting the standard monitoring well system to this relatively waterless site, the ALJs perceive that the most problematic point about the absence of an aquifer may be the consequent lack of clear reference points for the vertical positioning of point-of-compliance wells. When aquifers are present, they define rather obviously those levels of the subsurface upon which monitoring should focus. In this case, on the other hand, BFD has identified the whole geological formation encompassing the facility as a primary conduit for groundwater movement. While this seems reasonable enough, it is not very precise, and the record provides little explanation of how BFD has determined which portion of the formation's vertical expanse should be monitored.

The Mingus Formation in Palo Pinto County is generally about 230 ft. thick. The excavated floor and sidewalls of the landfill would intersect about 160 ft. of the formation, from a lowest depth of 870 ft. msl to a highest point at about 1,030 ft. msl. (Because the excavation would at places slope roughly parallel to the south face of the site's ridge and would at other places be "stair-stepped," the bottom of the facility would vary substantially in elevation from point to point.) The four wells designated by BFD to delineate the point of compliance would be completed still lower within the Mingus Formation.[11] The two deepest of these wells would penetrate to 777 ft. msl, and (beginning two feet above that depth) each would be screened upward for 30 ft. The well bottomed at the highest elevation (the already existing MW-21) extends to 814 ft. msl and is screened from the bottom upward for 30 ft. Thus, BFD proposes to monitor water movement through the formation with wells screened, in the aggregate, from elevations of about 779 to 844 ft msl–that is, with detection capability directly covering about 65 vertical feet of the formation.

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[11] The proposed point of compliance includes one existing well (MW-21), located about 600 ft. from the northeast corner of the site, and three proposed wells–including MW-1R (near the westernmost point on the site boundary) and MW-6R and MW-13R (which would be spaced roughly equidistant between MW-1R and MW-21).

The ALJs have some question as to whether (or how) the applicant has selected the right portion–or a sufficient portion–of the down-dip Mingus Formation for such monitoring. However, BFD's uncontroverted evidence indicates (albeit in quite general terms) that the proposed point-of-compliance wells would detect any movement of fluids along the bedding planes of the formation. The parties opposing the application do not appear to have taken real issue with this contention, arguing instead that the low conductivity of the Mingus Formation makes this detection system essentially superfluous. The ALJs thus have accepted the conclusion of BFD and the ED that the proposed system is adequate for monitoring any downgradient migration of fluids within the formation.

B. Other pathways for groundwater migration.

The Protestants and PIC have identified a second purported pathway for potential groundwater migration out of the landfill–*i.e.*, along the generally southward slope of the site's dominant ridge, where a subsurface interface between weathered and unweathered rock might force groundwater to move parallel to the local topography rather than in the direction of the regional dip.

Where the Mingus Formation outcrops at the surface, exposure to the elements over time changes its character and consistency. The effects of such weathering (which include increased fracturing and brittleness) extend somewhat below ground level. At the site, cross-sections based on BFD's subsurface characterization show the interface between weathered and unweathered rock at a varying depth of about 40 to 80 ft. Accordingly, the contour or directional orientation of the weathered zone is not the same as that of the underlying geological formation to which it is connected; rather, its contour generally mirrors that of the land's surface in the immediate area.

As noted previously, the hydraulic conductivity of the *unweathered* portions of the Mingus Formation is very low. And while debate apparently exists about how different the conductivity of the *weathered* portions of the formation may be, the objective evidence in the record (based upon formation pressure testing) indicates that the conductivity of at least some portions of the weathered

zone averages about 1,000 to 10,000 times greater than that of the adjoining unweathered zone.[12] Thus, water would be expected to move much more readily and more quickly through the weathered part of the formation. In addition, as noted by Dr. H.C. Clark (a geologist who testified on behalf of Fawcett), any interface or abrupt line of transition between geological strata of different character tends to act as a barrier to the movement of groundwater between such strata.[13] For that reason, water moving downward through the weathered zone, upon reaching the interface with the underlying unweathered zone, would tend to stay within the weathered zone, while being diverted laterally and downgradient. (This generally would be true even if the weathered zone actually was *not* more conductive and thus more receptive to water movement than is the unweathered zone.)

BFD's planned excavation of the site would remove much of the weathered layer of rock there. In places, however, the bottoms and sides of waste-containing cells would still lie within intact portions of the weathered zone, which would extend downslope–that is, toward the southern boundary of the site and beyond. In Dr. Clark's view, if water within these cells ever penetrated the landfill's liner and entered the weathered zone, it probably would migrate through that zone, generally to the south, rather than following the northwest-ward regional dip of the Mingus Formation as a whole. Ms. Richards responded, though, that while this "might be a natural presumption," she does not regard the weathered zone as a potential conduit for groundwater. As a basis for her conclusion she cited a general lack of indications that the "weathered/unweathered shale interface functions as a hydraulic barrier along which groundwater flows." She also noted that the isolated groundwater pockets beneath the site generally occur in unweathered material, rather than in the weathered zone.

While BFD thus ultimately has taken the position that the northwest tilt of the main formation represents the only significant potential pathway for groundwater leaving the site, portions of BFD's

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[12] While borings done by BFD produced samples with hydraulic conductivity averaging about $1x10^{-8}$ cm/sec in the unweathered zone, one of only two tests done in the weathered zone showed conductivity of $1.1x10^{-4}$ cm/sec.

[13] Both Dr. Kier and Ms. Richards noted that hydraulic conductivity is roughly two orders of magnitude greater parallel to bedding planes than perpendicular to bedding planes; however, their testimony apparently referred to geological layers created at different times or through different processes, rather than to initially homogeneous masses that are subsequently differentiated into layers by weathering.

record testimony lend support to the view that a plausible pathway exists in almost the opposite direction, down the south slope of the ridge. Such testimony includes the following:

> If pooling were to occur, it is possible that it would occur at the weathered/unweathered transition zone due to the decrease in hydraulic conductivity moving from weathered to unweathered shales (10^{-4} cm/sec to 10^{-7} cm/sec during formation pressure testing). Three wells on the south side of the site (MW-1A, MW-5A, and MW-11) are screened across the weathered/unweathered transition zone. Therefore, if pooling of leachate occurs, it can be detected rapidly by the existing monitoring well network.[14]

(The ALJs note that wells MW-1A and MW-5A are located within the proposed fill limits of the facility and would be plugged and abandoned when excavation of disposal cells reaches those points.)

Given these circumstances, the PIC and Fawcett argued that BFD has insufficiently delineated the point of compliance for the proposed facility. By this view, the point of compliance should encompass much or all of the southern boundary of the site, as well as the monitoring line to the north and west previously identified by BFD. The PIC urged that if BFD is allowed to cure this asserted deficiency in its application, it should be required to add monitoring wells along the southern edge of the proposed facility–including one immediately south of each of the planned sump pump installations[15] and one south of Sector 1 (the 16-acre area in the southeast corner of the facility where excavation and deposit of wastes is scheduled to begin first[16]). The recommended wells would be screened across the interface between the weathered and unweathered shale.

The ALJs are persuaded that the weathered, southern sloping face of the site's dominating ridge logically presents a potential major pathway for the movement of fluids out of the proposed facility.

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[14] Exh. 119, p. 5.16, sec. 5.5.

[15] The sumps, at an elevation of 870 ft. msl, represent the lowest points of planned excavation at the site; as part of the leachate collection system, they would be predictable points for the concentration (and possibly the escape) of water within the facility.

[16] Dr. Clark urged the location of a monitoring well near Sector 1 on the grounds, in part, that problems in executing designs are more likely to occur in early stages of a project.

Although Ms. Richards called the absence of groundwater pockets in the site's weathered zone an indication that water did not move readily through the zone, Dr. Kier acknowledged that BFD, in fact, did find groundwater in weathered material at the southeast corner of the site (where the MW-11 cluster of wells is located). Moreover, T. Wesley McCoy, the TNRCC geologist who evaluated the application, noted that the sparse groundwater in the Mingus Formation is usually found in the formation's upper 40 to 50 ft. of weathered shales. On the whole, then, the evidence in the record on this issue (which is not extensive) suggests that the geological structure of the site warrants systematic monitoring of the weathered zone, and particularly of the interface between weathered and unweathered zones, along the southern boundary of the property.

The general locations for southern point-of-compliance wells, as suggested by the parties opposing the application, appear reasonable. Still, the record obviously does not provide sufficient information to enable the ALJs to prescribe the character of these monitoring wells in detail. The application proposes the installation of an additional monitoring well (MW-5R) near the center of the property's southern boundary. This well would be screened at an interval of 50 to 75 ft. below the surface. Thus, it probably would encompass the interval between weathered and unweathered material and might be readily incorporated into an extended point of compliance. However, further review of the site by BFD (or at least further presentation of information already available) is necessary to develop a proper rationale for the specific placement of wells sufficient to monitor the southern boundary of the site.

C. Presence of crude oil.

The Fawcett group characterized the presence of crude oil within the geological formation at the southeastern corner of the site as a condition that BFD has failed to address in accordance with the requirements of 30 TAC § 330.51(b)(3). That rule states:

> The applicant is responsible for determining and reporting to the executive director any site-specific conditions that require special design considerations.

Small deposits of crude oil naturally occur at places within the Mingus formation, and the weight of evidence indicates that hydrocarbons encountered in two adjacent borings on the site represent such a deposit or deposits. Fawcett noted that the presence of natural petroleum can sometimes thwart groundwater monitoring systems, obscuring whether hydrocarbons detected in a well have originated from such deposits or from landfill wastes.

Accordingly, Fawcett urged that BFD should have included a specific plan or procedure for distinguishing naturally occurring petroleum from other substances detected by the monitoring system. Such a procedure presumably would augment or be a part of the project's required GWSAP. The Protestants pointed out that the Commission has at times in the past incorporated into landfill permits a detailed methodology for such analysis known as the "Corsicana Protocol." The GWSAP submitted by BFD, on the other hand, includes no specific provisions relating to crude oil, petroleum, or hydrocarbons generally.[17] Fawcett also criticized as unenforceable BFD's proposal to continue voluntary monitoring for petroleum in the two wells where it previously had been detected.

Given the prospect that excavation at the site may encounter additional pockets of the crude oil scattered through the Mingus Formation, the ALJs suggest that the Commission consider directing the applicant and the ED to develop an appropriate plan or protocol for groundwater monitoring within that specific context. However, while such a special condition would be worthwhile to assure more expeditious assessment of any hydrocarbons detected in the monitoring of the site, the ALJs do not regard the lack of such a plan or protocol as constituting a violation of the rules or a basis for denial of the permit sought. The record does not demonstrate that the presence of small amounts of petroleum on or near the site represents a condition requiring "special design considerations," as specified by Rule 330.51(b)(3). Nonetheless, to the extent that such a condition *might* exist at the site because of the documented presence of crude oil, BFD appears to have complied with that rule's requirements of "determining" the nature of the condition and "reporting" it to the ED.

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[17] The plan does provide, however, where a significant increase in a monitored parameter is detected, "If the increase over background of any constituent is believed to originate from a source other than the landfill . . . a report providing such documentation will be prepared by a qualified professional and submitted to the TNRCC within ninety (90) days of the sampling event." Exh. 183, p. 11.13.

In reviewing TNRCC regulations, the ALJs could find almost no explicit references to petroleum deposits and no prohibitions against locating a landfill on a site containing such deposits. The most notable requirements on the subject–outlining studies that must include data on "crude oil and natural gas accumulations"–appear in 30 TAC § 330.303(b), which demands the detailed assessment of areas potentially subject to differential subsidence–including subsidence caused by the withdrawal of petroleum. Such withdrawal and subsidence has not been shown to be pertinent in this case.

Often, a special procedural mechanism for determining the source of those monitored hydrocarbons that might represent natural petroleum deposits would appear to be of limited importance to the public at large, because the detection of many such substances (from *any* source) would oblige the landfill operator, under TNRCC regulations, to take prompt action to protect groundwater and to determine whether the substances in question were escaping from the landfill (particularly where designated point of compliance wells are involved). Such a protocol would appear, in many instances, to be more significant as a potential benefit to the operator, since it presumably would map an efficient and accepted procedure through which that operator could limit its responsibility by demonstrating that detected substances were naturally occurring. The ALJs are thus unable to conclude that BFD's failure to include such a plan or protocol invalidates its application.

3. Does the application satisfy regulatory requirements relating to drainage design?

The ALJs recommend a conclusion that BFD has failed to demonstrate that the proposed facility will not significantly alter natural drainage patterns.

The Commission's rules require an applicant "to demonstrate that natural drainage patterns will not be significantly altered as a result of the proposed landfill development."[18] BFD and the ED contend that the Blue Flats landfill will not cause such alteration, while the parties opposing the project contend that it will. The ALJs' conclusion on this issue is based, in particular, upon findings that BFD has not adequately evaluated the impact of increased peak flows and increased volumes leaving

[18] 30 TAC § 330.56(f)(4)(A).

the site to the northeast, nor has it adequately evaluated the impact of installing additional culverts under Old Santo Road south of the site. The ALJs emphasize that they do not find that the landfill definitely *will* alter natural drainage patterns significantly. Rather, they simply find that BFD has not met its burden of proof on this issue, as required by the Commission's rules.

Existing Drainage: (A depiction of the site's pre-developed conditions, including designated subareas relevant to surface drainage, appears in Attachment 1 to this Proposal for Decision. This figure was taken from hearing Exh. 177.)

South: In its existing condition, the site drains primarily to the south. BFD's application shows that134.85 acres[19] currently drain south, out of a total of 150.99 acres,[20] and the peak flow rate[21] to the south is 301.42 cubic feet per second ("cfs") during a 100-year storm event. After leaving the landfill site, the southbound drainage crosses the unpaved Old Santo Road, the Union Pacific Railroad tracks, and I-20. It then flows into Sunday Creek approximately one mile south of I-20. One 36-inch culvert is currently in place under Old Santo Road, but it cannot handle the existing flow during significant rainfall events. As a result, stormwater runoff frequently pools to the north of Old Santo Road and occasionally overflows the road. The runoff then flows under the railroad tracks through two five-foot box culverts. The evidence does not establish how drainage passes under I-20. Ms. Blackmon, who lives immediately south of I-20, testified that her pastures and roads occasionally flood under current conditions.

North: Two smaller areas totaling 16.14 acres currently drain generally to the north. Subarea D (6.59 acres) drains northwest with a peak flow rate of 21.20 cfs during a 100-year storm. This northwest drainage leaves the site and flows onto another piece of property owned by BFD, where it runs into

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[19] The acreage draining south includes on-site areas Subareas F, G, H, and I (126.8 acres) and off-site Subareas A and C (8.05 acres). Exh. 177, Calculation No. 6.2.

[20] The total existing drainage area includes on-site Subareas D, E, F, G, H, and I (140.88 acres) and off-site Subareas A, B, and C (10.11 acres). Exh. 177, Calculation No. 6.1.

[21] "Peak flow rate" refers to the maximum stormwater runoff flow rate for a given storm event. For existing conditions, all peak flow rates were calculated under the Rational Method, as required by TNRCC rules for drainage areas under 200 acres. 30 TAC § 330.55(b)(5)(A).

Saline Creek. Saline Creek then flows generally to the northeast off BFD's property and onto Roger Fawcett's property.

Off-site Subarea B (2.07 acres) and on-site Subarea E (7.48 acres) drain to the northeast, with a peak flow rate of 25.23 cfs[22] during a 100-year storm. The northeast drainage leaves the site and crosses additional property owned by BFD, but then enters Mr. Fawcett's property, where it, too, runs into Saline Creek. Thus, the northwest and the northeast drainage both enter Saline Creek about 1,300 ft. north of the site boundary, but at different points along an approximately quarter-mile segment of the creek.[23]

Post-Development Drainage: (A depiction of the site subsequent to development, including designated subareas relevant to surface drainage, appears in Attachment 2 to this Proposal for Decision. This figure was taken from hearing Exh. 177.)

All parties agreed that development of the landfill will cause some alteration to existing drainage patterns, but they disputed whether the alteration will be "significant." Critical as this standard appears to be, no statute, rule, formal policy, or other guidance document defines it. After full development of the site, approximately 20 acres that currently drain to the south will be diverted to the northeast, and about five acres that currently drain to the northwest will also be diverted to the northeast. In addition, the total volume of stormwater runoff leaving the site will increase, because the landfill is designed to promote drainage and to limit percolation through the buried waste. The purpose of this standard "dry-tomb" design is to keep the buried waste as dry as possible.

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[22] BFD offered this northeast peak-flow calculation of 25.23 cfs, but its witness Dr. Brandes testified that it is actually for Subarea E only. Apparently, BFD failed to combine the flow from Subarea B to the flow from Subarea E when calculating the existing drainage to the northeast. But Dr. Brandes testified that the drainage from Subarea B is the same both before and after development, and that BFD's post-development drainage calculation also omitted Subarea B. Therefore, according to Dr. Brandes, because the same peak flow for Subarea B is omitted in both the existing and post-development calculations, its omission has no effect in calculating the *change* in drainage to the northeast due to development of the landfill. Tr. Vol. 5, p. 1199

[23] See Exh. F-47 for the clearest depictions of drainage routes to the northeast and northwest and their confluences with Saline Creek.

To control the increased drainage after development, BFD proposes to install a detention pond south of the site (Pond A) and another to the northeast (Pond B).[24] Various berms and channels are planned to direct uncontaminated runoff from the developed landfill into the ponds. These detention ponds are not designed to hold stormwater runoff for any lengthy period. Instead, they temporarily delay the runoff in order to moderate the flow rates leaving the site. BFD designed Pond A to release stormwater through a stepped-triangular weir outlet that gradually releases a larger volume of water as the water level rises in the pond. It designed Pond B, which regulates a smaller volume of water, to release runoff through a single 18-inch reinforced concrete discharge pipe.

South: After development, 114.86 acres[25] will drain south into Pond A, with a peak flow rate of 502.34 cfs into the pond during a 100-year storm. The parties disputed the peak flow rate out of Pond A. For a 100-year storm, BFD calculated the peak flow rate out of Pond A at 276 cfs, but Protestant Fawcett calculated it at 367 cfs.[26] (These post-development calculations compare to 134.85 acres and a 301.42 cfs peak flow rate under existing conditions.)

To improve drainage to the south beyond the landfill site, BFD plans to replace the single 36-inch culvert under Old Santo Road with five 36-inch culverts. These added culverts would eliminate overflows across Old Santo Road during most rainfall events and would reduce erosion of the road. According to BFD, the Union Pacific Railroad requested the additional culverts to improve access to its right-of-way.

North: After development, 34.21 acres would drain to the northeast compared to 9.55 acres under existing conditions. Of this total, 28.95 acres would drain into Pond B,[27] while 5.26 acres of post-

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[24] BFD does not propose to build a detention pond for drainage to the northwest. As will be discussed later, Subarea D drains only small amount of runoff, and the landfill design will result in a decrease in drainage to the northwest. A detention pond is not needed for that subarea.

