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May 12, 2010

***Via Facsimile: (512) 475-4994
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Rebecca S. Smith, Administrative Law Judge
State Office of Administrative Hearings
300 West 15th Street, Ste. 502
Austin, Texas 78701

RE: SOAH Docket No. 582-10-0353; TCEQ Docket No. 2009-0913-MWD;
Application of The City of Patton Village for TPDES Permit No. WQ0014926001.

Dear Judge Smith:

Enclosed is *PROTESTANT ADRIANA CASENAVE'S CLOSING ARGUMENT* pursuant to the deadline established on April 1, 2010 at the conclusion of the Hearing on the Merits on this matter.

If you have any questions regarding the enclosed, please do not hesitate to call our office.

Sincerely,

BLACKBURN CARTER, P.C.



Velia Andaverde, Legal Assistant

Enclosure

c: LaDonna Castañuela *Via Facsimile: (512) 239-3311 and Federal Express*
Emily W. Rogers *Via E-Mail & U.S. First Class Mail*
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Alicia M. Lee *Via E-Mail & U.S. First Class Mail*
Tamara Garza *Via U.S. First Class Mail*
Adriana Casenave *Via U.S. First Class Mail*

APPLICATION OF THE CITY OF § BEFORE THE STATE OFFICE
PATTON VILLAGE FOR TPDES § OF
PERMIT NO. WQ0014926001 § ADMINISTRATIVE HEARINGS

**PROTESTANT ADRIANA CASENAVE’S
CLOSING ARGUMENT**

COMES NOW, Adriana Casenave and files this her Closing Argument in the above referenced matter. Protestant requests that this Permit Application be recommended for denial for the following reasons:

I. INTRODUCTION

This Closing Argument is submitted on behalf of Adriana Casenave (“Protestant”), a land owner on Peach Creek that will be affected by the City of Patton Village’s (“Applicant”) proposed wastewater discharge, should the Texas Commission on Environmental Quality (“TCEQ” or “Commission”) approve it. The primary issues of concern to Adriana Casenave are (1) the Applicant has failed to carry its burden of proof on the referred issues, (2) there was no evidence submitted on whether the proposed discharge will contribute to excess bacteria in Lake Houston, (3) The proposed discharge will contain toxic substances in concentrations that violate the Texas Surface Water Quality Standards, and (4) the use of *E. coli* as an indicator of pathogens in the proposed effluent is not protective of downstream users of Peach Creek, including both recreational users and those who use Peach Creek for drinking water.

II. PARTIES

According to Order No. 1, the following persons appeared and were admitted as parties:

The City of Patton Village, Texas; Executive Director of the Texas Commission on Environmental Quality; Office of Public Interest Counsel of the Texas Commission on Environmental Quality; Adriana Casenave; and Tamara Garza.

Subsequent to Order No. 1, Tamara Garza requested to withdraw from active party status in the contested case hearing and continue as a fact witness for Adriana Casenave.

III. JURISDICTION

The Commission has jurisdiction over this application pursuant to TEX. WATER CODE Chapters 5 and 26. The State Office of Administrative Hearings (“SOAH”) has authority to conduct a hearing and present the Proposal For Decision pursuant to TEX. WATER CODE § 5.311 and TEX. GOV’T CODE §§ 2003.021 and 2003.047.

IV. PROCEDURAL HISTORY

The Executive Director received the City of Patton Village’s application on September 15, 2008, and declared it administratively complete on November 18, 2008. An English Notice of Application and Intent to Obtain Water Quality Permit was published on December 10, 2008 in *East Montgomery County Observer*. A Spanish Notice of Application and Intent to Obtain Water Quality Permit was published on December 17, 2008 in *La Prensa de Houston*.

The Executive Director completed the technical review of the application on January 5, 2009, and prepared a draft permit. The English Notice of Application and Preliminary Decision was published on February 18, 2009 in *East Montgomery County Observer*. The Spanish Notice of Application and Preliminary Decision was published on February 25, 2009 in *La Prensa de Houston*. The public comment period ended on March 23, 2009.