[25] The acreage draining into Pond A includes on-site Subareas F, G, H, I, J, K, L, M, N, O and U (106.81 acres) and off-site Subareas A and C (8.05 acres). Exh. 177, Calculation 6.6.

[26] The ED did not make 100-year storm calculations. Instead, the ED made 25-year storm calculations in accordance with the Commission's rules.

[27] The drainage area for Pond B would include post-development drainage Subareas P, Q, R, S, and T. It would not include post-development Subareas B, D, or E. See Exh. 177, Calculation No. 6.6.

development Subareas B and E would drain northeast without contributing to Pond B. Subarea E is located on the far northeast side of the landfill site, but it will remain undeveloped. Subarea B, which flows onto Subarea E from the east, is an undeveloped area outside the permit boundary.

BFD calculated peak flow rates of 26 cfs out of Pond B and 21.52 cfs from Subarea E for a 100-year storm. Fawcett calculated post-development peak runoff to the northeast of 29 cfs out of Pond B, plus 16.5 cfs for Subareas B and E for a 100-year storm. In addition, 1.4 acres will drain to the northwest from Subarea D after development, for which BFD calculated a100-year storm peak flow rate of 9.45 cfs, and Fawcett calculated 5 cfs. As described previously, the northwest drainage enters Saline Creek on BFD's property, while the northeast drainage would cross a portion of Mr. Fawcett's property before entering Saline Creek.

Drainage Calculations:

The following charts summarize the drainage before and after development and show the changes in acreage and peak flow rates:

100-Year Storm

South Drainage (Into Sunday Creek)	**Acreage**	**BFD's Peak Flow Calculation**	**Fawcett's Peak Flow Calculation**
Existing	134.85 acres	301.42 cfs	301.42 cfs
Post Development (Out of Pond A)	114.86 acres	276.00 cfs	367.00 cfs
Change	– 19.99 acres	– 25.42 cfs	+ 65.58 cfs

100-Year Storm

Northeast Drainage (Into Saline Creek)	**Acreage**	**BFD's Peak Flow Calculation**	**Fawcett's Peak Flow Calculation**
Existing	9.55 acres (Subareas B & E)	25.23 cfs (Omits Subarea B)[28]	31 cfs (Includes Subarea B)
Post Development (Pond B drainage area, plus Subarea B and revised E)	28.95 acres (Pond B) + 5.26 acres (B & E) 34.21 acres (Includes Subarea B)	24 cfs + 22 cfs 46 cfs[29] (Omits Subarea B)[30]	29 cfs + 16.5 cfs 45.5 cfs (Includes Subarea B)
Change	+ 24.66 acres	+ 20.77 cfs	+ 14.5 cfs

100-Year Storm

Northwest Drainage (Into Saline Creek)	**Acreage** (Subarea D)	**BFD's Peak Flow Calculation**	**Fawcett's Peak Flow Calculation**
Existing	6.59 acres	21.20 cfs	22 cfs
Post Development	1.40 acres	9.45 cfs	5 cfs
Change	- 5.19 acres	- 11.75 cfs	- 17 cfs

[28] See Footnote 22. BFD agreed that the existing peak flow rate for Subareas B and E combined equals 31.1 cfs. Exh. 218.

[29] BFD's expert, Dr. Brandes, attempted to calculate a total peak flow rate to the north by combining the discharge from Pond B with the runoff from Subareas D and E, which do not drain into Pond B. In contrast, this chart combines the separately calculated peak flow rates for Pond B and Subarea E only, using a 100-year/2-hour storm. This design storm produces 24 cfs for Pond B plus 22 cfs for subarea E (46 cfs). The peak flow rate for Pond B alone is actually 26 cfs during a 100-year/12-hour storm, but during that storm event the peak flow rate for Subarea E is only 10 cfs, producing a lower combined peak flow rate. Exh. 160, Item 1.

[30] See Footnote 22.

100-Year Storm

NE & NW Drainage Combined	Acreage	BFD's Peak Flow Calculation	Fawcett's Peak Flow Calculation
Existing	16.14 acres	46.43 cfs (Omits Subarea B)	53 cfs[31] (Includes Subarea B)
Post Development	35.61 acres	56.97 cfs (Omits Subarea B)	50.5 cfs (Includes Subarea B)
Change	+ 19.47 acres	+ 10.54 cfs	- 2.5 cfs

BFD's Arguments: BFD contended that the detention ponds will moderate stormwater runoff so that the developed landfill will not significantly alter the existing natural drainage patterns. Because landfills are designed to enhance runoff in order to prevent percolation through the buried waste, BFD suggested that all landfills cause some increase in runoff volume. Therefore, BFD argued that the critical factor to consider is the peak flow rate of the runoff. According to BFD's 100-year storm calculations, the peak flow rates before and after development are 301.42 cfs and 276 cfs to the south, 25.23 cfs and 47.52 cfs to the northeast,[32] and 21.20 cfs and 9.45 cfs to the northwest. BFD also calculated a combined peak flow rate for the northeast and northwest, since both areas drain into Saline Creek within a relatively short distance. When these drainage areas are combined, they produce overall before-and-after peak flow rates to the north of 46.43 cfs and 56.97 cfs.[33]

BFD noted that the Commission's rules do not define "significant alteration," and it contended that this determination must be based on professional engineering judgment. In BFD's view, the Commission should accept the professional judgment of its engineer and the ED's engineer that no

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[31] Fawcett's attorney and expert witness argued that the northeast and northwest drainage should not be combined. The ALJs have added Fawcett's expert's calculations for these drainage areas simply for purposes of comparison to BFD's calculations.

[32] See Footnotes 22 and 29.

[33] See Footnote 29.

significant alteration of natural drainage will occur and should reject the contrary opinion of Protestants' expert. BFD characterized Fawcett's expert, Mr. Larry Dunbar, as a "part-time engineer and part-time lawyer" whose technical analysis "contained a fundamental flaw." To attack the credibility of Mr. Dunbar, BFD pointed out that Mr. Dunbar originally evaluated the uncontaminated stormwater detention ponds by using the wrong regulations (*i.e.*, those that apply to *contaminated* stormwater retention ponds). The regulation that applies to contaminated storm water[34] requires a pond that will contain a 25-year/24-hour storm event, but the regulation that applies to uncontaminated stormwater[35] requires a design that will control runoff from a 25-year storm event, without specifying a critical storm duration.

BFD argued that, because of this mistake, Mr. Dunbar erroneously used a 100-year/24-hour storm for his calculations using the HEC-1 computer model. BFD also contended that Mr. Dunbar used abnormally high Soil Conservation Service ("SCS") curve numbers[36] in his calculations and improperly adjusted the Time of Concentration ("TOC")[37] to calibrate his model. BFD's expert testified that the TOC is a site-specific, derived number that should not be used to calibrate the HEC-1 model. According to BFD, these errors resulted in a much higher calculated flow rate from the detention ponds than will actually occur under "real world conditions." Therefore, BFD argued that Mr. Dunbar's opinions are not credible and should be disregarded.

BFD further argued that its engineering witnesses, Jeff Arrington and Dr. Robert Brandes, and the ED's witness, Nevzat Turan, are more experienced and more competent in surface hydrology and landfill design. BFD asserted that Dr. Brandes applied the appropriate variables in his HEC-1 model, which produced more realistic results.

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[34] 30 TAC § 330.55(b)(3).

[35] 30 TAC § 330.56(f)(4)(A)(ii).

[36] Under the HEC-1 computer model, a higher SCS curve number indicates surface cover conditions that increase the amount of stormwater runoff.

[37] In general terms, time of concentration is the amount of time for a water particle to travel across the longest distance of a specific drainage area.

ED's Arguments: The ED agreed with BFD that the developed landfill will not significantly alter natural drainage patterns. The ED's expert witness calculated peak runoff to the northeast for a 25-year storm event before and after development at 30 cfs and 44 cfs, respectively. The ED also noted that the two detention ponds (Ponds A and B) were designed for a 100-year storm event, which exceeds the minimum 25-year storm event referenced in the rules.

The ED disputed Protestants' contention that the TNRCC staff considers any increase in runoff of more than 10 percent as a significant alteration of natural drainage. The ED pointed out that this 10–percent threshold is not in the Commissions regulations, and Mr. Turan testified that no such general rule of thumb exists among TNRCC engineers. Rather, the ED concurred with BFD that whether a significant alteration will occur from development of a landfill is a matter of professional engineering judgment.

OPIC's Arguments: OPIC argued that drainage patterns should be evaluated at the permit boundary and accused BFD of shifting the focus downstream to Saline Creek in order to provide a rationale for combining the northeast and northwest drainage. Combining these two drainage areas tends to obscure the increase in peak flow rate to the northeast because the peak flow rate to the northwest actually declines after development. Thus, the net increase in the peak flow rate when the northeast and northwest areas are combined is less than the increase in the peak flow rate for the northeast alone. OPIC pointed out that the ED, protestants, and BFD's application (as contrasted with its testimony at hearing) all evaluated the northeast and northwest drainage patterns separately at the boundary and it argued that examining each area separately at the permit boundary is the best method for evaluating drainage patterns.

Ultimately, OPIC stated that it could not give an unqualified opinion on whether the landfill will result in a significant alteration of natural drainage patterns, due to the lack of guidance in the Commission's rules. Nevertheless, OPIC suggested that a significant alteration would occur due to the increase in stormwater draining across the northeast boundary under post-developed conditions.

Fawcett's Arguments: Fawcett suggested that the three fundamental issues are: (1) what degree of change constitutes a significant alteration of natural drainage patterns; (2) whether changes to natural drainage patterns should be evaluated at the permit boundary of somewhere else downstream; and (3) whether BFD should be allowed to offer evidence at hearing about changes to drainage patterns off-site and downstream, when its application reflects calculations only at the permit boundary. In general, Fawcett argued that development of the landfill would significantly alter natural drainage patterns because of both increased peak flow rate and increased total volume at the northeast boundary.

Fawcett stated that in determining whether a significant alteration would occur, the Commission must consider peak flow, volume, velocity, direction of flow, erosion, and flooding. Fawcett pointed out that the area draining to the northeast would increase after development from 9.55 acres to 34.21 acres (258 percent). For total volume of run-off to the northeast from a 25-year storm event, Fawcett calculated an increase from 3.8 acre-feet to 16 acre-feet (321 percent), and the ED calculated an increase from 3 acre-feet to 13 acre-feet (333 percent).[38] Finally, Fawcett calculated an increase in peak flow rate to the northeast for a 25-year storm from 25 cfs to 39 cfs (56 percent), and for a 100-year storm from 31 cfs to 45 cfs (45 percent), while the ED calculated an increase for a 25-year storm event from 30 cfs to 44 cfs (47 percent). Fawcett emphasized that all of these calculations were made at the site boundary and accused BFD of trying to divert attention away from the site boundary to a point downstream. Fawcett suggested that this change in position by BFD amounts to a tacit admission that a significant alteration in natural drainage patterns would occur at the site boundary.

Fawcett also criticized BFD for combining the flows leaving the site to the northwest with flows leaving the site to the northeast. Fawcett asserted that BFD did this to "manipulate its results by forcing the existing or pre-development conditions to agree with the final or post-development conditions." According to Fawcett, combining the peak flows to the northwest and northeast is

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[38] BFD did not prepare separate calculations of runoff volume, which Fawcett claims violates 30 TAC § 330.56(f)(4)(A)(i).

improper because the runoff from each subarea crosses the northern boundary at a different point and flows in a distinctly different direction. Mr. Fawcett also claimed that erosion already occurs on his property along the northeast drainage path and suggested that the increased flows to the northeast after development will exacerbate the erosion.

Fawcett disputed BFD's claim that Mr. Dunbar used an improper rain distribution pattern in his HEC-1 model. Fawcett stated that Mr. Dunbar used the same rainfall pattern as the ED's witness, Mr. Turan, and that this distribution pattern has been long accepted by TNRCC. And Fawcett criticized Dr. Brandes' modeling because he testified that a 12-hour storm was the critical storm duration, while his model used only a 500-minute (8.32-hour) storm duration. In addition, Fawcett stated that Mr. Dunbar used both the HEC-1 model and the SCS triangular hydrograph method and reached essentially the same result under both methods.

Fawcett further argued that the effects of drainage beyond the permit boundary should not be considered, because the ED has no enforcement authority beyond the boundary. Fawcett noted that BFD's application does not contain any information or calculations relating to conditions beyond the permit boundary, and Fawcett vehemently objected to BFD's offering any such evidence at hearing, since BFD had not revealed during discovery that it would attempt to address that subject. Further, Fawcett stated that its expert, Mr. Dunbar, also did not consider drainage beyond the permit boundary, because none of the calculations in BFD's permit applications did so.

CSPPC's Arguments: CSPPC summarized its position by stating: "Despite the disagreements among the experts regarding modeling details, they all basically agree that the landfill will increase peak flow rates going to the north by approximately 50 percent. Clearly this is not an insignificant alteration." CSPPC disagreed with BFD's argument that whether an alteration is significant depends on the offsite impacts. It noted that neither BFD's application nor the Commission's regulations make any mention of offsite impact.

CSPCC also argued that BFD's placement of four additional 36-inch culverts under Old Santo Road would cause a significant alteration to natural drainage patterns south of the landfill. The application does not consider the effects of this change, but CSPPC claimed that it would cause a higher peak flow south of Old Santo Road and would worsen the flooding that already occurs on Ms. Blackmon's land immediately south of I-20.

Analysis: The ALJs do not accept arguments that impact on drainage patterns must be determined solely at the permit boundary. The Commission's rules do not limit where this determination should be made. Instead, they allow flexibility in examining drainage patterns. Considering the diverse topography of the state, the evaluation of drainage patterns should not be so restricted. Depending on the circumstances of each case, it may be appropriate to examine the impact of changed drainage patterns near the permit boundary, well beyond the permit boundary, or both. In this case, for example, the project appears to pose little impact on drainage patterns at the immediate south boundary of the proposed landfill, but the addition of four culverts under Old Santo Road may have a significant impact on drainage patterns beyond that boundary. In contrast, the alteration of peak flow rates at the northeast boundary appears considerable in abstract terms, but the actual impact of this change may be insignificant because that runoff, entering a stream after only a short distance, may become an inconsequential fraction of that stream's natural flow.

The ALJs also reject the arguments of Protestants and OPIC that a 10-percent change should be the rigid threshold for defining a significant alteration. Such an artificial percentage threshold does not evaluate the actual impact of a change in drainage patterns. Depending on circumstances, a small percentage change to a large runoff volume or peak flow rate could have devastating effects, while a large percentage change to a small runoff volume or peak flow rate might have little or no impact. Instead, the determination of whether an alteration to drainage patterns is significant should be based on the effects of the change–such as flooding, erosion, reduction of water supply, or large-scale modification of the plant life supported by a watershed.

In this case, the parties expended a large amount of energy attacking their opponent's methods and calculations. The ALJs conclude that Dr. Brandes' HEC-1 computer models are probably more accurate in general. Dr. Brandes evaluated various 100-year storm events to determine which one would produce the greatest peak flow (the critical storm event) while neither Mr. Dunbar nor Mr. Turan made this determination.[39] In addition, Dr. Brandes calibrated his HEC-1 model to correspond to the peak flow rates under the Rational Method by adjusting the SCS curve numbers, while Mr. Dunbar calibrated his HEC-1 models by adjusting lag times. Although the precise impact of these adjustments is unclear, the ALJs were persuaded by the evidence that adjusting the SCS curve numbers was likely to produce a more reliable result. As Dr. Brandes explained, time of concentration is based on the fixed physical characteristics of a watershed, and in the HEC-1 model TOC has a direct impact on the shape of the hydrograph and the peak flow rate calculation. In addition, TOC has an unvarying mathematical relationship to lag time in the HEC-1 model, such that a change to lag time causes an even greater change in TOC.[40] As a result, Mr. Dunbar's changes in lag time resulted in unrealistic times of concentration in his HEC-1 model. In contrast, the SCS curve numbers only concern surface conditions, and Dr. Brandes' modified SCS curve numbers remained realistic for this watershed.

But problems also exist with Dr. Brandes' and BFD's calculations. First, BFD and Dr. Brandes failed to include the runoff from Subarea B in their calculations of runoff to the northeast. Dr. Brandes explained that this omission occurred in both the existing and post-development calculations and that it did not affect the analysis of the change in drainage patterns. Although this may be true, the fact remains that the application fails to accurately represent the maximum peak flow rate to the northeast before and after development.

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[39] Because the duration of a rainfall event will affect the hydrological and hydraulic behavior of the ponds, Dr. Brandes analyzed a range of storm durations to verify that the ponds will function properly under the unique conditions of the critical storm duration. He analyzed 100-year storms with a variety of storm durations ranging from 15 minutes to 24 hours and determined that the peak outflows for Ponds A and B occurred during a 12-hour storm event.

[40] Lag Time = 0.6 X Time of Concentration; Time of Concentration = 1.666 X Lag Time. Tr. Vol. 5, p. 1262.

In addition, the ALJs are not persuaded by Dr. Brandes' attempt to calculate a single HEC-1 modeled peak flow rate for drainage to the north by combining the northeast drainage with the northwest drainage. Both the northeast runoff and northwest runoff eventually enter Saline Creek, but the northeast drainage flows over a different path than the northwest drainage, and it has the greatest increase in peak flow rate of all the areas. In contrast, the northwest drainage will actually decline after development.

The ALJs agree that the combined changes in the northwest and northeast drainage should be considered to determine their impact on Saline Creek. But the changes in drainage patterns to the northeast and northwest should also be evaluated separately to determine their impact before reaching Saline Creek. Otherwise, the impact of changes to the drainage patterns cannot be fully evaluated. In this case, however, the ALJs conclude that BFD did not adequately evaluate either the northeast drainage alone or the northeast and northwest combined drainage into Saline Creek. Instead, BFD's application and evidence simply showed that runoff from the northeast and northwest drainage areas flow into Saline Creek. There was no evidence on Saline Creek's size or capacity, or on the impact of the increased volume flowing into the creek.[41] It may be that changes in drainage from the landfill site will not have a significant impact on Saline Creek, but there is insufficient evidence in the record to make that determination.

The ALJs are also concerned that BFD did not present calculations of runoff volume or velocity before and after development. Under 30 TAC § 330.56(f)(4)(A)(i), an application must include "calculations used to estimate peak flow rates *and run-off volumes* . . . ." Dr. Brandes stated that his HEC-1 models calculated volume, but BFD did not present this information in a meaningful way, either in the application or in the evidence offered at hearing. Fawcett and the ED presented evidence of an increase in volume to the northeast, but the impact of this change is unknown. Further, it is unclear what change in runoff volume will occur to the northwest or to the south.

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[41] Dr. Brandes did testify on redirect examination that Saline Creek had a total drainage area of approximately 1,200 acres. However, this information was not contained in BFD's application or in Dr. Brandes' prefiled testimony, and BFD offered no other information about Saline Creek or its watershed.

In addition, evidence at hearing established that erosion is affected by the velocity of stormwater runoff, but BFD failed to offer any evidence about runoff velocity. This lack of evidence is troubling to the ALJs because it seems logical that velocity to the northeast will increase due to the higher runoff volume and peak flow rate and because Mr. Fawcett complained that the northeast runoff route already suffers from erosion.

In short, the ALJs find that BFD failed to adequately evaluate the changes in drainage patterns that would occur after development of the landfill. In particular, BFD failed to calculate runoff volumes or velocities draining to the south, northwest, and northeast; it failed to include the runoff from Subarea B in its northeast drainage calculations; it failed to analyze the impact of installing additional culverts under Old Santo Road south of the landfill site; and it offered no evidence about the Saline Creek watershed or the creek's capacity to handle increased runoff. For these reasons, the ALJs find that BFD failed to meet its burden to demonstrate that the proposed landfill will not significantly alter natural drainage patterns.

4. Does the application satisfy regulatory requirements relating to endangered species?

The ALJs recommend a conclusion that, with respect to the Texas horned lizard, the application does not satisfy such requirements.

In the context of TNRCC landfill permitting, the essential requirements for the protection of endangered species appear in 30 TAC §§ 330.53(b)(13)(B) and 330.129, both of which provide:

> The facility and the operation of the facility shall 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.

According to the definition in 30 TAC § 330.2(42), "endangered or threatened species" are those so listed pursuant to either the Federal or the Texas Endangered Species Act. Applicants are also advised by 30 TAC § 330.53(b)(13)(C) that "The United States Fish and Wildlife Service ["FWS"]

and the Texas Parks and Wildlife Department ["TPWD"] should be contacted for locations and specific data relating to endangered and threatened species in Texas."

In this case, BFD consulted listings maintained by the two wildlife agencies and determined that 12 species of endangered or threatened animals may inhabit Palo Pinto County. These include eight types of bird, three types of snake, and the Texas horned lizard. BFD's primary investigator on this subject (Peter McKone, an environmental scientist with Freese and Nichols, Inc.) visited the site on one occasion (on November 21, 1991), finding it to be "unimproved rangeland" with brush dominated by post oak and, in some areas, by mesquite or juniper. Based in part upon these observations, Mr. McKone concluded that the site included no natural habitat suitable for any of the endangered or threatened birds and snakes listed as potential Palo Pinto County residents. He made a somewhat oblique acknowledgment, however, that the site could provide habitat for the horned lizard–asserting, nonetheless, that "Loss of habitat resulting from development of the site is insignificant to the species as a whole or to individuals within Palo Pinto County."

Mr. McKone observed no individual specimens of any endangered or threatened species during his one on-site visit. His report then concluded:

> None of the federally or state-listed threatened or endangered species are known to occur in the vicinity of the proposed project site. However, in the event the Texas horned lizard is observed at the site, BFD will record the occurrence and notify the TPWD. In addition, the observed specimen will be managed in accordance with the TPWD letter dated January 2, 1996.

This letter from TPWD, addressed to Mr. McKone, contained the following directives:

> The Texas Horned Lizard, listed as a federally threatened species, is stated to occur within the immediate area.[42] Specimens should be relocated to suitable sites outside

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[42] The Texas horned lizard (*Phrynosoma cornutum*) is a state-listed threatened species, as designated by the TPWD at 31 TAC § 65.172. Despite the statement in TPWD's letter, the record indicates that this species is not at this time federally listed as endangered or threatened.

> plant operations. Contact this agency for permits needed to handle or relocate specimens found.
>
> Occurrence or sighting of any other endangered or threatened state or federal listed species should be reported immediately to the TPWD.

The Protestants and PIC criticized as inadequate BFD's examination of the project's potential impact upon endangered or threatened species. They noted that Mr. McKone's single site visit took place during a time of year–late November–when migratory birds would be expected to be absent and reptiles dormant. According to information compiled by TPWD, Texas horned lizards hibernate in underground burrows from September or October until April or May. Thus, the Protestants and PIC contended, Mr. McKone's failure to observe endangered species at the site was inevitable and supports no inference that the habitat there is unsuitable for such species during their active seasons. In contrast, two witnesses for the Protestants (Patricia Blackmon and Max Wheeler) testified that they regularly see horned lizards on their rangeland properties, situated within one to two miles of BFD's site.

In its written response to closing arguments, BFD summarized its final position on this issue as follows:

> BFD, taking the conservative approach once again, *assumed* the presence of the Texas Horned Lizard . . . on site because it recognized the presence of suitable Texas Horned Lizard habitat. The record reflects that the plan set out in BFD's application to address the possibility of a Texas Horned Lizard being found on the site satisfies . . . all endangered and threatened species regulatory requirements. This finding is confirmed in the correspondence with [TPWD and FWS], which is a part of the evidentiary record. . . .

Overall, the ALJs find BFD's presentation on this subject somewhat confusing. Certainly, the limited correspondence in the record from TPWD and FWS does not constitute, on its face, any approval by those agencies of BFD's investigation or planning process with respect to endangered or threatened species, much less any confirmation that the proposed project as a whole meets regulatory requirements on the subject. On the basis of what appears to be a somewhat cursory investigation (including a site visit at a time when the species of concern most likely to appear on

the site would be inactive, underground, and virtually undetectable), BFD first concluded that no protected species were "known" to occur in the vicinity, but now has "assumed" that the horned lizard is present. BFD's general plan for preventing harm to any horned lizards encountered on the site–*i.e.,* relocating them outside the operations area–will require a TPWD permit; however, BFD acknowledged that it presently has no such permit and provided no evidence about its ability to get one.

In seeking to apply Chapter 330's general requirements for endangered species protection, the ALJs have been able to find little specific guidance in either TNRCC or TPWD rules. However, once a site has been shown to include habitat suitable for a threatened species, logic would dictate that an applicant make at least some realistic effort to determine whether a population of that species actually does live there–and if so, what the general character of that population is. Without some knowledge of how horned lizards may be distributed over the 140 acres of the BFD site, a plan that simply cautions heavy equipment operators to be on the lookout for a slow-moving, highly camouflaged, toad-sized lizard is not likely to afford meaningful protection. Under the circumstances, BFD has failed to show full compliance with the mandate of the rules that the facility not "cause or contribute to the taking" of a protected species.[43] Nor has it satisfied the requirement of 30 TAC § 330.51(b)(8): "The applicant shall submit Endangered Species Act compliance demonstrations under state and federal laws."

The ALJs are not presupposing that horned lizards are present at the site or that BFD's activities necessarily would result in the taking of such lizards if any are present. The record indicates, though, that BFD has effectively done nothing to learn whether a population of the species actually is present on the site. And in this informational vacuum, BFD has proposed a plan that effectively has no content, amounting to no more than a resolution to remove horned lizards if, by chance, any are encountered.

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[43] In 30 TAC § 330.53(b)(13)(A)(ii), "taking" is defined as "harassing, harming, pursuing, hunting, wounding, trapping, capturing, or collecting an endangered or threatened species or attempting to engage in such conduct."

Setting aside the horned lizard to address the 11 other endangered or threatened species that potentially may occur in Palo Pinto County, the ALJs are satisfied that BFD has performed a reasonable investigation and has shown a lack of prospective impact. Although Mr. McKone's field investigation on the site occurred at a relatively inactive time of year (in biological terms), it apparently did enable him to observe the character of the permanent habitat there. His conclusion that this existing habitat would not support any of these other 11 species is thus plausible, as well as uncontroverted in the record.

5. Does the application satisfy regulatory requirements relating to operating plans?

The ALJs recommend a conclusion that, with respect to plans for fire protection, endangered species protection, and disease vector control, the application does not satisfy such requirements.

The rules, at 30 TAC § 330.57, require an application to include a site operating plan. Further, 30 TAC § 330.114 prescribes the following:

> The site operating plan (SOP) shall provide operating procedures for the site management and the site operating personnel in sufficient detail to enable them to conduct the day-to-day operations of the facility. The SOP shall be retained during the active life of the site and throughout the post-closure maintenance period. As a minimum, the SOP shall include specific guidance, procedures, instructions, and schedules on the following:
>
> . . . . (3) a detailed description of the procedures that the operating personnel shall follow concerning the operational requirements of this subchapter; . . . .and
>
> (6) a fire protection plan that shall identify the fire protection standards to be used at the facility and the training of personnel in fire-fighting techniques.

In addition, the definition of SOP at 30 TAC § 330.2(135) states that a plan should be drawn to enable personnel to conduct day-to-day operations "throughout the life of the site in a manner consistent with the engineer's design and with the commission's regulations." Rule 330.113

clarifies that the SOP is to be maintained at the landfill facility or at "an alternate location approved by the Executive Director."

The CSPPC group argued that a SOP is insufficient if it "generically describes" how operational goals will be achieved or merely tracks the general language of the pertinent rules.[44] On this basis, the group called BFD's operating plan deficient with respect to four subjects, all of which the rules require such a plan to address: *i.e.*, fire protection, endangered species, disease vector control, and windblown waste.

A. Fire protection plan.

The fire protection aspects of the required SOP are specified more fully in 30 TAC § 330.115, as follows:

> The owner or operator shall maintain a stockpile of earth within 2,500 feet of the working face or active disposal area. The stockpile shall be sized to cover the entire working face or active disposal area. Sufficient on-site equipment for movement of that earth shall be provided at all landfill sites. The executive director may approve alternate methods of fire protection. Accidental fires shall be promptly extinguished. The potential for accidental fires shall be minimized by use of proper compaction and earth cover.

By comparison, BFD's fire control plan, in its entirety, states:

> The City of Gordon Fire Department will provide safety training to all landfill personnel. Open burning at the landfill will be prohibited. Landfill fires will be extinguished by smothering with cover material spread by a dozer or other suitable equipment. A minimum of 1,000 cubic yards of soil will be stockpiled within 2,500

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[44] CSPPC cited a decision from the 126th District Court of Travis County case, *Brazoria County, Texas, and Citizens in Protest of Browning-Ferris Waste v. TNRCC*, Case No. 357,114, Letter Opinion dated May 2, 1996, pertaining to a disposal well, in which the court concluded that "Several of the plans . . . fall short of regulatory requirements . . . . For example, the Contingency Plan, while referring to 'arrangements made' with local police, hospitals, and emergency response teams, does not actually describe any 'arrangements' . . . . The only reference in the Contingency Plan to the mandatory evacuation plan . . . is that it 'will be prepared.'"

> feet of the working face for this purpose. Stockpile amount may vary dependent upon size of the working face. Stockpile volume will be adequate to cover the working face. All equipment will be equipped with fire extinguishers. In the event that a major fire hazard exists, the City of Gordon Fire Department will be summoned to the site.

The CSPPC group contended that this part of the plan amounts to little more than a restatement of Rule 330.115 and provides insufficient instruction for on-site personnel–failing to include even something so basic as the phone number of the fire department. In general, the ALJs must agree. This sketchy fire control plan can hardly be said to offer facility personnel "specific procedures" or "instructions" for handling this subject "in sufficient detail to enable them to conduct the day-to-day operations," as Rule 330.114 requires. That rule, in demanding "a detailed description" of procedures for meeting the subchapter's "operational requirements" (*i.e.*, Rules 330.115 through 330.139, which outline the main subjects to be addressed by a SOP), necessarily contemplates more than a mere repetition of those "operational requirements."

BFD's fire protection plan, however, is very little more than such a repetition. Essentially, Rule 330.114 directs an applicant to define *how* its personnel will meet the objectives set out in Rule 330.115. However, BFD's plan, for the most part, simply reiterates that those objectives will be met, in some general way. It describes no sequence of concrete steps to be taken in fighting specific types of fires. It describes no precautions to be observed for avoiding fires in the first place (not even so obvious a point as prohibition of smoking at active areas of the facility). It describes no procedures for checking or maintaining fire equipment.[45]

Moreover, Rule 330.114's requirement for identifying "the fire protection standards to be used at the facility" receives little if any attention in BFD's plan. "Standards" must mean primarily criteria or rules for on-site personnel to observe in preventing or extinguishing fires. At best, BFD's plan provides a broad framework for approaching the problem and leaves the staff to interpolate almost all of the operational details.

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[45] In contrast, the SOP in Texas Ecologists, Inc.'s application for Permit MSW-2267 (TNRCC Docket No. 1998-1058-MSW; SOAH Docket No. 582-98-1652), issued December 22, 1999, includes a four-page breakdown of practices for fire prevention, maintenance procedures, and sequential actions for responding to fires.

In this context, particularly, the setting of "standards" also would suggest a systematic effort to make distinctions for treating different types of fire hazards. CSPPC noted that the testimony of BFD's general manager, Jim Lattimore, illustrated well the fact that landfill fires tend to fall within a handful of typical scenarios–*e.g.*, a burning load of waste detected at the facility entrance, such a "hot load" detected when initially deposited at the landfill's working face, or a fire that develops within accumulated waste in the landfill. Mr. Lattimore explained that these different circumstances call for different operational responses, but BFD's plan includes no mention of such varying contingencies or of the specific steps relevant to addressing each. Another element of the plan that appears on its face to call for greater elaboration of applicable standards is the provision that the local fire department will be summoned in the event of a "major fire hazard." Some definable criteria for determining such a "major" hazard seem warranted–especially in the light of Mr. Lattimore's testimony that fire departments typically lack the type of equipment needed for moving enough dirt to suppress any kind of landfill fire.

The ALJs recognize that no operating plan can be expected to cover every contingency or detail (even every *important* detail), but the content of BFD's fire protection plan is simply too sparse and superficial to meet the rules' mandate for "detailed description" and "specific guidance."

B. Endangered species protection plan.

The following is the entire portion of BFD's operating plan related to the protection of endangered or threatened species:

> BFD personnel will record any observation of [the horned lizard] at the site and will notify the TPWD accordingly. Any specimens of the horned lizard found during development of the site will be relocated to areas outside the landfill development. BFD will contact the TPWD regarding permits needed to handle or relocate specimens found.

Given BFD's failure to examine the distribution of the horned lizard at its site–and thus its failure to determine the potential impact of the project upon this species (as noted in Section IV.4, above), the lack of sufficient specificity in this aspect of the SOP is predictable.[46]

The existing plan does not even outline the more obviously crucial operational issues relating to this subject–*i.e.*, how personnel will be instructed to recognize and spot the horned lizard, what routine will be used to scan working areas for the species, how specimens will be cared for while being transported to new locations, and how BFD will ascertain proper locations for the release of such specimens. While BFD should not be required to obtain a TPWD permit for handling horned lizards prior to issuance of a landfill permit from TNRCC, it nevertheless should have examined the requirements associated with such a TPWD permit and incorporated means for satisfying such requirements into the SOP.

C. Disease vector control plan.

In its entirety, the portion of BFD's operating plan related to disease vector control states as follows:

> Vectors such as flies, birds and rodents will be controlled by minimizing the size of the working face, properly compacting waste, and covering waste with soil at the end of each working day. Approved pesticides will be used if necessary.

This text would seem to suggest that vector control is largely incidental or integral to the basic process of compacting and covering waste at a landfill. To the extent this is true, the ALJs believe that these compacting and covering processes are adequately addressed by the application as a

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[46] In the subchapter for operational planning, operational requirements relating to endangered species appear at 30 TAC § 330.129, which states, "The facility and the operation of the facility shall 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."

whole and need not be reiterated in detail in this portion of the SOP.[47] On the other hand, additional or alternative means of control (*i.e.*, "Approved pesticides will be used if necessary") are not outlined in any detail whatsoever.

In the ALJs' view, a reasonable plan should attempt at least some specific listing of the vectors present in the vicinity of the site,[48] identification of circumstances under which the use of controls other than compacting and covering would become necessary, and procedures for safely using pesticides or other alternative means of control in such circumstances.

D. Windblown waste control plan.

The SOP's operational requirements with respect to control of windblown waste are specified in 30 TAC § 330.120, as follows:

> Windblown material and litter shall be collected and returned to the active disposal area or working face as necessary to minimize unhealthy, unsafe, or unsightly conditions.
>
> (1) A portable fence may be employed to confine windblown material resulting from unloading, spreading, and compaction operations. If a portable fence is not practical, other suitable practices shall be employed to control windblown materials.
>
> (2) Litter scattered throughout the site, along fences and access roads, and at the gate due to wind or as a result of waste falling from vehicles shall be picked up at least weekly and returned to the active disposal area or working face.

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[47] In the subchapter for operational planning, operational requirements for disease vector control appear at 330 TAC § 330.126.

[48] During the hearing, several witnesses testified that raccoons, armadillos, and wild hogs are common in the countryside around the site, and that these (as well as the other vectors noted in BFD's plan) might carry waste or contamination from a landfill to nearby land and stock tanks.

BFD's plan for control of windblown waste, in its entirety, states:

> Windblown material will be confined to the smallest area practical at the bottom of the working face near the toe of the fill. Any windblown materials will be collected and returned to the working face at the end of each working day. Daily cover will be placed over the working face at the end of the day to minimize windblown materials. The site will be inspected daily for windblown litter and any litter that is discovered will be returned to the active disposal area or working face. Portable litter fencing shall be used down wind of the working face when active filling is above natural ground elevations.

CSPPC again argued that this aspect of the SOP represents little more than a restatement of the rule's operational requirements. While this may be true to an extent, the ALJs are unable to identify any obvious way in which expanding this description of procedures would be notably useful. Nor does the record indicate any specific deficiency with this aspect of the plan, at least insofar as it relates to clean-up on the actual 140-acre tract owned by BFD.

However, CSPPC's principal concern with this subject relates to creating a workable legal and logistical mechanism for retrieving the wastes that may blow from BFD's site onto surrounding privately owned land, in the event that BFD ultimately receives a permit for the proposed facility. The group worries that BFD either may do nothing about such escaped trash or, in retrieving it, may act without sufficient care–*e.g.*, failing to drive slowly to avoid harming livestock, allowing stock to escape when opening gates, or ignoring necessary precautions when hunters are using the land. CSPPC concluded that, without a retrieval plan to protect adjacent landowners' interests, waste may accumulate on those lands until TNRCC transfers the responsibility of collecting it to the landowners. The group cited an instance in which TNRCC staff notified a landowner living adjacent to a landfill near Amarillo that unless personnel from that facility were admitted *unconditionally* onto the adjacent land to retrieve windblown waste, the landowner would become liable for that waste and could be prosecuted by TNRCC.

In order to avoid circumstances like this, CSPPC urged that the following special condition be included in any permit issued for the BFD facility:

> The operator shall prepare and submit to the TNRCC a plan for the identification of waste blown from the site or from vehicles bringing waste to the site that enters private property. The plan shall provide for notice to surrounding landowners of the phone number of permittee's representative to be called in case such waste enters their property. Notice can be by an annual mailing to landowners within one half mile of the landfill boundary or by a sign on the corners of permittee's property in prominent locations. The plan shall include a procedure for retrieving waste from private land in a reasonable time and shall include a proposed entry agreement that protects the landowner from liability for the acts of the agents of the permittee while they are on the property of the landowner. Such an entry agreement shall be subject to review and comment by the TNRCC Office of Public Interest Counsel to assure that it is a fair agreement and protects the landowner's rights.