On September 9, 2009 the Texas Commission on Environmental Quality (“Commission”) considered hearing requests from four individuals. The Commission further determined that the requestors raised disputed issues of fact during the comment period, which were relevant and

material to the Commission's decision on the application. In an Interim Order dated September 16, 2009, the Commission set forth, among other things, its decisions granting the hearing requests, identified three issues for a contested case hearing on the application and referred the application to the State Office of Administrative Hearing ("SOAH") for such purposes.

The Interim Order issued on September 16, 2009, referred the following issues for contested case hearing:

1. Will the proposed discharge impact Peach Creek's ability to meet TCEQ water quality standards;
2. Whether the proposed discharge would contribute to excess bacteria in Peach Creek and Lake Houston; and
3. Will the proposed discharge impact the hearing requestors' use of Peach Creek for recreational purposes.

The Commission set a duration of nine (9) months from the date of the Preliminary Hearing to the issuance of a Proposal for Decision and Proposed Order. The Preliminary Hearing was held in the City of Patton Village's Municipal Courtroom on November 16, 2009. At that Preliminary Hearing, the Administrative Law Judge ("ALJ") determined that the Commission had jurisdiction and that notice had been properly provided. The ALJ designated the parties as indicated above in Section II.

The Hearing on the Merits was held in Austin, Texas from March 31, 2010 through April 1, 2010. Final written arguments are due May 12, 2010 and responses to final written arguments are due May 26, 2010.

V. BACKGROUND FACTS

The City of Patton Village is located in Montgomery County approximately 36 miles north of Houston and near the intersection of United States Route 59 and Texas State Highway 242. The City of Patton Villages proposes to build a wastewater treatment plant just west of the City's Municipal buildings and near the intersection of Lakeview Drive and South Lakeview Drive. The City then proposes to pipe the effluent approximately one half mile across Peach Creek Lake and discharge into Peach Creek, TCEQ segment 1011. Protestant Adriana Casenave owns property on Peach Creek within one mile of the proposed discharge.

The Commission's Draft Permit for the proposed facility would allow the discharge of a daily average up to 350,000 gallons per day of treated domestic wastewater into Peach Creek with the following effluent limits 10 mg/l CBOD₅, 15 mg/l TSS, 3 mg/l NH₃-N, 4 mg/l minimum DO, and *E. coli* colonies not to exceed 126/100ml.

Peach Creek a is tributary of Lake Houston, the City of Houston's main source of drinking water. The lower section of Peach Creek, southeast of U.S. Route 59 all the way to Caney Creek near Lake Houston, receives several treated wastewater discharges and is listed as impaired for bacteria under the Clean Water Act's 303(d) list. The upper section of Peach Creek, everything northwest of U.S. Route 59, has few wastewater discharges and is relatively pristine. The lower section of Peach Creek runs through the 5000 acre Lake Houston Wilderness Park and consequently is heavily used for swimming and fishing despite its impaired classification. Lake Houston is of course immediately downstream of Lake Houston Wilderness Park. Lake Houston is the City of Houston's primary source of drinking water and is also heavily used for boating, swimming, and fishing. The discharge as proposed will be located in the lower, impaired section of Peach Creek, the section that is already heavily burdened by wastewater discharges.

VI. WITNESSES, QUALIFICATIONS, AND CREDIBILITY

Ms. Casenave presented one fact witness, Ms. Tamara Garza, a neighboring property owner and fellow hearing requestor. Ms. Garza testified with respect to her concerns regarding the proposed discharge, her recreational use of Peach Creek, and her concerns regarding the proposed discharge. Ms. Garza witnessed the severe infection of a friend's foot after wading in Peach Creek and testified that the proposed discharge will interfere with her recreational use of the creek.

Ms. Casenave also presented one expert witness, Ms. Mary Ellen Whitworth, a long time public servant experienced in water quality and wastewater engineering. Ms. Whitworth testified that the discharge as proposed would not comply with the Texas Surface Water Quality Standards in many respects, had significant potential to contribute excess bacteria into Peach Creek and Lake Houston, and that the use of *E. coli* as an indicator bacteria would not be protective of those recreating in the water downstream of the proposed discharge.

VII. ARGUMENT

A. The Applicant, by Relying Exclusively on the TCEQ's Analysis, Failed to Carry its Burden of Proof with Regard to all Three Referred Issues.

1. TCEQ Rules and the Texas Water Code lay the Burden of Proof Solely on the Applicant.

It is without question that the Applicant has the burden of proof on all referred issues and that burden is by a preponderance of the evidence. 30 TEX. ADMIN. CODE §§ 80.17(a) and (e); *Id.* at 80.108(e); *Id.* at 80.117(b). The TCEQ rules do allow an applicant to rely on “any analysis, study, or review that the executive director is required by statute or rule to perform,” however the applicant must still meet their burden of proof. 30 TEX. ADMIN. CODE § 80.127(h).

Except under specific exceptions that do not apply here, the Texas Water Code and TCEQ rules specifically prohibit the Executive Director (“ED”) from assisting a permit applicant in meeting its burden of proof.¹ TEX. WATER CODE § 5.228(e); 30 TEX. ADMIN. CODE § 80.108(e). In fact, the ED is specifically limited to participating “for the sole purpose of providing information to complete the administrative record.” 30 TEX. ADMIN. CODE § 80.108(d).

2. The Applicant’s Only Technical Expert Relied Exclusively on the TCEQ’s Preliminary Analysis for his Opinions on all Referred Issues.

In this case, it is undisputed that the Applicant’s only expert failed to conduct any independent analysis and instead relied exclusively on the TCEQ’s review for the bases of his opinions on all three referred issues. For example, consider the following testimony concerning referred issue one, whether the proposed discharge will impact Peach Creeks ability to meet the TCEQ’s Texas Surface Water Quality Standards (“TSWQS”):

Q: Do you have any information with you today that would show some analysis on your part of either a Tier 1 or Tier 2 antidegradation review, other than this document [referring to Protestant’s Exhibit 8(The TCEQ water quality assessment memorandum)]?

A: I don’t have any other information as far as a Tier 1 and Tier 2 analysis. We depend on TCEQ to conduct that analysis.

Hearing Transcript at 28: 14-20.

Antidegradation review is, of course, just one small part of the TSWQS. Moving into more specific sections of the TSWQS, the Applicant’s expert repeatedly asserts that his opinions are based on the TCEQ’s modeling of the proposed discharge. Consider the following testimony regarding § 307.4 of the TSWQS:

¹ In situations where there is a special need for assistance, the ED may help an applicant with its burden of proof if the applicant qualifies and if the ED gives notice of it decision to assist with the burden, no such notice exists in this case. 30 TEX. ADMIN. CODE §§ 80.108(e) and (g).

- Q: So let's be clear. You did not undertake a separate analysis of whether there was toxicity – or toxic substances, according to 30 TAC Section 307.4(d). Correct?
- A: That is Correct.
- Q: Now, I'd like you to turn to (i) under 307.4. In your analysis of compliance with the Texas water quality standards that you testified to, did you make an assessment of whether or not the standards regarding aquatic life uses and habitat under Subsection 307.4(i) were met?
- A: I did not conduct an analysis. I'm depending on the Qualtex model completed by TCEQ staff.
- *** (overruled objection omitted)
- Q: With regard to aquatic recreation, 307.4(j), did you make an independent determination as to whether or not aquatic recreation would be affected as – under Subsection (j) ?
- A: No, I'm depending on the Qualtex model completed by the TCEQ staff.
- Q: But you can't tell me how the Qualtex model incorporates recreation, can you?
- ***(overruled objection omitted)
- A: No
- Q: Isn't it true that Qualtex only refers to antidegradation? Do you know?**
- A: I don't know.**
- Q: So you really don't know if Qualtex addresses any of these toxicity issues and aquatic life issues other than in the antidegradation section. Correct?**
- A: Correct.**

Hearing Transcript at 38:11--39: 23 (emphasis added).

In fact, as we will discuss later, the TCEQ's QUAL-TX model looks exclusively at whether the discharge will impact dissolved oxygen in the receiving stream and does not correlate with the requirements for contact recreation.² Regardless of this fact, the Applicant's Expert repeatedly and wrongly bases his opinions on the TCEQ's QUAL-TX modeling:

- Q: Now, did you offer an opinion as to whether Peach Creek would be suitable for contact recreation after the – if this permit were allowed to be issued?
- A: The only thing that I can base that in – on is the Qualtex model that was conducted by TCEQ, and that indicates that it would not have a significant impact.