The authority governing this aspect of the interaction between a facility and adjacent land does not appear to be altogether clear. In order to promote a more stable and productive relationship at this interface, therefore, the ALJs suggest that the Commission consider placing a provision substantially similar to the above in any permit that may be issued to BFD. The provision should include a time line for initial submission of a plan–perhaps 120 days from the date of a permit's issuance (subject to extensions granted by the ED on the basis of demonstrated necessity).

While the ALJs agree that an arrangement for collecting windblown waste outside site boundaries may be important to the welfare of the surrounding community, such a provision is not obviously a necessary component of the standard site operating plan, as defined by TNRCC rules. As a whole, the relevant rules focus upon management of the site itself, and the specific operational requirements in 30 TAC § 330.120 refer only to waste "scattered throughout the site, along fences and access roads, and at the gate . . ." The ALJs conclude that failure to specifically address off-site accumulations of waste is not a deficiency that invalidates BFD's operating plan with respect to control of windblown waste.

6. Does the application satisfy regulatory requirements relating to compliance with the regional solid waste plan?

The ALJs recommend a conclusion that BFD's proffered proof on this issue does not satisfy such requirements.

As part of the "basic elements" of a landfill permit application, 30 TAC § 330.51(b)(10) directs that "The applicant shall submit demonstration of compliance with regional solid waste plan." Producing such a plan is primarily the responsibility of the council of government ("COG") for the area in question.

Palo Pinto County lies within the jurisdiction of the North Central Texas Council of Governments ("NCTCOG"). To demonstrate compliance with the regional plan encompassing Palo Pinto County, BFD submitted a letter from NCTCOG dated May 15, 1995, which stated the following:

> At their May 11, 1995, meeting, the North Central Texas Council of Governments' Resource Conservation Council reviewed the application for a new Type I MSW Landfill permit for the Blue Flats Disposal Facility in Palo Pinto County, Texas. National Environmental Systems, Inc. intends to site a 140 acre Type I MSW landfill in Palo Pinto near Gordon, Texas. Based on the Executive Summary received from Freese and Nichols, Inc., the consultants on the project, and a presentation made by Mr. Bill Allanach of Freese and Nichols, Inc., the RCC found the proposed expansion to be in conformance with the capacity needs of the *Regional Solid Waste Management Plan for North Central Texas.*

The Protestants and PIC noted, however, that the application to which this letter refers is not the one now under consideration in this proceeding. Rather, at the time of NCTCOG's approval, an earlier BFD application for the same site was pending before TNRCC. That application was withdrawn in January of 1996, to be succeeded by the filing of the present application in September of 1996. Accordingly, the Protestants and PIC concluded that BFD has presented no evidence that its *current* application conforms to NCTCOG's regional solid waste plan.

In closing argument, BFD responded that its earlier application "was merely withdrawn for additional site-characterization studies related to geology, not location and service, which are the main thrust of a regional plan." BFD concluded, "NCTCOG is fully aware of the application before this Court and the TNRCC, and has not withdrawn its favorable evaluation."

The ALJs are unable to perceive any reasonable basis for assuming that NCTCOG's approval would carry over from a contemporaneous application to any successive application. The cited letter of approval explicitly relates to the then-pending application. It does not indicate what aspects of the application then under review could be changed without affecting the council's positive view of the application–or what aspects could not be so changed. Even if the council had made this distinction, the record contains little if any specific information comparing the contents of the two successive BFD applications.

By statute,[49] the contents of a regional solid waste management plan must emphasize the minimization and reuse of waste, as well as requiring an inventory of municipal solid waste landfill units and an assessment of need for new waste disposal capacity. Even when no direct amendments are made to a plan, evolving circumstances clearly may change, over time, the context in which these subjects (and others addressed by a plan) are applied to evaluate a landfill application. The ALJs cannot presume, then, that in the year and a half between NCTCOG's approval of BFD's first application and the submission of BFD's second application, changed circumstances would not have led NCTCOG to evaluate the two applications differently, even if they had been identical. BFD's simple assertion that its new application would still satisfy NCTCOG carries no evidentiary weight. Since the 1995 letter from NCTCOG represents essentially the only evidence offered by BFD on this issue, the ALJs must conclude that BFD has failed to demonstrate compliance with the regional solid waste plan applicable to this project.

Parties also have asserted that because several of BFD's consultants in this permit proceeding also assisted NCTCOG in developing its regional solid waste management plan, conflicts of interest on the part of these consultants must invalidate any approval of BFD's proposals by NCTCOG. In the ALJs' view, it has not been shown to be within the Commission's jurisdiction to determine whether any legally significant conflict of interest exists in this case; nor has any other entity with authority to make such a determination done so.

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[49] TEX. HEALTH & SAFETY CODE § 363.064.

The Fawcett group contended, further, that BFD should be required to demonstrate compliance not only with the regional waste plan prepared by the COG with jurisdiction over the county in which the proposed site is located, but also with the regional plans of other COGs with jurisdiction over counties that might be the origin of solid waste ultimately transported to the BFD site. The ALJs can find no support in authority or logic for this contention. Chapter 363 of the Health & Safety Code, which governs the regional planning process, is consistently structured to make areas of planning responsibility coterminous with specific geographical boundaries of jurisdiction–whether of regional groupings of counties, subregions, or localities. The statutes provide for the coordination of such plans through their mandated consistency with the state solid waste management plan[50] (prepared by the Texas Department of Health) and through the Commission's review of the various regional plans.[51] Nothing in the law suggests that individual applicants must further such coordination by demonstrating compliance with the plans of multiple regions.

7. Does the application satisfy regulatory requirements relating to financial assurance and closure costs?

The ALJs recommend a conclusion that the application satisfies such requirements.

The Commission's rules require an applicant to estimate the costs of hiring a third party to close the largest area of the landfill that will require final closure at any time during the life of the landfill.[52] An applicant must also estimate the costs to maintain the landfill site by a third party for 30 years after the landfill is closed.[53] Finally an applicant must provide financial assurance to the TNRCC to cover these costs at least 60 days prior to the initial receipt of waste.[54]

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[50] TEX. HEALTH & SAFETY CODE § 363.062.

[51] TEX. HEALTH & SAFETY CODE § 363.061.

[52] 30 TAC § 330.281.

[53] 30 TAC § 330.283.

[54] 30 TAC §§ 330.52(b)(11) and 330.285.

BFD's application and prefiled testimony stated that it will have not less than five acres nor more than 25 that will require final cover at any time during the life of the landfill. It then calculated third-party costs to close the landfill and apply the final cover to 25 acres at $1,778,233. It also calculated third-party post-closure care costs for 30 years at $2,497,000. When combined, BFD's estimated closure and post-closure care costs totaled $4,275,223, based on 1995 dollars.[55] BFD also provided the Commission a letter dated December 16, 1999, stating that it will provide financial assurance for these costs, through either a trust fund or a surety bond, at least 60 days before the initial receipt of waste at the site.[56]

Protestant Fawcett argued that BFD failed to offer sufficient proof of closure and post-closure care costs or sufficient evidence of financial responsibility. In particular, Fawcett complained that BFD's closure-cost estimates are based on 1995 dollars, while 30 TAC §§ 330.281(a) and 330.283(a) require estimates in "current dollars." Fawcett also argued that BFD's letter concerning financial assurance failed to satisfy the requirements of 30 TAC § 330.285(a), because BFD did not offer the letter in evidence for the truth of the matter asserted.[57]

CSPPC also criticized BFD's closure-cost estimate because the closure plan failed to identify the most costly time of closure and failed to include sufficient detail about action that would be necessitated in the event of premature closure of the facility. CSPPC argued that BFD witness Anthony Bosecker testified that the highest cost to close the landfill will occur when Sector 6 is open, but BFD's application does not contain a closure plan for Sector 6. Instead, the only closure plan presented by BFD is for Sector 10, at the end of the anticipated operating life of the landfill.

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[55] Exh.121, pp. 26-27; Exhs. 134, 135, 179, 180, and 181.

[56] Exh. 111. BFD did not offer this exhibit for the truth of the matters stated in the exhibit, but simply to establish that it informed TNRCC that financial assurance would be provided 60 days before receipt of waste at the site, as required by TNRCC rules.

[57] Exh. 111.

Decrying a general lack of detail in the closure plan, CSPPC especially complained that BFD failed to include any closed-landfill contour maps (other than for the normal end of the landfill's life) and failed to include any discussion about melding completed sectors of the landfill with undeveloped portions if premature closure occurs.

BFD made a terse response to Protestants, simply stating that it met TNRCC's requirements to estimate worst-case closure costs and post-closure care costs and that evidence of a financial assurance mechanism is not required until 60 days prior to the receipt of waste.

The ALJs find that BFD's closure and post-closure cost estimates meet the Commission's minimum requirements. BFD's application and testimony state that no more than 25 acres will require final cover at any time during the life of the landfill. Although some of the designated sectors are larger than 25 acres, Mr. Bosecker explained that BFD will not excavate such a sector entirely at one time, nor will it make such a sector a single cell. Rather, the numbered sectors simply indicate the general sequence of filling the landfill.[58] No evidence was offered to contradict BFD's explanation, nor was any evidence offered to challenge the accuracy of BFD's cost calculations. Further, the Commission's rules do not require a detailed final closure plan for every sector or for every possible open cell, as suggested by CSPPC. Therefore, the lack of such closure plans do not invalidate BFD's closure cost estimate.

The ALJs agree with Fawcett that BFD's cost estimates need to be updated, but this is not a factor that would weigh in favor of denying the application. BFD's cost estimates were stated in current dollars when the calculations were made, but the passage of time has dated them. In addition, 30 TAC § 330.52 does not require BFD to provide the actual financial assurance instruments until 60 days prior to receiving waste, so BFD was not required to offer evidence of these instruments in its application or at hearing. BFD's letter to the Commission stating that it will provide financial assurance through either a trust fund or a surety meets the Commission's requirements at this time.

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[58] Tr. Vol. 3, p. 781.

In summary, the ALJ's find that BFD has met the minimum requirements to calculate third-party closure costs and post-closure care costs. If the Commission grants a permit to BFD, the ALJs recommend that the Commission require BFD to update its cost estimates to current dollars and to provide its financial assurance instruments based on the updated cost estimates at least 60 days before receiving waste.

8. Does the application satisfy regulatory requirements relating to wetlands?

The ALJs recommend a conclusion that the application satisfies such requirements.

A Commission rule, 30 TAC § 330.302, prohibits the location of a landfill within wetlands (with exceptions not relevant to this proceeding). The PIC has questioned whether BFD would violate this rule through its plan to include an existing man-made stock pond within the area excavated for its proposed facility.

In a letter of December 21, 1995, the U.S. Army Corps of Engineers (which regulates dredge and fill work affecting all waters of the United States, including wetlands) notified BFD that the proposed project would not involve activities subject to the Corps' regulation. Additionally, Barbara Nickerson (an environmental scientist with Freese and Nichols) testified that, because the pond in question is small and man-made, it is excluded by the applicable TNRCC definition of "wetland," at 30 TAC § 307.3(49). That definition includes the following statements:

> The term 'wetland' does not include . . . a man-made wetland of less than one acre. . . . If this definition of wetland conflicts with the federal definition in any manner, the federal definition prevails.[59]

While Ms. Nickerson conceded on cross-examination that she was unsure as to the details of how Freese and Nichols personnel determined the size and origin of the pond, the ALJs believe that her conclusions, corroborated by the Corps of Engineers' evaluation of the project, are sufficient to

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[59] The 30 TAC ch. 330 definition of "wetland" cross-references the 30 TAC ch. 307 definition of the term.

establish that regulated wetlands will not be affected by the application. Even if Ms. Nickerson had been shown to be incorrect in applying the exception noted in the TNRCC's definition of wetland, a federal definition of wetland, implicit in the Corps' conclusion that wetlands will not be affected by the project, would prevail.

9. Does the application satisfy regulatory requirements relating to existing conditions?

The ALJs recommend a conclusion that the application satisfies such requirements.

Protestants and PIC asserted that BFD has failed to comply with TNRCC rules requiring that the application include a summary of the site's existing condition. BFD's summary stated only that its land is privately owned and currently utilized for livestock grazing, omitting any mention of sandstone-quarrying operations that have been conducted on the site over the past several years.

This subject is addressed in broad terms by 30 TAC § 330.53(a)(1), which states (under the heading "General"), "Part II of the application shall describe the existing conditions and character of the site and surrounding area." Identical language also appears in 30 TAC § 330.51(a)(2). This general requirement is elaborated upon slightly by 30 TAC § 330.53(b)(4), which states (under the heading "Requirements of Part II"), "Existing conditions summary. The applicant may discuss any land use, environmental or special issues he desires in an existing conditions summary."

Taken together, these rules provisions appear to allow an applicant considerable latitude in determining what level of detail to include in a description of existing conditions. Other provisions in § 330.53 of the rules indicate that the public's primary concern, in this context, is not the exhaustive description of the proposed site–which, after all, the applicant is seeking to transform–but rather a reasonably comprehensive survey of the surrounding lands whose use and character may be affected, against the will of their owners, by a new landfill. Where existing aspects of a site provide important amenities or support for activities on surrounding land, specific inclusion of those aspects in the existing conditions summary should be expected. Quarrying operations would not appear to fall into this category, however.

In the ALJs' view, nothing in record indicates that the quarrying on the BFD site is a matter of such significance that it needs to be flagged in a portion of the application that largely amounts to an introductory overview. To the extent that quarrying has affected the contours or methods of proposed construction at the site, those changes have been depicted in amendments (which ALJ Zukauckas ruled to be minor amendments) to the pertinent technical portions of the application. If BFD's summary of existing conditions reflects a failure to satisfy fully some aspect of the cited rules, it is an inconsequential failure.

10. Do various alleged defects in form, certification, and listing of adjacent landowners invalidate the application?

The ALJs recommend a conclusion that these alleged defects either do not represent regulatory violations or are not sufficiently significant to have bearing upon whether the application should be approved or denied.

Fawcett complained that BFD's application contains several defects, including an improper signature, lack of certification of amendments, and a signature without proof of corporate authority or authorized representative capacity. Fawcett also complained that several technical drawings lack an engineer seal date or contain other engineer seal defects, while several revised drawings fail to explain what revision had been made.[60] According to Fawcett, some of these defects violate the Texas Engineering Practice Act and the rules of the Texas Board of Professional Engineers.

Protestant Fawcett asserted, as well, that BFD failed to provide an accurate list of persons owning land adjacent to the facility or within a reasonable distance of proposed disposal areas, as required by 30 TAC § 305.45(6)(D). In particular, Fawcett complained that BFD Exhibits 163 and 171 fail

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[60] Fawcett argued that the following exhibits contain errors: Exh. 177, Att. 6H.2 does not have a seal date; Exhs. 134, 178, 179, and 180 are not sealed such that all engineering can be clearly attributed to the responsible engineer or engineers; Exhs. 128, Att. 1; 131, Att. 7A; 133, Att. 6A, 6A.2; 135, Att. 12A; 136, Att. 15A; 163, Fig. 1-5; 171, Fig. 1-5; 177, Atts. 6A, 6A.2, 6H.2, 6H.5, 6H.6, 6H.7 and 6H.8; 179 Att.12; and 182, Att. 15A were revised but no notation of the revision or its date was made and they are not clearly attributable to each engineer who worked on the document; and Exhs. 178, Att. 8A; 181, Att. 14E; 134, Att. 8A; and 128, Capacity Analysis fail to show the new access road.

to include Mr. Fawcett as an adjacent landowner, even though he purchased property adjacent to the landfill before the BFD application was declared technically complete.

With respect to Fawcett's complaints about signatures, BFD explained that Jodie Collins, its original general manager, resigned after BFD submitted its application to TNRCC and after staff declared the application technically complete. BFD then hired James Lattimore as general manager and substituted Mr. Lattimore's signature for Mr. Collins' when it seemed logical to do so. BFD stated that the ALJs have already accepted these changes and ruled that the corporate change in authority was a minor amendment. BFD also argued that Fawcett cited no legal authority to support its arguments and suggested that Fawcett's contentions would make it virtually impossible for a company to have personnel changes while an application proceeded through the administrative process. In addition, BFD contended that Fawcett's alleged violations of the Engineering Practices Act and Board rules are irrelevant in this contested case hearing.

The ALJs find that Mr. Lattimore had authority to sign BFD's application after Mr. Collins resigned. Fawcett's argument that an application must be refiled when the original authorized representative dies, resigns, or otherwise becomes unavailable, is impractical and unnecessary and elevates form over substance. The evidence established that BFD's representative possessed the necessary corporate authority, and BFD's application and supporting affidavits have been properly signed.

Fawcett's complaints about defective engineering seals are more troubling, because the Commission's rules at 30 TAC § 330.51(d) expressly provide that engineering plans and drawings shall be sealed as required by the Engineering Practices Act.[61] Nevertheless, the ALJs conclude

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[61] 30 TAC § 330.51(d) provides:
Preparation. Preparation of the application shall conform with Texas Civil Statutes, Article 3271a, Engineering Practices Act.

> (1) The responsible engineer shall affix her seal, sign her name, place the date of execution and state intended purpose on each sheet of engineering plans, drawings, and on the titled or contents page of the application as required by the Texas Engineering Practice Act, § 15c, and in accordance with 22 TAC §131,138 (concerning Engineer's Seal).

that these alleged errors do not require denial of the application. Initially, the ALJs note that very little evidence was offered on this issue and it is not clear whether the alleged errors actually violate the Act or Board rules. In addition, even if the alleged errors do violate the Act or rules, they are simply technical errors of form concerning the engineering seal rather than substantive errors in the drawings or calculations themselves.[62]

The ALJs find that these alleged engineer-seal violations are not substantive issues that affect the merits of BFD's application. However, because the Commission's rules require that engineering documents and drawings comply with the Act and Board rules, the ALJs recommend that the Commission require BFD to correct any defective engineer seals that the ED determines violate the Act or Board rules, in the event that the Commission grants BFD a permit.

With respect to the landowner list, BFD noted that it included Earl Waddell, who owned the Fawcett property at the time BFD filed its application. BFD also pointed out that Mr. Fawcett fully participated in the hearing, and that he knew about the proposed landfill when he purchased Mr. Waddell's property. BFD also stated that all nearby residents and landowners were either parties to the proceeding or chose not to be parties. Therefore, if any error occurred in the landowners list or land use map, the error was harmless.

The ALJs find that BFD's landowner list is adequate. Mr. Fawcett testified that he knew about the proposed landfill when he bought the property, and he has fully participated in this administrative proceeding. In addition, Fawcett has not shown that any other landowner was unaware of BFD's landfill application or was otherwise prejudiced by BFD's landowner list.

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(2) Applications that have not been sealed shall be considered incomplete for the intended purpose and shall be returned to the applicant.

[62] See Footnote 60.

11. Should the duration of any permit issued to BFD be limited to a predetermined term of years rather than to the actual operating life of the facility?

The ALJs recommend that any permit, if issued, be for the operating life of the facility.