² This is discussed more fully in section 3, *infra*. However it is worth repeating here the TCEQ's modeler's (Mark Rudolph) statement on this issue, "**my analysis was exclusively for dissolved oxygen impact.**" Hearing Transcript at 199: 9-10 (emphasis added).

Q: That's the Qualtex model that you haven't been able to tell me any details about. Is that the same model?

A: That is the model that was conducted by the TCEQ, yes.

Q: Section 307.6, Toxic Materials, do you see that?

A: Yes.

Q: Have you ever read that section of the water quality standards before?

A: I've seen this table before, yes.

Q: Have you read the provisions?

A: No.

Q: How can you testify that this discharge meets the water quality standards of the State if you've never read them?

*** (overruled objection removed)

A: I'm basing it on the Qualtex model conducted by the TCEQ staff and their recommendations.

Q: Do you have any independent basis for your testimony that this proposed discharge meets the water quality standards other than the modeling done by TCEQ?

A: No independent basis.

Hearing Transcript at 34: 12-23; 42: 14-43: 7; 44:23-45: 2 (emphasis added).

Again, as will be explained in the discussion of referred issue three, *infra*, the TCEQ's modeling looks exclusively at the proposed discharges impact on dissolved oxygen levels, which are one small part of the TCEQ's TSWQS. *See generally* 30 TEX. ADMIN. CODE § 307. *See also Procedures to Implement the Texas Surface Water Quality Standard*, TCEQ Document RG-194 (Revised) (January 2003). Despite this severe limitation on the scope of the TCEQ's modeling, the Applicant's expert inexplicably uses the TCEQ's modeling results as the basis for most of his opinions. Why would Mr. Lazaro do this? The answer is that he has no idea what the TCEQ models, how that modeling works, or what it is used for. In other words, the Applicant's expert has no understanding of the very thing that he bases the majority of his opinions on. Consider the following testimony concerning Mr. Lazaro's understanding of the TCEQ's QUAL-TX modeling:

Q: Are you familiar with how the Qualtex model works?
A: I have never performed one. So I am not familiar with it.
Q: So you have no knowledge about the inner workings of the Qualtex model. Is that correct?
A: Not the way that TCEQ performs it within their agency.

Q: Do you know what parameter for normal stream flow was taken into account in the Qualtex model for Peach Creek?
A: No, sir.
Q: "Aquatic life." Do you see aquatic life there?
A: Yes.
Q: Do you know how aquatic life is taken into account in the Qualtex model?
A: No, sir.
Q: "Dissolved oxygen conditions." Do you see that in you testimony?
A: Yes.
Q: Do you know how dissolved oxygen is taken into account in the Qualtex model?
A: No, sir.
Q: You state down here on Line 15 that the model determines potential impacts. Do you see that?
A: Yes.
Q: So you have any idea how this model determines potential impacts?
A: Modeling conducted by TCEQ takes into account the aquatic life, the dissolved oxygen conditions, and therefore, that's how the effluent limits are determined.
Q: I understand that, but can you offer me any detail about how that's done?
A: No, sir.

Hearing Transcript at 29: 6-13; 31: 15-32: 17.

The Applicant's only expert has no understanding of what he is testifying to. Once again, as will be explained in the discussion of referred issue three, *infra*, the TCEQ's QUAL-TX model looks exclusively at whether the discharge will impact dissolved oxygen in the stream and does not correlate with the requirements for contact recreation, toxic pollutants, *E.coli*, or any of the other specific requirements of the TSWQS. The Applicant's expert has shown himself to be without knowledge of the subjects on which he is claims to present expert opinions. From an evidentiary standpoint his opinions are, at the very least, insufficient to carry the burden of proof.