Protestant CSPPC urged denial of the permit but asked, alternatively, for a recommendation that the Commission limit the duration of any permit issued to five years, subject to renewal. CSPPC stated that the Commission has authority to limit the term of the permit under § 361.087 of the Code, and it cited the permit renewal for the Texas Ecologist, Inc. (TECO)[63] hazardous waste landfill as precedent. In the TECO case, the Commission limited the permit to five years, even though the normal hazardous waste permit has a 10-year duration.

CSPPC noted that the TNRCC rules do not give explicit criteria for establishing the duration of a permit. However, it noted that other types of permits (including hazardous waste, wastewater, injection wells, and air-emission permits) have limited durations and renewal requirements. CSPPC suggested that new technologies, new technical data, and changing conditions favor limiting permit durations. In this case, new technologies might provide for better detection of leaks, better technical data might become available to characterize groundwater, changes may occur in available landfill space, or alternatives to landfill disposal might develop. In CSPPC's view, a five-year renewal process will allow periodic review of the landfill site and its operation and will provide an incentive for the operator to comply with TNRCC rules.

In response, BFD accused CSPPC of seeking regulatory changes through a contested-case hearing rather than the rule-making process. It also argued that the duration of the permit is not properly before the ALJs because CSPPC did not raise the issue at hearing.

The ALJs find that CSPPC has not presented sufficient grounds to limit the duration of BFD's requested permit. Although Texas law and Commission rules authorize the Commission to limit

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[63] Application of Texas Ecologist, Inc., Permit No. HW-50052-001 (1989).

the duration of a municipal landfill permit, the rules also state that a permit will normally be issued for the life of the site. Code § 361.087 provides:

> A permit issued under this chapter must include: . . . (3) the terms and conditions on which the permit is issued, including the duration of the permit.

The Commission's rules provide at 30 TAC § 330.63(a) and (b):

> (a) A permit is normally issued for the life of the site.
>
> (b) When deemed appropriate by the executive director a permit may be issued for a specific period of time. When an owner or operator has made timely and sufficient application for the renewal of a permit, the existing permit does not expire until the application has been finally determined by the commission.

At most, CSPPC suggested that possible advancements in technology might improve monitoring capabilities that should be required in future permit renewals. But this argument could be made about any solid-waste landfill application and would require limited permit durations for all landfills. Yet the Commission's rule at § 330.63 clearly states that such a permit is normally issued for the life of the site. CSPPC's proposal to limit the permit based on possible future advancements in technology would effectively supplant this formal determination of Commission's policy. In addition, imposing a permit expiration date would likely subject the applicant, the ED, and other state resources to a lengthy, recurring, and often merely repetitive process of considering renewal applications.

Likewise, the ALJs find unpersuasive CSPPC's argument that a limited duration permit would encourage BFD to comply with TNRCC regulations. That argument can also be made about any permit application. Further, enforcement action can be brought against BFD if it fails to comply with TNRCC regulation, regardless of the duration of the permit. The risk of fines or license revocation through an enforcement action provides sufficient motivation for a landfill operator to

comply with the Commission's rules and regulations. In short, the ALJs find that CSPCC has not offered sufficient evidence or argument to justify limiting the duration of the requested permit--in the event it is issued--and they recommend that the Commission deny CSPPC's request.

12. What is the proper allocation of transcript costs?

The ALJs recommend a finding that the applicant should bear the full costs of transcription in this matter, as well as the costs for those copies of the transcript furnished as a normal matter of course to the ALJs and to agency parties.

The Commissions rules, at 30 TAC § 80.23(d), enumerate factors that the Commission "shall consider . . . in assessing reporting and transcription costs." Factors pertinent to this case include the following:

(A) "The party who requested the transcript." The applicant made the initial request in this case.

(B) "The financial ability of the party to pay costs." The applicant's demonstration of financial resources for closure costs, access road construction, and other aspects of the project indicates that it exceeds other parties in its ability to defray what amounts, after all, to a cost of doing business.

(C) "The extent to which the party participated in the hearing." The extent of participation by applicant and protestants was roughly comparable, given the dynamics of a proceeding in which the pre-filing of direct testimony was required and the great majority of such testimony was submitted by the applicant.

(D) "The relative benefits to the various parties of having a transcript." As the party bearing the burden of proof, the applicant could anticipate the greatest potential benefit from an ability to cite and reassemble the information within the record.

(E) "The budgetary constraints of a state or federal administrative agency participating in the proceeding." The broad responsibilities and limited budgets of the agency parties in this case make it unreasonable to assess costs against them. The rules also preclude the Commission from assessing costs against statutory parties (the ED and PIC), which cannot appeal a Commission decision.

(F) "Any other factor which is relevant to just and reasonable assessment of costs." The applicant is the only party that could anticipate a direct, new benefit from the outcome of the proceeding (*i.e.*, authorization to operate a new facility); other parties could at best hope for preservation of the status quo that antedated the initiation of the application. Moreover, in proceedings that may result in impact upon environmental conditions and upon publicly owned resources (such as surface water), public participation should not be discouraged by assessment of costs, absent strong countervailing factors.

In accordance with usual Commission practice, BFD should *not* be required to pay for additional copies of the transcript ordered by participants other than the agency parties and the ALJs.

V. SUMMARY

In the ALJs' opinion, the hearing process has not revealed, in the proposed site itself, any physical deficiencies that could be termed clearly intrinsic or fundamental. However, the applicant has failed in a number of instances to demonstrate its satisfaction of specific requirements for the issuance of a landfill permit. Some of these failures relate to prerequisites that the ALJs regard as basic–such as failures to delineate a wholly adequate groundwater monitoring system or to demonstrate that significant alteration of natural drainage patterns will not occur. Others might reasonably be described as relating primarily to operational details. Most or all might be subject to prompt cure if the application was referred for further staff review. Given the application's present condition and content, though, the ALJs cannot recommend its approval.

VI. ADDITIONAL FACTS

In addition to the facts addressed in the preceding discussion of the major issues, the Findings of Fact contained in the proposed Order (attached to this Proposal for Decision) include other facts, as established during the proceeding, that are necessary to show compliance with regulatory requirements applicable to this administrative process. These additional facts are incorporated by reference into this Proposal for Decision.

VII. CONCLUSION

After a review of the record and for the reasons given above, the ALJs recommend that the Commission adopt the proposed Order attached to this Proposal for Decision and deny the pending application from Blue Flats Disposal, L.L.C.

Signed this 2nd day of October, 2000.

STATE OFFICE OF ADMINISTRATIVE HEARINGS

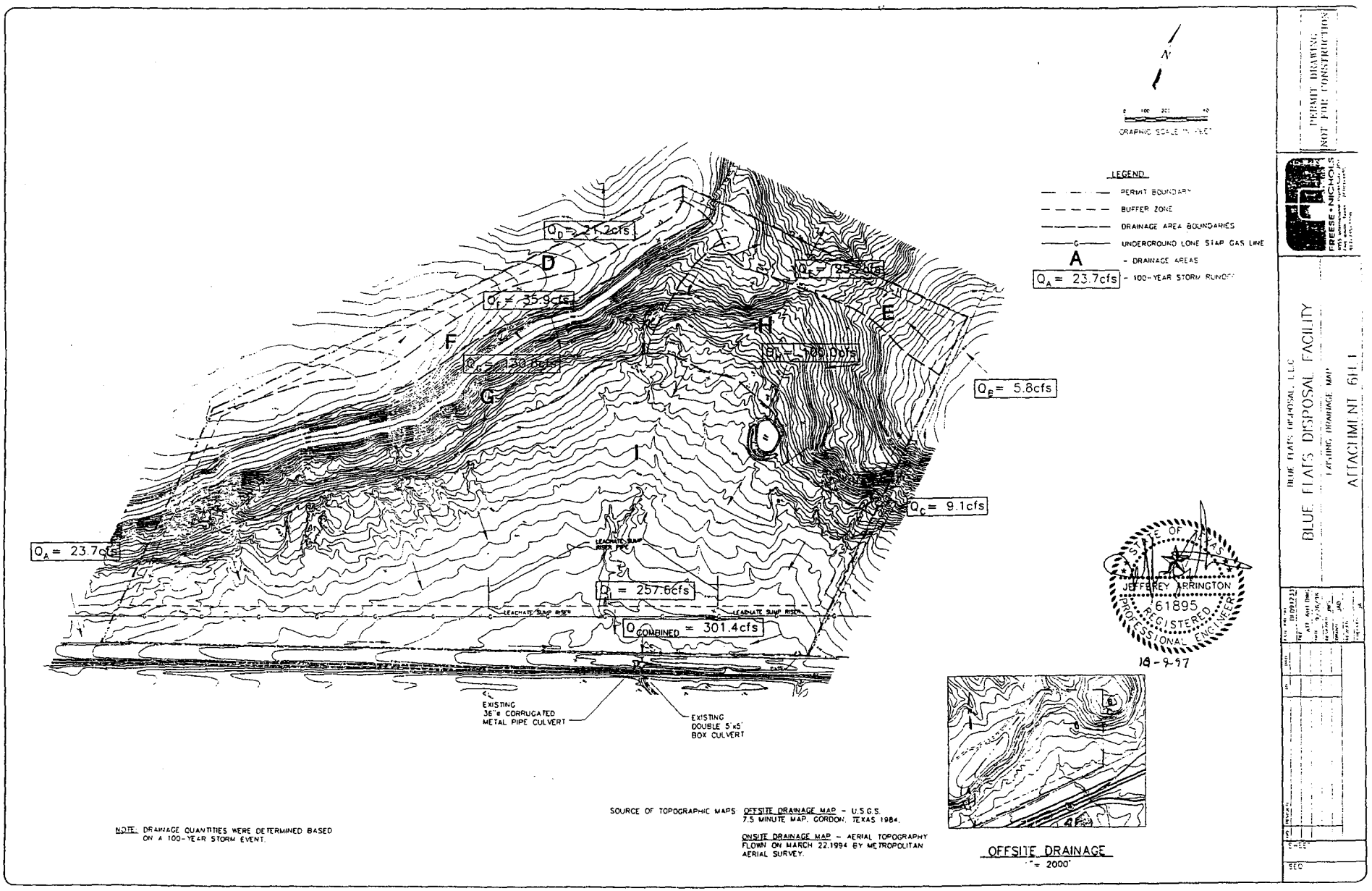
Thomas H. Walston

THOMAS H. WALSTON
ADMINISTRATIVE LAW JUDGE

Mike Rogan

MIKE ROGAN
ADMINISTRATIVE LAW JUDGE

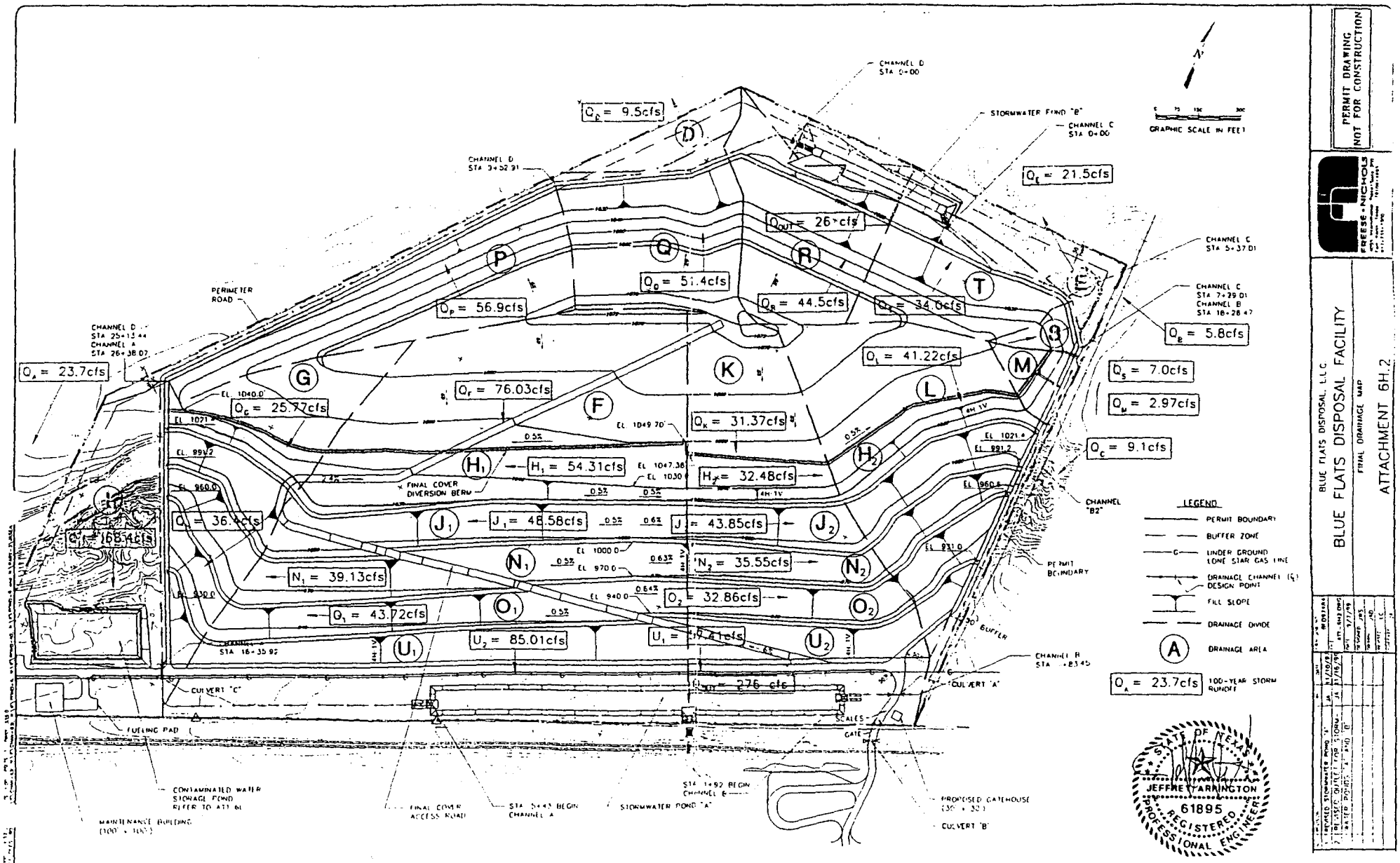
ATTACHMENT 1



NOTE: DRAINAGE QUANTITIES WERE DETERMINED BASED ON A 100-YEAR STORM EVENT.

SOURCE OF TOPOGRAPHIC MAPS: OFFSITE DRAINAGE MAP - U.S.G.S. 7.5 MINUTE MAP, GORDON, TEXAS 1984.
ONSITE DRAINAGE MAP - AERIAL TOPOGRAPHY FLOWN ON MARCH 22,1994 BY METROPOLITAN AERIAL SURVEY.

ATTACHMENT 2



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

AN ORDER denying the application by Blue Flats Disposal, L.L.C., for Permit No. MSW-2262 ; TNRCC Docket No. 98-0415-MSW; SOAH Docket No. 582-98-1390

On December 6, 2000, the Texas Natural Resource Conservation Commission ("Commission") considered the application of Blue Flats Disposal, L.L.C., ("Applicant") for a permit authorizing the construction and operation of a Type I municipal solid waste landfill, approximately six miles east of the City of Gordon in Palo Pinto County, Texas, pursuant to the Chapter 361 of the Texas Health & Safety Code.

Administrative Law Judge ("ALJ") Bill Zukauckas, with the State Office of Administrative Hearings ("SOAH"), conducted a preliminary hearing upon this action on September 2, 1998. ALJs Mike Rogan and Tom Walston conducted evidentiary hearings on June 7 through 9, 12 through 16, 19 and 20, 2000. The following were designated as parties to the proceeding: the Applicant, Blue Flats Disposal, L.L.C.; the Executive Director of the Commission; the Public Interest Counsel of the Commission; and 15 individuals or entities opposing the application, including Citizens to Save Palo Pinto County, Brian Birk, Patricia Blackmon, Gem and Susan Brierton, Judy Fawcett, Roger Fawcett, Ruby Finch, Robert and Jerrie Rexroat, Robert E. Richards, James Roberts, Mike and Susan

Ruff, and X-O Ranch Co., Inc.;. Fawcett, Ltd., subsequently was substituted for X-O Ranch Co., Inc., as a party. Brian Birk, Judy Fawcett, and Mike and Susan Ruff subsequently withdrew as parties.

After considering the ALJs' Proposal for Decision and the evidence and arguments presented, the Texas Natural Resource Conservation Commission makes the following Findings of Fact and Conclusions of Law:

FINDINGS OF FACT

1. Applicant is a limited liability company, for which the State of Texas issued a Certificate of Organization on April 29, 1996. Applicant remains fully authorized to do business in Texas.

2. In September of 1998, the Applicant filed an application with the Commission for a permit to construct and operate a Type I municipal solid waste landfill. Commission staff declared the application administratively complete on October 28, 1996, and technically complete on December 4, 1997.

3. Applicant provided proper notice of the application as follows:

   a. Notice of intent to obtain a permit was published in *The Mineral Wells Index* on March 8, 1998; and in *The Quad City Messenger* on January 23, 1998. Each of these publications is a newspaper of general circulation published and regularly circulated in Palo Pinto County, Texas.

   b. Copies of the application were provided to agencies, officials, and authorities with a jurisdictional interest in the case and the comments or recommendations of those entities were solicited.

4. Applicant provided proper notice of the initial public hearing on the application as follows:

   a. Notice of the preliminary hearing was published on July 31, 1998, in *The Mineral Wells Index*, a newspaper regularly published and generally circulated in Palo Pinto County, Texas.

   b. Notice of the preliminary hearing was mailed to each residence, business, and owner of real property located within one-half mile from the property line of the proposed landfill on July 31, 1998, by certified mail, return receipt requested. Notice was also sent to all persons who requested a public hearing in response to the notice of application.

5. A preliminary public hearing on the application was held in Gordon, Texas, on September 2, 1998.

6. The Evidentiary hearing in the proceeding was held in Austin, Texas, on June 7 through 9, 12 through 16, 19 and 20, 2000.

7. The proposed site of the facility is a 140-acre tract of land owned in fee simple by the Applicant and located adjacent to Interstate Highway 20 ("I-20"), approximately six miles east of the City of Gordon in Palo Pinto County, Texas. The site is currently utilized for livestock grazing and limited sandstone quarrying.

8. The land immediately surrounding the site is rural, predominantly rangeland, with some cropland. Three occupied residences exist within a one-mile radius of the site, the nearest approximately 0.3 mile from the site boundary.

9. The site lies outside the corporate limits or extra-territorial jurisdiction of any city. Gordon, the nearest incorporated city (population 465) has experienced no net population change from 1990 to 1998.

Groundwater protection:

10. The site is situated upon (and the facility would be excavated into) thick strata of shale interbedded with sandstone and limestone, a structure classified geologically as the Mingus Formation of Upper Pennsylvanian sediments. Higher elevations of the site are capped by the Dobbs Valley Sandstone, a subclassification (or lentil) of the Mingus Formation.