3. The TCEQ's Mandatory Review and Analysis Failed to Cover all Referred Issues.

The results of the TCEQ's review and analysis can be found in three documents. First, there is the TCEQ water quality assessment memorandum written by Robert Hansen, which is commonly referred to as the standards memorandum. *See* Patton Village Exhibit No. 8; Executive Director's Exhibit ED-12. The standards memorandum contains the results of the TCEQ's preliminary antidegradation review and endangered species review. Second, there is the TCEQ modeling memorandum written by Mark A. Rudolph, P.E. *See* Patton Village Exhibit No. 9; Executive Director's Exhibit ED-9. The modeling memorandum documents the results of the TCEQ's QUAL-TX modeling, which looks exclusively at the impacts of the discharge on dissolved oxygen. Third, the standards memorandum and the modeling memorandum, along with a less important pretreatment memorandum that was not included in evidence, were used to create the "Statement of Basis/Technical Summary and Executive Director's Preliminary Decision" ("Technical Summary") written by Dr. Michael Redda, which is included in and considered part of the draft permit. *See* Executive Director's Exhibits ED-3 at pages 3-6; Executive Director's Exhibit ED-4. As its name suggests, the Technical Summary merely summarizes the information in the modeling and standards memoranda and contains a description of the proposed discharge.

These three TCEQ documents were exclusively relied upon by Applicant's expert. We know without question, that the TCEQ's analysis never considered potential effects on Lake Houston, the accumulation of bacteria in sediments, the re-growth of bacteria, toxic pollutants, or whether the proposed discharge will impact the hearing requestors' use of Peach Creek for recreational purposes. All of the TCEQ's review and analysis occurred before the draft permit was issued, which was long before the TCEQ referred the proposed discharge to SOAH. As a

result, it is not surprising that the TCEQ's analysis did not consider many of the referred issues or at least essential aspects of the referred issues.

B. Analysis of the Three Referred Issues.

1. Referred Issue One: The Applicant Failed to Submit Evidence or Submitted Insufficient Evidence on Whether the Proposed Discharge Would Violate TSWQS With Respect to Toxic Pollutants.

Referred issue number one asks "will the proposed discharge impact Peach Creek's ability to meet TCEQ water quality standards." The TCEQ's TSWQS include 30 TEX. ADMIN. CODE §§ 307.4(d) and 307.6(b) both of which strictly prohibit the water of Texas from being toxic to man or fish.

30 TEX. ADMIN. CODE § 307.4(d):

Toxic Substances. Surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life. Additional requirements and criteria for toxic substances are specified in § 307.6 of this title.

30 TEX. ADMIN. CODE 307.6(b):

General provisions.

(1) Water in the state shall not be acutely toxic to aquatic life in accordance with § 307.8 of this title.

(2) Water in the state with designated or existing aquatic life uses shall not be chronically toxic to aquatic life, in accordance with § 307.8 of this title.

(3) Water in the state shall be maintained to preclude adverse toxic effect on human health resulting from contact recreation, consumption of aquatic organisms, consumption of drinking water....

In relation to toxic pollutants the Applicant's only expert witness, Mr. Lazaro, testified as follows:

Q: Now, in your analysis of the impacts of this facility, did you take into account the impacts of any toxic substances?

A: No sir.

Q: Are you familiar with the term "acute toxicity"?

A: No, sir.

Q: Are you familiar with the term “chronic toxicity”?

A: No, sir.

Q: Are you familiar with the term “bioaccumulation”?

A: No, sir.

Q: In your assessment that this proposed discharge met the water quality standards of the TCEQ, did you analyze compliance with 307.4(d)?

A: I strictly depended on the Qualtex model prepared and conducted by the TCEQ staff.

Q: So your answer is “no”?

A: Yes, sir.

Mr. Blackburn: And I did- - I would object to the earlier statement in terms of being nonresponsive.

Judge Smith: Sustained.

Q: (BY MR. BLACKBURN) So let’s be clear. You did not undertake a separate analysis of whether there was toxicity - - or toxic substances, according to 30 TAC Section 307.4(d). Correct?

A: That is correct.

Q: Section 307.6, Toxic Materials, do you see that?

A: Yes.

Q: Have you ever read that section of the water quality standards before?

A: I’ve seen this table before, yes.

Q: Have you read the provisions?

A: No.