11. Hydraulic conductivity of the unweathered portions of the Mingus Formation on site is low, ranging from 1.5×10^{-7} to 1×10^{-9} cm/sec, which is generally equal to (or even lower than) the level of conductivity required for a landfill's recompacted soil liner material.

12. In the area surrounding the site, the Mingus Formation generally slopes downward to the northwest at an angle of about one-half degree (or 30 to 50 ft. per mile), an orientation described as the "regional dip."

13. No major or minor aquifers are present within Palo County or beneath the site. No recharge areas for aquifers are located within 7.5 miles of the site. Groundwater beneath the site occurs in isolated, discontinuous pockets of poor quality, which are incapable of yielding significant quantities of usable water.

14. If groundwater (including any leachate that might escape through the liner of the proposed landfill) is able to enter and move through the unweathered portion of the Mingus Formation, it will move parallel to bedding planes and downgradient, in the direction of the regional dip.

15. Applicant's proposed "point of compliance" system of monitoring wells, situated on the northern and western boundaries of the site (*i.e.*, downgradient along the regional dip from the proposed waste disposal cells), will detect groundwater migrating from the proposed facility through the unweathered portion of the Mingus Formation.

16. Where the Mingus Formation is exposed to the elements, at or near the surface, weathering alters its character. Portions of the formation's weathered zone at the site exhibit conductivity of 1.1×10^{-4} cm/sec–or approximately 1,000 to 10,000 times greater than that of the adjacent unweathered zone. Accordingly, water would move much more readily and more quickly through the weathered zone than through the unweathered zone.

17. Most of the site lies on the face of a ridge that slopes generally downward toward the south. The weathered zone here extends to a depth of approximately 40 to 80 feet beneath the surface and is oriented generally parallel to the local topography, so that it, too, slopes downward toward the south–*i.e.*, in a direction essentially opposite that of the regional dip.

18. Under the Applicant's plan for excavating the site, portions of the floors and sidewalls of disposal cells would be situated in the weathered zone.

19. Any leachate that escaped from portions of the disposal cells excavated into the weathered formation at the site would likely move downgradient through the weathered zone–*i.e.*, in the direction of the zone's southward slope. Water moving downward within the weathered zone, upon reaching the interface with the underlying and less hydraulically conductive unweathered zone, would tend to remain within the weathered zone and to move laterally and downgradient within that zone.

20. Applicant's proposed monitoring system, particularly its "point of compliance" monitoring wells, will not monitor the southern boundary of the site sufficiently to assure detection of groundwater migrating from the proposed facility through the potential pathway represented by the weathered portion of the Mingus Formation.

Surface Drainage:

21. Under existing conditions, 134.85 acres drain south of the proposed landfill site, out of a total of 150.99 acres affected by the project, and the existing peak flow rate to the south during a 100-year storm is 301.42 cfs.

22. After leaving the site, the southbound drainage crosses the unpaved Old Santo Road, Union Pacific Railroad tracks, and I-20, and eventually flows into Sunday Creek about one mile south of I-20.

23. Currently, one 36-inch culvert is in place under Old Santo Road, but it cannot handle the existing flow during significant rainfall events. Two five-foot box culverts are in place under the railroad tracks. These box culverts can handle existing stormwater flow.

24. The property and roads located immediately south of I-20 occasionally flood under current conditions.

25. If the proposed landfill is constructed in accordance with the application, a detention pond (Pond A) would be constructed south of site. Pond A would release stormwater runoff through a stepped-triangular weir outlet that would moderate flow rates leaving the site to the south.

26. If the proposed landfill is constructed in accordance with the application, 114.86 acres would drain south into Pond A upon completion of the landfill. The peak flow rate into Pond A during a 100-year 12-hour storm would be 502.34 cfs; the peak flow rate out of Pond A during a 100-year 12-hour storm would be 276 cfs.

27. If the proposed landfill is constructed in accordance with the application, BFD would replace the single culvert under Old Santo Road with five 36-inch culverts. The record contains

insufficient evidence to determine what impact the addition of four 36-inch culverts under Old Santo Road would have on natural drainage patterns south of the proposed landfill site.

28. Under existing conditions, 9.55 acres drain northeast of the proposed landfill site, and the existing peak flow rate to the northeast during a 100-year storm is 31.1 cfs.

29. After leaving the site, the northeast drainage crosses an additional piece of property owned by BFD and property owned by Roger Fawcett. It then enters Saline Creek on Mr. Fawcett's property, about a quarter mile from the proposed landfill site.

30. The northeast drainage causes minor erosion to Mr. Fawcett's property under existing conditions.

31. If the proposed landfill is constructed in accordance with the application, a detention pond (Pond B) would be constructed northeast of site. Pond B would release stormwater runoff through a single 18-inch reinforced concrete pipe that would moderate flow rates leaving the site to the northeast.

32. If the proposed landfill is constructed in accordance with the application, 34.21 acres would drain into Pond B upon completion of the landfill. The peak flow rate into Pond B during a 100-year/2-hour storm would be 195.31 cfs; the peak flow rate out of Pond B during a 100-year/ 2-hour storm would be 24 cfs.

33. If the proposed landfill is constructed in accordance with the application, an additional 5.26 acres would drain to the northeast along the same path as the northeast drainage from Pond B. This additional acreage would have a peak flow rate of at least 22 cfs during a 100-year/ 2-hour storm. The precise post-development peak flow rate cannot be determined because

BFD omitted offsite Subarea B, which is a portion of the additional 5.26 acres, from its calculation of such peak flow rate.

34. If the proposed landfill is constructed in accordance with the application, Pond B and the additional 5.26 acres would have a combined peak flow rate to the northeast of at least 46 cfs during a 100-year/2-hour storm. The precise combined post-development peak flow rate cannot be determined because BFD omitted offsite Subarea B, which is a portion of the combined northeast drainage area, from its calculations.

35. The record contains insufficient evidence to determine what impact this increased peak flow rate would have on natural drainage patterns northeast of the site, if the proposed landfill is constructed in accordance with the application.

36. Under existing conditions, 6.59 acres drain northwest of the landfill site, and the existing peak flow rate to the northwest during a 100-year/12-hour storm is 21.20 cfs.

37. After leaving the landfill site, the northwest drainage crosses an additional piece of property owned by BFD and enters Saline Creek approximately one quarter mile from the site.

38. If the proposed landfill is constructed in accordance with the application, 1.40 acres would drain to the northwest upon completion of the proposed landfill and the peak flow rate to the northwest during a 100-year/12-hour storm would be 9.45 cfs.

39. The northwest drainage and the northeast drainage enter Saline Creek about one quarter mile from each other. The record contains insufficient evidence to determine the net effect on natural drainage patterns when the increased drainage to the northeast and the decreased drainage to the northwest combine in Saline Creek, if the proposed landfill is constructed in accordance with the application.

40. BFD's application does not include any calculations or analyses of existing or post-development runoff volumes to the northwest or northeast.

41. BFD's application does not include any calculations or analyses of existing or post-development runoff velocities to the northwest, northeast, or south.

42. BFD's application does not include any calculations, discussion, or analyses using 25-year rainfall intensities.

43. BFD's application does not include any calculations, discussion, or analyses regarding the carrying or assimilative capacity of Saline Creek.

44. BFD's application does not include any calculations, discussion, or analyses regarding the impact on natural drainage patterns south of the proposed landfill site that may result from the replacement of the single 36-inch culvert under Old Santo Road with five 36-inch culverts.

45. BFD's application and the evidence admitted in the record provide insufficient information to make a reasoned determination of whether development of the proposed landfill will significantly alter natural drainage patterns.

Endangered Species:

46. At the proposed site, suitable habitat exists for the Texas horned lizard (*Phrynosoma cornutum*), a species classified by the State of Texas as "threatened."

47. Applicant's only substantive on-site biological investigation occurred on November 21, 1991–that is, during the time of year when Texas horned lizards hibernate in underground burrows, and failure of the Applicant's investigators to observe any specimens therefore does not support a conclusion that Texas horned lizards do not inhabit the site. Based on the

content of its scientific investigation of the subject, Applicant has no knowledge of the character of any population of this species on the site.

48. Texas horned lizards have been observed regularly on rangeland located within one to two miles of the site.

49. Applicant's plan to prevent harm to any Texas horned lizard specimens found on the site is to relocate the specimen outside the landfill operations area.

50. Because Applicant's plan is founded on a lack of information about any population of the Texas horned lizard that may exist on the site and because it wholly lacks specificity for executing its objective of removing individual lizards encountered in the operations area, the plan articulates no meaningful measures for assuring protection of this species.

Site Operating Plans:

51. Applicant's fire protection plan fails to provide sufficiently detailed procedures or instructions for facility personnel to handle fires during the day-to-day operations of the facility. Among other things, the proposed fire protection plan fails to describe precautions to be observed for avoiding fires, a concrete sequence of steps to be taken in fighting specific types of fires, or procedures for checking or maintaining fire equipment.

52. Applicant's endangered species protection plan fails to provide sufficiently detailed procedures or instructions for facility personnel to handle endangered or threatened species during the day-to-day operations of the facility. Among other things, the proposed endangered species protection plan fails to describe how personnel will be instructed to spot and recognize the Texas horned lizard; what routine will be used to scan working areas for the species; how specimens will be handled while being transported to new locations; or how

personnel will determine a suitable location for the release of such specimens. The plan also fails to address requirements that the Applicant will need to fulfill in order to obtain the Texas Parks and Wildlife Department permit required handling endangered or threatened species.

53. Applicant's disease vector control plan fails to provide sufficiently detailed procedures or instructions for facility personnel to handle disease vectors during the day-to-day operations of the facility. Among other things, the proposed disease vector control plan fails to list significant vectors in the vicinity of the site, fails to identify circumstances that would necessitate using means of control other than the routine compacting and covering of waste, and lacks procedures for safely using pesticides or other alternative means of control.

Regional Solid Waste Plan:

54. To demonstrate compliance with the applicable regional solid waste plan, BFD provided only a letter of approval from the North Central Texas Council of Governments (NCTCOG), which encompasses Palo Pinto County, dated May 15, 1995. The NCTCOG letter referred only to a prior BFD application, which was withdrawn in January of 1996; it did not refer to BFD's application under consideration in this proceeding.

Transcript Costs:

55. With respect to hearing transcription costs, the Applicant possesses greater resources and ability to pay such costs than any other parties; the Applicant initially requested transcription of the proceedings; and the Applicant is the only party in this action who could anticipate any direct increased benefit from the proceedings–*i.e.*, new authorization for landfill construction and operation--as opposed to preservation of the *status quo ante.*

CONCLUSIONS OF LAW

1. The public hearings on this permit application were held under the authority of, and in accordance with, the Texas Solid Waste Disposal Act, Chapter 361 of the TEXAS HEALTH & SAFETY CODE; TEXAS GOVERNMENT CODE § 2003.047; the Commission's rules (Title 30 of the TEXAS ADMINISTRATIVE CODE), and SOAH's procedural rules (Title 1, Chapter 155 of the TEXAS ADMINISTRATIVE CODE).

2. Proper notice of these matters was given as required by the Act and by Commission rules.

3. In failing to delineate a "point of compliance" system of monitoring wells that assures the detection of groundwater migrating toward the southern boundary of the proposed facility through the weathered portion of the Mingus Formation, as noted in Findings of Facts Nos. 10 through 20, the Applicant has failed to comply with 30 TAC § 330.231, which requires installation of a monitoring well system capable of assuring the detection of groundwater contamination escaping the site.

4. In failing to analyze substantively the impact of changes that the proposed project would produce in the flow rate and volume of surface water draining off the site, as noted in Findings of Fact Nos. 21 through 45, the Applicant has failed to comply with 30 TAC § 330.56(f)(4)(A), which requires demonstration that natural drainage patterns will not be significantly altered by proposed landfill development.

5. In failing to conduct a reasonable investigation of the status of the Texas horned lizard on the site and in failing to produce a plan articulating meaningful measures for protecting the species on the site, as noted in Findings of Fact Nos. 46 through 50, the Applicant has failed to comply with 30 TAC §§ 330.53(b)(13)(B) and 330.129, which require that proposed

landfill operations not cause or contribute to the taking of a protected species, and has failed to comply with 30 TAC § 330.51(b)(8), which requires an applicant to submit adequate demonstrations of compliance under state and federal endangered species laws.

6. In failing to submit a site operating plan with sufficient substantive provisions relating to fire protection, endangered species protection, and disease vector control, as noted in Findings of Fact Nos. 51 through 53, the Applicant has failed to comply with 30 TAC § 330.114, which requires sufficiently detailed plans to give operating personnel specific guidance on conducting day-to-day operations.

7. In failing to submit a letter of approval or other documentation relevant to the pending application, as noted in Finding of Fact No. 54, the Applicant has failed to comply with 30 TAC § 330.51(b)(10), which requires an applicant to demonstrate compliance with the regional solid waste plan.

8. In accordance with 30 TAC § 80.23, transcription costs in this proceeding are reasonably borne by the Applicant.

9. Based on the foregoing Findings of Fact and Conclusions of Law, Applicant has failed to demonstrate that construction and operation of the proposed landfill will not result in adverse effects upon the health, welfare, environment, or physical property of the public and has failed to demonstrate that the pending application complies with all statutory and regulatory requirements.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION THAT:

1. The application of Blue Flats Disposal, L.L.C., for a permit to authorize the construction and operation of a Type I municipal solid waste landfill be denied, and all exceptions inconsistent therewith be overruled.
2. Transcription costs in this matter be assessed against the Applicant.
3. The chief clerk of the Texas Natural Resource Conservation Commission shall forward a copy of this Order to all parties.
4. If any provision, sentence, clause or phrase of this Order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of the Order.
5. All other motions, requests for entry of specific Findings of Fact or Conclusions of Law, and other requests for general or specific relief, if not expressly granted herein, are hereby denied for want of merit.

Issue date:

TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION

_____

Robert J. Huston, Chairman

ATTACHMENT B

Upload Date: 20191001100656 Account Number: 100 Upload Description: PFDOrder582-18-1960

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AN ORDER Denying the application of Altair Disposal Services, LLC, for a new noncommercial hazardous waste landfill in Colorado County, Texas; TCEQ Docket No. 2018-0013-IHW; SOAH Docket No. 582-18-1960

On September 11, 2019, the Texas Commission on Environmental Quality (Commission or TCEQ) considered an application by Altair Disposal Services, LLC (Altair) for a new hazardous waste permit to authorize construction and operation of a noncommercial, hazardous waste landfill disposal facility in Colorado County, Texas (Altair Facility). A proposal for decision (PFD) was issued by Administrative Law Judges (ALJs) Meitra Farhadi and Pratibha J. Shenoy with the State Office of Administrative Hearings (SOAH), who conducted an evidentiary hearing concerning the application on December 6-18, 2018, in Austin, Texas.

After considering the ALJs' PFD, the Commission adopts the following findings of fact and conclusions of law:

I. FINDINGS OF FACT

Background and Procedural History

1. On October 22, 2013, Altair filed an application with the TCEQ for permit no. 50407 to construct and operate the Altair Facility (Application).

2. The Application requests authorization to construct and operate a noncommercial, captive hazardous waste landfill.

3. The Altair Facility would receive, and dispose by landfilling, hazardous and nonhazardous incinerator and thermal desorption ash/residue generated off-site from commercial hazardous waste treatment storage and disposal (TSD) facilities located in Texas, and owned and operated by Clean Harbors, Inc. (Clean Harbors).

4. Clean Harbors is a publicly traded company that was founded in 1980 and operates throughout the United States, Canada, Mexico, and Puerto Rico.

5. Through its various affiliates and subsidiaries, Clean Harbors provides hazardous waste management services, emergency spill response services, industrial cleaning and maintenance services, and recycling and disposal services.

6. Altair is a wholly owned subsidiary of Clean Harbors Disposal Services, Inc. (Clean Harbors Disposal), which is a wholly owned subsidiary of Clean Harbors.

7. The Altair Facility would be located approximately seven miles south of the intersection of Interstate Highway (IH) 10 and Texas Highway (Hwy) 71, and two miles north of Altair, Texas (Site).

8. Notice of a pre-application public meeting was provided with a visible and accessible sign, published in *The Colorado Citizen* and broadcast on September 18, 2013, and published in *The Banner Press Newspaper* on September 19, 2013. Notice was also provided to the TCEQ.

9. On October 21, 2013, Altair held a pre-application meeting in Columbus, Texas.

10. The Site encompasses approximately 472 acres. The southern part of the Altair property has been operated as a municipal solid waste landfill (MSW Facility) since approximately 1973 on a permit boundary of approximately 197 acres.

11. The northern part of the Site encompasses approximately 276 acres and would be the permit boundary for the Altair Facility. Within those 276 acres, approximately 66 acres would encompass the footprint of the landfill (Landfill).

12. The Landfill would include 12 cells, each divided into subcells, and would be constructed above the grade of the ground, surrounded by a dike system. A final cover system would be placed over individual cells as they reach capacity.

13. Altair paid the required application fee.

14. Altair made a copy of the Application available for inspection and copying at the Nesbitt Memorial Library, 529 Washington Street, Columbus, Texas, 78934.

15. The Executive Director (ED) of the TCEQ declared the Application to be administratively complete on November 20, 2013.

16. The Final Draft Hazardous Waste Permit No. 50407 (Permit) authorizes activities and components associated with the storage, processing, and disposal of hazardous waste and industrial solid waste at a noncommercial facility.

17. On November 25, 2013, the Chief Clerk of the TCEQ mailed the Notice of Receipt of Application and Intent to Obtain an Industrial Hazardous Waste Permit (NORI) to adjacent landowners, public officials, and other persons entitled to receive notice under TCEQ rules or who requested notice. On December 6, 2013, the Chief Clerk also mailed the NORI to individuals that participated in the October 21, 2013 pre-application meeting.

18. On December 19, 2013, the NORI was published in *The Banner Press Newspaper.*

19. The ED issued one administrative notice of deficiency (NOD) on November 5, 2013, during the administrative review and two technical NODs on March 18, 2014, and March 4, 2015, to Altair during its technical review; in response, Altair provided updated Application materials on November 6, 2013, July 8, 2014, June 26, 2015, and November 12, 2015.

20. The ED found that the updated Application materials submitted by Altair addressed all issues raised in the NODs.

21. A Notice of Public Meeting was mailed by first-class mail on October 20, 2016 by the Chief Clerk to all persons on the mailing list.

22. The Notice of Public Meeting was published in *The Banner Press Newspaper* on November 10, 2016, November 17, 2016, and November 24, 2016, and in *The Colorado Citizen* on November 9, 2016, November 16, 2016, and November 23, 2016.

23. The TCEQ held a public meeting on the Application on December 1, 2016, in Columbus, Texas.

24. The public comment period for the Application closed on December 1, 2016.

25. On June 2, 2016, the ED issued a Technical Summary and Executive Director's Preliminary Decision.

26. The ED issued a Notice of Application and Preliminary Decision (NAPD) and a Final Draft Permit on June 27, 2016.

27. On June 29, 2016, the Chief Clerk mailed the NAPD to adjacent landowners, public officials, and other persons entitled to receive notice under TCEQ rules or who requested notice.

28. The NAPD was published in the *Halletsville Tribune-Herald* and *The Colorado County Citizen* on July 20, 2016, and in *The Banner Press*, *The Eagle Lake Headlight*, *The Sealy News*, and *The East Bernard Express* on July 21, 2016. The NAPD was also published in Spanish in *The Colorado County Citizen* on July 20, 2016, and in *The Banner Press* and *The Eagle Lake Headlight* on July 21, 2016. The NAPD was also broadcast on July 20, 2016.

29. On November 14, 2017, the ED filed a Response to Public Comments and stated that no changes were made in response to public comment.

30. On November 20, 2017, the ED declared the Application to be technically complete.

31. By letter dated January 9, 2018, Altair requested that the Application be directly referred to SOAH for a contested case hearing.

32. On February 5, 2018, the Chief Clerk mailed a Notice of Hearing and on February 6, 2018, mailed an Amended Notice of Hearing to interested persons, public officials, and other persons entitled to receive notice under TCEQ rules or who requested notice.

33. The Amended Notice of Hearing was published in *Wharton Journal-Spectator*, *Halletsville Tribune-Herald*, *The Colorado County Citizen*, and the *Jackson Co. Herald-Tribune* on February 21, 2018, March 7, 2018, March 14, 2018, and March 21, 2018, and *The Banner Press Newspaper* and *The Eagle Lake Headlight* on February 22, 2018, March 8, 2018, March 15, 2018, and March 22, 2018. The Amended Notice of Hearing was mailed to all persons on the mailing list on February 21, 2018. The Amended Notice of Hearing was also broadcast sixteen times between February 22, 2018, and March 23, 2018.

34. On March 28, 2018, SOAH ALJ Meitra Farhadi held a preliminary hearing in Columbus, Texas.

35. At the preliminary hearing, the SOAH ALJ admitted the following as Parties to the proceeding: Altair; the ED; the Office of Public Interest Counsel (OPIC); the Lower Colorado River Authority (LCRA); Darmor Investments, LP (Darmor); Colorado County, Colorado County Groundwater Conservation District, Alliance for a Clean Environment (ACE) and Rice Consolidated Independent School District (collectively Aligned Protestants); and United Methodist Women's Organization (UMWO). A request for party status by Tom Etheridge was taken under advisement at the preliminary hearing by the ALJ but denied in Order No. 1 on the grounds that Mr. Etheridge did not meet the definition of an affected person.

36. During discovery in 2018, Aligned Protestants sought leave to enter the Site to conduct surface and subsurface inspection of the soils within the Landfill footprint. ALJs Farhadi and Pratibha J. Shenoy granted the request, and Aligned Protestants conducted discovery at the Site in October and November 2018.

37. On November 29, 2018, the ALJs held a prehearing conference.

38. The hearing on the merits was held from December 6-18, 2018, at the SOAH offices, in Austin, Texas.

39. Altair, the ED, Darmor, and Aligned Protestants pre-filed direct case testimony and exhibits. Except for UMWO, all Parties participated in the hearing on the merits through their designated representatives.

40. After the parties submitted written closing arguments, the record closed on March 8, 2019.

Commercial/Noncommercial Classification of Altair Facility

41. The Application requests authorization to construct and operate a noncommercial, captive hazardous waste landfill.

42. Commercial hazardous waste facilities owned (or effectively controlled by) Clean Harbors accept waste on a commercial basis, then thermally treat the waste, stabilize the treatment residue to meet the hazardous waste land disposal restrictions, and then dispose of the waste by landfilling.

43. According to the Application and the Final Draft Permit, the only wastes that Altair would accept at the Landfill would be: (1) incineration ash/residue hazardous wastes from Clean Harbors Deer Park, L.L.C. in Deer Park, Texas (Deer Park Facility) and (2) Thermal Desorption Unit (TDU) process non-hazardous industrial waste from DuraTherm, Inc. in San Leon, Texas (DuraTherm Facility), as well as non-hazardous treatment residue from Clean Harbors-owned and operated mobile TDU treatment units that manage oil and gas exploration and production waste in Texas.

44. The wastes generated at the Deer Park Facility are currently being disposed of at a hazardous waste landfill onsite which is expected to reach capacity in the next 5-7 years; the TDU wastes generated at the DuraTherm Facility are being disposed of at third-party non-hazardous landfills; and Clean Harbors does not currently have any mobile TDUs in Texas.

45. The Deer Park Facility is permitted by the TCEQ as a commercial hazardous waste management facility, and consists of a hazardous waste incinerator, a landfill, and storage facilities.

46. The landfill at the Deer Park Facility is currently the only hazardous waste landfill in Texas operated by any Clean Harbors entity.

47. The landfill at the Deer Park Facility is permitted as a commercial hazardous waste management facility and only receives incineration ash/residue hazardous wastes from the Deer Park Facility.

48. [Deleted]

49. [Deleted]

50. A waste code is a code defined by the Environmental Protection Agency (EPA) to describe a particular waste. Each type of hazardous waste has a particular code associated with it. When a listed hazardous waste is treated, the residual from the treatment process maintains the same waste code through to its final disposition. Therefore, the same waste codes will carry through from the original generator, through the incineration or thermal treatment facility, to the final disposal site at the Altair Facility.

51. When the Altair Facility receives wastes from a Clean Harbors facility, there will be an inter-company accounting debit/credit ledger adjustment. No commercial invoicing will occur.

52. [Deleted]

53. [Deleted]

54. [Deleted]

55. [Deleted]

56. The Altair Facility would be located on the same parcel of real property as the existing MSW Facility, and contiguous to the MSW Facility.

57. The MSW Facility accepts waste for a charge on a commercial basis.

58. The MSW Facility and the proposed Altair Facility each have their own legal description containing their own facility boundary, each have their own EPA identification number, and each have their own unique TCEQ regulated entity number.

59. The MSW Facility would not be part of the Altair Facility.

60. Clean Harbors owns or effectively controls both the Altair Facility and the treatment facilities (Deer Park Facility, DuraTherm Facility, and mobile TDUs).

61. Altair does not own or effectively control the Deer Park Facility or the DuraTherm Facility.

62. The sources of the waste being incinerated at the Deer Park Facility are commercial generators, not under the ownership or control of either Altair or Clean Harbors.

63. The activity of treating hazardous wastes causes the treatment facility to become a generator of the residue wastes.

64. [Deleted]

65. [Deleted]

66. [Deleted]

Analysis of Practical, Economic, and Feasible Alternatives that are Reasonably Available

67. Altair did not adequately evaluate vertical expansion of the Deer Park Facility in conjunction with a horizontal expansion.

68. Altair did not adequately evaluate alternative locations for siting the proposed hazardous waste landfill.

69. Altair did not adequately evaluate existing commercial hazardous waste landfills capable of disposing hazardous waste.

70. [Deleted]

71. [Deleted]

72. [Deleted]

73. Altair did not adequately consider practical, economic, and feasible alternatives that are reasonably available to manage the waste.

74. The ED did not evaluate if there was a practical, economic, and feasible alternative that is reasonably available to manage the waste, because Altair did not provide the ED with information to review.

Location and Siting Requirements

75. The Landfill is proposed to be located in Unit I, the Beaumont Formation, which is composed primarily of gray to red-brown clay, typically classified as lean to fat clay, with occasional pockets of trace to moderate amounts of fine sand and a layer of caliche of varying thickness.

76. Unit I ranges in thickness from 10 feet to 35 feet across the Site, but is approximately 20 to 25 feet thick in the vicinity of the proposed Landfill.

77. Immediately below Unit I, Unit II contains the Lissie Formation, the uppermost part of the Chicot aquifer, which is part of the Gulf Coast Aquifer System.

78. TCEQ's geologist testified that TCEQ technical guidance resources classify the Altair area as an aquifer recharge zone that would likely present significant problems for the disposal of solid waste.

79. In the 1990s, the ED twice deemed portions of the Site unsuitable for proposed waste disposal sites based on geological and site location concerns. The geology of the Site has not changed in any significant respect since the 1990s.

80. There is extensive sand and gravel mining in the three-county area surrounding the Site.

81. The TCEQ allows caliche in Colorado County to be used for below-ground disposal of wastewaters from domestic sewage systems because the caliche has been found sufficiently permeable for disposal.

82. Sandier pockets encountered in the subsurface investigations of the Landfill are variable in composition, and where present, are found as sand lenses, typically in soil classified as sandy clay to clayey sand. Samples of clay from the Landfill consistently have sand and silt content of 25% to 40%.

83. To be adequately protective of the aquifer in Unit II, the bottom of the Landfill must be separated from the top of the aquifer by at least a 10-foot thick barrier of soils with hydraulic conductivity of no greater than 1×10^{-7} cm/sec. In addition, the Landfill may not have, in the first five feet of soil surrounding the containment structure, soils with Unified Soil Classification of GW (well-graded gravel), GP (poorly-graded gravel), GM (silty gravel), GC (clayey gravel), SW (well-graded sand), SP (poorly-graded sand), or SM (silty sand), or that have a hydraulic conductivity greater than 1×10^{-5} cm/sec.

84. Hydraulic conductivity values at the Landfill vary over several orders of magnitude. Soil classifications vary across the Landfill, including samples taken from a single boring.

85. Maximum and minimum hydraulic conductivity values of soils at the Landfill are 3.3×10^{-6} and 2.1×10^{-10} cm/sec, respectively. The average hydraulic conductivity value in the Landfill footprint is 2.43×10^{-7} cm/sec. The median is 1.30×10^{-8} cm/sec.

86. The Application characterized the hydraulic conductivity of Unit I soils at the Landfill by using the geometric mean of the hydraulic conductivity values, which is 1.81×10^{-8} cm/sec.

87. TCEQ witnesses testified that they were unfamiliar with the use of the geometric mean to characterize soil data in any other permit application for a new hazardous waste landfill approved by the ED or the Commission.

88. The geometric mean as presented in the Application distorts the hydraulic conductivity of the Landfill site because it excludes values from sand samples, does not include any values for caliche, and is also presumed to represent the hydraulic conductivity of all untested and uncharacterized soil at the Landfill.

89. In situ hydraulic conductivity testing requested by the ED in the March 18, 2014 NOD was not performed by Altair.

90. The record evidence fails to adequately characterize the hydraulic conductivity and soil classifications of the soils in the Landfill footprint.

91. The record evidence does not establish whether the sand lenses found in Unit I at the Landfill could facilitate lateral or vertical hydraulic migration of pollutants to the aquifer in Unit II.

Financial Assurance/Information

92. A corporate guarantee is an acceptable alternative mechanism for financial assurance.

93. A corporate guarantee from a publicly traded corporate parent is sufficient to meet the financial capability (financial assurance for operations) requirements of an applicant.

94. The Application includes publicly available audited statements, estimated construction costs for the Altair Facility of $6,654,419, and a letter of guarantee from Clean Harbors' President and Chief Financial Officer certifying that Clean Harbors will act as guarantor for Altair to ensure that Altair has the financial resources to construct and safely operate the Altair Facility.

95. Altair has sufficient financial resources to construct, safely operate, properly close, and provide adequate closure and liability coverage for the Altair Facility.

Waste Analysis Plan and Waste Characterization

96. The only waste streams to be accepted at the Landfill are residue and other wastes from the Deer Park Facility incineration process and dry thermal residue wastes from the DuraTherm Facility, or from mobile TDUs operated by subsidiaries of Clean Harbors.

97. The wastes analyzed to develop the waste characterization for the Landfill are adequately representative of the current and potential types of incineration residue that may be received.

98. The waste analysis adequately describes the incidental wastes that will be accepted at the Landfill, including spent carbon, tellerettes, crushed drums, and contaminated soil.

99. [Deleted]

Design Considerations

100. The Landfill will utilize a containment system consisting of a double composite liner on the bottom and a final cover barrier on the top.

101. Altair's use of a high-density polyethylene (HDPE) liner meets all chemical compatibility requirements.

102. Altair performed adequate settlement analysis for the HDPE liner.

103. Altair will use a geosynthetic clay liner (GCL) as part of the composite barrier of the final cover system.

104. Altair's use of a GCL layer in the final cover system is appropriate from a physical, mechanical, and chemical equivalency perspective.

Stormwater and Leachate

105. The proposed stormwater management plan for stormwater that will not come into contact with waste (clean stormwater) is adequate.

106. The Landfill was designed based on information available in 2013 regarding the precipitation projection of 11.94 inches for a 24-hour, 100-year storm (Old 24/100 Storm).

107. In September 2018, the National Oceanic and Atmospheric Administration published Atlas 14, a new precipitation atlas for Texas. Atlas 14 contains the best currently-available precipitation forecasts and estimates the 24-hour, 100-year storm in Colorado County will result in approximately 14 inches of rain (New 24/100 Storm).

108. Recent storm events in Colorado County have already exceeded the New 24/100 Storm, including storms in mid-April 2015 (15 inches of rain); April 2016 (15 to 19 inches of rain); and Hurricane Harvey in 2017 (county-wide average of 21 to 26 inches of rain).

109. As of the time the Application was deemed complete, the design of the Landfill was adequate to manage at least the contaminated stormwater expected to be generated from the Old 24/100 Storm standard then in effect, as well as managing leachate expected to be generated by the storm and/or by regular operations.

110. Altair accepts the need to ensure the Landfill's stormwater and leachate management plan is revisited prior to construction of the Landfill to ensure it will be adequate based on the best information then available.

Traffic and Transportation Requirements

111. There will be approximately ten commercial trucks carrying waste from the Deer Park Facility to the Altair Facility seven days a week, and ten commercial trucks departing the Altair Facility each day once they are emptied.

112. The commercial trucks carrying the waste will have a trailer with a roll-off bin, and the hazardous waste will be covered with a tarp.

113. The hazardous waste the trucks would carry will be a granular material that is characteristically toxic, and there is the potential for the material to blow out of the bins during transport.

114. The trucks will travel approximately 100 miles from the Deer Park Facility through Houston heading west on IH 10 to Hwy 71 heading south, crossing over the Colorado River, before reaching the Altair Facility.

115. [Deleted]

116. [Deleted]

117. [Deleted]

118. IH 10 and Hwy 71 are designated hurricane evacuation routes and the main route for emergency crews to access various parts of the county.

119. The Application shows the major transportation route to be used for the transportation of hazardous waste to and from the Altair Facility for a distance of five miles out from the Altair Facility and did not evaluate the major intersection of IH 10 and Hwy 71 seven miles from the Altair Facility.

120. Additional trucks will be brought in on a periodic basis to haul off accumulated leachate and contaminated stormwater from the Altair Facility for treatment at the Deer Park Facility.

121. The Application does not contain information on the routes of travel from the mobile TDUs to the Altair Facility.

122. The Application includes an exposure information report, which describes the Altair Facility and surrounding area, general operating procedures, and waste characteristics.

123. [Deleted]

124. Altair evaluated the potential for the public to be exposed to hazardous wastes from releases from the transportation of waste to the unit onsite and in the immediate vicinity of the Altair Facility.

125. [Deleted]

126. [Deleted]

127. [Deleted]

128. [Deleted]

129. Local land use consideration of transportation risks under 30 Texas Administrative Code § 335.180 was conducted within a five-mile radius of the Altair Facility.

Land Use Requirements

130. The area around the Altair Facility is primarily used for gravel pits, rice farming, soybean farming, cattle grazing, and hunting purposes.

131. The Colorado River is approximately two miles from the Site and is used for recreation as well as irrigation and water for cattle.

132. There are no land use plans for the area within a five-mile radius of the Altair Facility.

133. The Altair Facility will not be within 1,000 feet of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park.

134. The MSW Facility at the Site does not receive hazardous waste, and no other industrial or waste generating facilities are located within ½ mile of the Altair Facility.

135. The Application contains a map identifying the major routes of travel within a five-mile radius of the Altair Facility.

136. The evaluation of transportation risks is a necessary element of the evaluation of the impacts of a facility on local land use.

137. No land use compatibility determination was performed.

Air Emissions

138. The Application does not propose any processing vents; does not propose to manage waste containing organics with concentrations of 10% or greater by weight; and the waste stream proposed to be generated and managed onsite (leachate and contaminated stormwater) would not contain volatile organic compounds.

139. Airborne particle emissions (i.e., dust) containing heavy metals such as lead or mercury, might occur from trucks emptying their waste loads at the landfill.

140. To address particulate matter and other potential emissions, the Application includes the following measures: trucks will be covered with a tarp during transport; trucks will dump their loads directly into the active cell, and the load will be promptly spread and compacted in the active cell by earthmoving equipment; the waste will be sprinkled with water three times a day to prevent dust; if dust becomes visible, water or a dust-binding agent will be applied; if problems persist, interim soil cover will be placed as soon as practicable to minimize the wind dispersal. Additionally, it is expected that the presence of a perimeter dike higher than the waste in the active landfill will mitigate against airborne emissions by acting as a windbreak.

141. On occasion, waste will be placed at the site at a height above the top of the perimeter dikes, at which point the dikes may be ineffective as a wind break.

142. The Application does not include an evaluation of the potential impact of airborne emissions on nearby land uses such as ranching or farming, or on the Colorado River, except for the exposure information report.

143. The Final Draft Permit does not require daily cover at the Altair Facility.

Compliance History

144. Altair's compliance history classification score was Satisfactory for the period from May 25, 2011 through May 25, 2016, and High for the period between October 1, 2013 and October 1, 2018.

Transcript Costs

145. Altair arranged for and paid a court reporter to report and transcribe the hearing on the merits and to deliver the original copy of the transcript to the ALJs and two copies to the TCEQ's Chief Clerk.

146. The cost of reporting, preparing, and delivering the transcripts to the ALJs and the TCEQ Chief Clerk was $23,275.15.

147. Altair, the ED, OPIC, Darmor, Aligned Protestants, and LCRA all participated in the contested case hearing and benefitted from having a transcript for use in preparing written closing arguments and responses.

148. The Application was found deficient by the ALJs in numerous respects, and the ALJs recommend its denial.

149. The transcript costs should be assessed 100% to Altair, as a just and reasonable assessment of costs.

II. CONCLUSIONS OF LAW

1. The Commission has jurisdiction over the storage and processing of industrial solid waste and hazardous waste and the authority to issue this permit under Texas Health and Safety Code § 361.061.

2. Notice was provided in accordance with Texas Health and Safety Code chapter 361 and 30 Texas Administrative Code chapter 39, and affected persons were provided an opportunity to request a hearing on the Application in the manner required by law. Proper notice of the preliminary hearing was given to affected persons pursuant to Texas Government Code §§ 2001.051 and 2001.052.

3. SOAH has jurisdiction to conduct a hearing and prepare a proposal for decision on contested cases referred by TCEQ. Tex. Gov't Code § 2003.047.

4. The Application was processed, and the proceedings described herein were conducted in accordance with applicable law and rules of TCEQ and SOAH, and all applicable procedural requirements relating to notice, hearing, and due process of law were met.

5. Altair had the burden of proof to show by a preponderance of evidence that the Application satisfied all requirements of applicable law and rules. 30 Tex. Admin. Code § 80.17(a).

6. The evidence in the record in support of the Application is insufficient to meet the requirements of applicable law for issuance of such permit, including Texas Health and Safety Code chapter 361 (the Solid Waste Disposal Act) and 30 Texas Administrative Code chapters 305 and 335.

7. Altair failed to submit a complete permit Application that included all information required by Texas Health and Safety Code chapter 361 and 30 Texas Administrative Code chapters 281 and 305.

8. Altair failed to prove by a preponderance of the evidence that the Altair Facility would be a captive facility. 30 Tex. Admin. Code § 335.1(13).

9. Altair failed to prove by a preponderance of the evidence that the Altair Facility would be a noncommercial hazardous waste management facility. Tex. Health & Safety Code § 361.003(4); 30 Tex. Admin. Code § 335.1(29).

10. Altair failed to prove by a preponderance of the evidence that its Application is consistent with the prohibition against issuing a permit for a new hazardous waste landfill if there is a practical, economic, and feasible alternative to the landfill that is reasonably available, in accordance with Texas Health & Safety Code § 361.106 and 30 Texas Administrative Code § 335.205(a)(2).

11. Altair did not prove by a preponderance of the evidence that the base of the containment structure of the Landfill will be separated from the underlying regional aquifer by a minimum of 10 feet of soil with a hydraulic conductivity toward the aquifer not greater than 1×10^{-7} cm/sec or a thicker interval of more permeable material which provides equivalent or greater retardation to pollution migration as required by 30 Texas Administrative Code § 335.204(e)(4).

12. Altair did not prove by a preponderance of the evidence that the first five feet of soil around the proposed containment structure consists of soils that do not have either Unified Soil Classification of GW, GP, GM, GC, SW, SP, or SM or a hydraulic conductivity no greater than 1×10^{-5} cm/sec, unless such soils will not facilitate lateral or vertical hydraulic migration of pollutants, as required by 30 Texas Administrative Code § 335.204(e)(5).

13. Altair did not prove by a preponderance of the evidence that the Landfill will reasonably minimize possible contamination of surface water and groundwater as mandated by 30 Texas Administrative Code § 335.203.

14. Altair showed by a preponderance of the evidence that the proposed liner system and final cover for the Landfill will meet standards set by 30 Texas Administrative Code §§ 335.152(a)(12) and 335.173(a).

15. The Application meets the financial assurance requirements for closure, post-closure, and liability coverage as specified by 30 Texas Administrative Code § 335.179 and chapter 37, subchapter P.

16. The Application meets the financial capability (financial assurance for operations) requirements contained in 30 Texas Administrative Code § 305.50(a)(4)(B).

17. Altair proved by a preponderance of the evidence that the waste expected to be disposed at the Landfill is adequately characterized as required by 30 Texas Administrative Code §§ 305.50(a)(9) and 335.152(a)(1) and that the Landfill will have onsite capacity to analyze waste in accordance with 40 Code of Federal Regulations § 264.13.

18. Altair proved by a preponderance of the evidence that the Landfill will collect and control at least the water volume from active cells resulting from a 24-hour, 100-year storm as required by 30 Texas Administrative Code § 335.173(h).

19. The transportation information contained in the Application meets the requirements of 30 Texas Administrative Code § 305.50(a)(8) with regard to transportation risks to and from the unit.

20. The transportation information contained in the Application does not meet the requirements of 30 Texas Administrative Code § 305.50(a)(10) with regard to traffic requirements.

21. [Deleted]

22. [Deleted]

23. The transportation information in the Application does not meet the requirements of 30 Texas Administrative Code § 335.180(1)(C) with regard to risks associated with transportation of hazardous waste to the Altair Facility.

24. The Application demonstrates compliance with 30 Texas Administrative Code § 335.204(e)(6), prohibiting a landfill from locating within 1,000 feet of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park.

25. The Application meets the air emission requirements of 30 Texas Administrative Code § 335.152 and 40 Code of Federal Regulations Subparts AA, BB, and CC.

26. The Application demonstrates compliance with 30 Texas Administrative Code § 335.173(j).

27. No transcript costs may be assessed against the ED or OPIC because the TCEQ's rules prohibit the assessment of any cost to a statutory party who is precluded by law from appealing any ruling, decision, or other act of the Commission. 30 Tex. Admin. Code § 80.23(d)(2).

28. Factors to be considered in assessing transcript costs include: the party who requested the transcript; the financial ability of the party to pay the costs; the extent to which the party participated in the hearing; the relative benefits to the various parties of having a transcript; the budgetary constraints of a state or federal administrative agency participating in the proceeding; and any other factor which is relevant to a just and reasonable assessment of the costs. 30 Tex. Admin. Code § 80.23(d)(1).

29. Considering the factors in 30 Texas Administrative Code § 80.23(d)(1), a just and reasonable assessment of hearing transcript costs is to assign the full cost to Altair.

III. EXPLANATION OF CHANGES

During the September 11, 2019, open meeting, the Commission made the following changes to the ALJs' Proposed Order, as discussed and explained during the open meeting:

1. The Commission adopted the ALJs' recommended modifications to Finding of Fact No. 7 and Conclusion of Law No. 17, as set forth in the ALJs' June 27, 2019 letter. In addition, the Commission deleted the phrase "and issue the attached permit" in proposed Ordering Provision No. 3, as it is inconsistent with the ALJs' recommendation and the Commission's decision to deny the permit.

2. The Commission replaced "1.81" with "1.30" in the last sentence of proposed Finding of Fact No. 85, as it appears to be a typographical error and should be consistent with page 22 of Applicant's Supplemental Exhibit No. 3-3.

3. The Commission added new Ordering Provision No. 3A to reflect the Commission's adoption of the Executive Director's Response to Public Comments to the extent that it is not inconsistent with the Commission's decision to deny the application, in accordance with 30 Texas Administrative Code § 80.126.

4. Regarding the insufficiency of the record on the commercial nature of the proposed facility, the Commission deleted proposed Finding of Fact Nos. 48, 49, 52-55, 64-66, and 126-128; overturned proposed Conclusion of Law Nos. 8 and 9; and deleted proposed Conclusion of Law Nos. 21 and 22, as the findings and conclusions are not supported by the great weight of the evidence and are not material to applicable regulations. The Commission determined that Altair failed to meet its burden to prove that the facility would be noncommercial. The Commission further determined that the evidence in the record was inconclusive on the commercial issues. The Commission disagrees with the ALJs that the record establishes that the Altair Facility is a commercial facility.

5. Regarding alternatives, the Commission modified proposed Finding of Fact Nos. 67-69 to add the word "adequately" before the word "evaluate" in each finding and deleted proposed Finding of Fact Nos. 70-72, to more accurately reflect the evidence and testimony in the record and applicable regulations. The Commission determined that there is insufficient evidence in the record to support the conclusive determinations in the deleted findings on alternatives.

   Additionally, the Commission replaced proposed Conclusion of Law No. 10 with the following: "Altair failed to prove by a preponderance of the evidence that its Application is consistent with the prohibition against issuing a permit for a new hazardous waste landfill if there is a practical, economic, and feasible alternative to the landfill that is reasonably available, in accordance with Texas Health & Safety Code § 361.106 and 30 Texas Administrative Code § 335.205(a)(2)" to more accurately reflect and track the language in the applicable statute and rule.

6. The Commission added the phrase "TCEQ's geologist testified that" to the beginning of proposed Finding of Fact No. 78 and modified proposed Finding of Fact No. 87 to read "TCEQ witnesses testified that there were unfamiliar with the use of the geometric mean to characterize soil data in any other permit application for a new hazardous waste landfill approved by the Executive Director or Commission," to more accurately reflect the evidence and testimony in the record.

7. Regarding waste characterization, the Commission overturned proposed Finding of Fact Nos. 97 and 98, deleted proposed Finding of Fact No. 99, and overturned proposed Conclusion of Law No. 17, as the findings and conclusion are not supported by the great weight of the evidence, mischaracterize the evidence in the record, and are clearly erroneous in light of precedent and applicable rules. The Commission determined that the ALJs' reading of 40 CFR § 264.13 is clearly erroneous, and the regulation does not require onsite waste analysis. The Commission further determined that the evidence supports that the waste analysis adequately represents the types of waste that would or may be accepted.

8. Regarding the exposure information report, because the findings and conclusions are not supported by the great weight of the evidence, and are inconsistent with, or exceed, EPA exposure information requirements guidance contained in the record, the Commission: deleted the word "briefly" in proposed Finding of Fact No. 122; deleted proposed Finding of Fact Nos. 115-117, 123, and 125; reworded proposed Finding of Fact No. 124 to read: "Altair evaluated the potential for the public to be exposed to hazardous wastes from releases from the transportation of waste to the unit onsite and in the immediate vicinity of the Altair Facility;" and overturned proposed Conclusion of Law No. 19.

   The exposure information requirements in 30 Texas Administrative Code § 305.50(a)(8), as interpreted by EPA guidance in the record, require the submittal of information concerning transportation "to and from the unit" including onsite transportation and transportation in the immediate vicinity of the facility. EPA guidance speaks to "the immediate vicinity" as being access routes within a distance of one mile. As such, the Commission determined that the record, including Applicant's Exhibit No. 8, does not support the ALJs' interpretation that the exposure information report must include transportation routes all the way back to the Deer Park facility.

9. The Commission added the phrase "except for the exposure information report" to end of proposed Finding of Fact No. 142 to more accurately reflect the evidence and testimony in the record, consistent with the Executive Director's exceptions.

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

1. The Application by Altair Disposal Services, LLC, for Hazardous Waste Permit No. 50407 is hereby **DENIED**.

2. Transcript costs shall be allocated 100% to Altair.

3. The Chief Clerk shall forward a copy of this Order to all parties.

3A. The Executive Director's Response to Public Comment is hereby **ADOPTED** to the extent that it is not in conflict with the Commission's decision to deny the Application.

4. All other motions, requests for specific Findings of Fact or Conclusion of Law, and other requests for general and specific relief, if not expressly granted herein, are hereby **DENIED** for want of merit.

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

6. The effective date of this Order is the date the Order is final, as provided by Texas Government Code § 2001.144 and 30 Texas Administrative Code § 80.273.

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

Jon Niermann, Chairman for the Commission

9-27-19
Dated

ATTACHMENT C

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AN ORDER denying the application of Far Hills Utility District for proposed TPDES Permit No. WQ0014555001; Docket No. 2005-1899-MWD; SOAH Docket No. 582-06-0568

On August 22, 2007, the Texas Commission on Environmental Quality (Commission or TCEQ) considered the application of Far Hills Utility District (Applicant, Far Hills, or District) for proposed Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0014555001. The application was presented to the Commission with a proposal for decision by Carol Wood, Administrative Law Judge (ALJ) with the State Office of Administrative Hearings (SOAH).

After considering the ALJ's proposal for decision and the evidence and arguments presented, the Commission makes the following Findings of Fact and Conclusions of Law:

I. FINDINGS OF FACT

1. Far Hills filed its application for a TPDES permit on August 31, 2004, and on December 2, 2004, the Commission's Executive Director (ED) made a preliminary decision that the proposed permit would meet all statutory and regulatory requirements.

2. On November 8, 2005, Applicant requested that the matter be directly referred to SOAH.

3. On November 21, 2005, the Commission's Chief Clerk sent notice of hearing to an attached list of persons.

4. On December 7, 2005, notice of hearing was published in *The Courier*, a newspaper regularly published or generally circulated in Montgomery County, Texas.

5. A preliminary hearing regarding the application was held in Conroe, Texas, on January 11, 2006. The Judge designated the following as parties to the proceeding: Far Hills, the ED, the Commission's Public Interest Counsel, Capps Concerned Citizens (Capps), and Ralph and Marcia Sandall (Sandalls). The Judge also designated the San Jacinto River Authority (River Authority) as a party; however, the River Authority participated mainly as an observer.

6. Although the ED participated in the preliminary hearing, he later withdrew as a party after reaching an agreement with Far Hills regarding disputed provisions of the proposed permit.

7. The hearing on the merits was held in Austin, Texas, from June 26 to June 28, 2006.

8. Far Hills was created as a water control and improvement district by Commission order in 1972 and encompasses about 327 acres on a peninsula in the southeast quadrant of Lake Conroe in Montgomery County. Far Hills is located near the City of Willis and in the extraterritorial jurisdiction of the City of Conroe, but not within the corporate limits of any city. The District's boundaries include seven residential subdivisions for which it provides water and wastewater services.

9. Far Hills provides water service to 320 residential connections and sewer service to 302 residential connections. The District currently serves a population of approximately 591

people. Its projections of future growth indicate that it will serve a total of 1,021 connections at full build-out of the subdivisions that Far Hills serves.

10. Currently, Far Hills' wastewater is being treated by Montgomery County Utility District (MCUD) No. 2 at its Seven Coves Plant (Plant). Far Hills' collection lines transport wastewater to a Far Hills sewer main located along Cude Cemetery Road. After passing through a Far Hills' lift station located at Virginia Street, the wastewater is conveyed about two miles north and west to the Plant.

11. In January 2004, MCUD No. 2 told Far Hills that the Plant and lift station needed major repairs. A few months later, MCUD No. 2 advised the District that the Plant was reaching its permitted flow capacity and would have to be expanded in the very near future. The engineer of MCUD No. 2 estimated repair costs of approximately $568,500, which did not include the cost of a plant expansion for which Far Hills' share would equal about one million dollars. MCUD No. 2 asked Far Hills to fund about 29 percent of the repair costs.

12. Far Hills decided it was more cost effective to terminate its agreement with MCUD No. 2 and build its own wastewater treatment plant.

13. Far Hills' contract with MCUD No. 2 to provide wastewater service expires in 2012.

14. The proposed Far Hills facility would be an activated sludge process plant operated in the complete mix mode and would be located north of Virginia Street at the intersection of Cude Cemetery Road and Virginia Street in Montgomery County. Treatment units in the interim phase are proposed to include a lift station, a manual bar screen, an aeration basin, a clarifier, a sludge digester, and a chlorine contact chamber. The final phase is proposed to include the following treatment units: a lift station, a manual bar screen, two aeration basins, two clarifiers, two sludge digesters, and two chlorine contact chambers.

15. The proposed permit authorizes a discharge of treated domestic wastewater at an interim volume not to exceed a daily average flow of 0.25 million gallons per day (MGD) and a final volume not to exceed a daily average flow of 0.5 MGD.

16. The proposed effluent limitations in the interim and the final phase of the proposed permit, based on a 30-day average, are the following: 10 milligrams per liter (mg/l) carbonaceous biochemical oxygen demand (CBOD), 15 mg/l total suspended solids (TSS), 3 mg/l ammonia nitrogen, and 4.0 mg/l minimum dissolved oxygen (DO). The effluent must contain a chlorine residual of at least 1.0 mg/l and must not exceed a chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes, based on peak flow.

17. Far Hills' proposed wastewater treatment plant would be partially located in wetlands.

a. Hydrophytic vegetation, such as *planera aquatica*, exists throughout the designated wetlands area.

b. Wetland hydrology exists throughout the area designated as wetlands.

(1) There is a clear watermark on a tree at the data point closest to the District's proposed wastewater treatment units.

(2) Drift lines are a primary indicator of wetland hydrology, and such lines exist at two observation points within the wetlands area.

(3) Drainage patterns in wetlands are a primary indicator of wetland hydrology, and such patterns exist at two observation points within the wetlands area.

c. Hydric soils with distinct gleyed colors are present in the area where Far Hills' wastewater treatment units are proposed to be located.

18. The site of Far Hills' proposed wastewater treatment facility lies on a floodplain of an unnamed tributary to the West Fork of the San Jacinto River (Lake Conroe). The area is mapped as Trinity Clay, frequently flooded, and Ferris Clay, 1-5 % slopes, eroded, by U.S.Soil Survey Staff (1972). The area is not a mapped FEMA floodplain. It is

hydrologically adjacent to the unnamed tributary and to Lake Conroe, waters of the United States. While not a mapped floodplain, the area is frequently flooded.

19. Transcription and reporting costs for the hearing in this case totaled $ 6, 640.20. Of that total amount, Far Hills should be assessed 93 percent and Capps should be assessed 7 percent.

a. The ALJ ordered the transcript.
b. Far Hills requested that the transcript be expedited, which cost $ 2,602.40 of the total amount of transcription costs.
c. Applicant has substantial financial resources as a result of its significant tax base.
d. Capps is funded by donations from individuals and families. The Sandalls have only the financial resources of a single family.
e. Capps presented five witnesses compared to Applicant's seven witnesses, and cross-examination was about equal. The extent of participation by all the parties was appropriate, and none of the parties unduly burdened the transcript with frivolous arguments or unnecessary questioning of witnesses.
f. No other factor affects the assessment of transcription costs. All parties had plausible, good-faith arguments for the issues they raised.

II. CONCLUSIONS OF LAW

1. The Commission has jurisdiction over this matter, pursuant to TEX. WATER CODE (Water Code) ch. 26.

2. SOAH has jurisdiction over all matters relating to the conduct of a hearing in this proceeding, including the preparation of a proposal for decision with findings of fact and conclusions of law, pursuant to TEX. GOV'T CODE ch. 2003.

3. Wetlands are those areas that are inundated or saturated by surface water 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, playa lakes, and similar areas. 30 TEX. ADMIN. CODE (TAC) § 309.11(10).

4. A wastewater treatment plant unit may not be located in wetlands. 30 TAC § 309.13(b).

5. The Commission may not issue a permit for a wastewater treatment plant if the facility does not meet the requirements of 30 TAC § 309.13.

6. Based on the above findings of fact and conclusions of law, issuance of the proposed permit should be denied.

EXPLANATION OF CHANGES

Pursuant to Texas Government Code § 2003.047(m) the Commission provides the following Explanation of Changes to the Proposal for Decision prepared by the Administrative Law Judge:

1. The Commission deleted proposed Finding of Fact No. 17 based on its determination not to exercise its discretionary power to deny a permit on the basis of need or regionalization, and renumbered the following Findings of Fact accordingly.
2. Conclusions of Law No. 3, 4, and 5 have been deleted based on the Commission's determination not to exercise its discretionary power to deny a permit on the basis of need or regionalization and renumbered the following Conclusions of Law accordingly.

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

1. The application of Far Hills Utility District for a TPDES permit is DENIED.

2. Applicant shall pay 93 percent of the total transcription costs of $6,640.20 and Capps Concerned Citizens shall pay the remainder.

3. All other motions, requests for entry of specific findings of fact or conclusions of law submitted by any party and any other request for general or specific relief not expressly granted or adopted herein are denied for want of merit.

4. The Commission's Chief Clerk shall forward a copy of this Order to all parties.

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

ISSUED: SEP 07 2007

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Buddy Garcia

Buddy Garcia, Chairman

Sunday Diary