Q: How can you testify that this discharge meets the water quality standards of the State if you’ve never read them?

***(overruled objection omitted)

A: I’m basing it on the Qualtex model conducted by the TCEQ staff and their recommendations.

Hearing Transcript at 37: 12- 38: 15; 42: 14-43: 7. As Mr. Lazaro, explains in his testimony, his opinion on whether the proposed discharge will violate TSWQS with respect to toxic pollutants is based exclusively on the TCEQ’s QUAL-TX modeling. As has been mentioned repeatedly and is discussed in detail in the section related to referred issue three, *infra*, the TCEQ’s QUAL-TX modeling looks exclusively at the proposed discharges’ impacts on the receiving streams dissolved oxygen concentrations. TCEQ modeling is utterly and completely unrelated to toxic pollutants.

In fact, the TCEQ made no analysis of toxic pollutants in the proposed discharge. Robert Hansen, the TCEQ staff member in charge of water quality standards reviews, testified as follows:

- Q: Hello, Mr. Hansen. I just have a few questions for you today. So when you are reviewing a permit application, are you—excuse me – have you ever imposed permit limitations for toxic material that’s not listed in Table 1?
- A: No.
- Q: And why not?
- A: That is not part of my screening process.
- Q: What do you mean by that?
- A: When I have a permit application, I screen for what the designated uses are for the classified segment that eventually receives that discharge, and I screen for the appropriate criteria, but not for toxics.
- Q: So you don’t screen for toxics at all?
- A: I do not.
- Q: Who does?
- A: An evaluation is done by the permit writer. If it’s [the proposed discharge] greater than 1 MGD, we have a staff member who does screening for toxics.

Hearing Transcript at 261: 4-24. The TCEQ permit writer, Dr. Michael Redda, in his testimony states the following :

- Q: Fair enough. Did you consider toxic pollutants when you reviewed this application?
- A: No, sir.

Hearing Transcript at 160: 6-10. As was stated by Mr. Hansen, the reason the TCEQ staff did not consider toxic pollutants in their review is that the proposed discharge does not meet a one million gallon per day threshold. This threshold is not part of the TSWQS in 30 TEX. ADMIN. CODE § 307, and as such, has no effect on the TSWQS strict prohibition against toxicity in Texas surface waters, *supra*.

However, it is important that the TCEQ completely failed to consider toxic pollutants in its review of the proposed discharge because the Applicant’s expert alleges he relied on the

TCEQ's analysis of such when forming his opinion. In this case that simply did not happen. The TCEQ's mandatory review of the proposed discharge, on which the Applicant is entitled to rely under TCEQ rules, contained no analysis of toxic pollutants. Any opinion by Mr. Lazaro that purports to rely on such would be unreliable to such an extreme as to constitute no evidence or at the very least insufficient evidence for the applicant to carry its burden on referred issue number one as it relates to toxic pollutant. Additionally, protestant has presented evidence that toxic pollutants will more than likely be present in the proposed discharge in concentrations that require analysis, monitoring, and limitation under the TSWQS as will be discussed in section "C.1.", *infra*.

2. Referred Issue 2: The Applicant Failed to Submit Evidence or Submitted Insufficient Evidence on Whether the Proposed Discharge Would Contribute to Excess Bacteria in Lake Houston.

Referred issue number two questions "Whether the proposed discharge would contribute to excess bacteria in Peach Creek and Lake Houston." As was previously discussed, the Applicant's expert opinions were based exclusively on the TCEQ's analysis of all referred issues. With respect to referred issue two, Mr. Lazaro testified as follows:

Q: But what I'm asking is excess bacteria. You know, how did you make a determination of excess bacteria with regard to Lake Houston, specifically, if you know no information on the current levels [of bacteria] ?

A: I am depending on the parameters that were set forth in the discharge permit.

Q: So would it be fair to say you made no such assessment?

A: I did not conduct an independent assessment.

Hearing Transcript at 57: 9-14.

Again, the Applicant's expert opinions contain no additional analysis or independent assessment. Incredibly, with respect to referred issue two, Mr. Lazaro's opinion is based "on the parameters set forth in the draft permit." Whether or not the parameters set forth in the draft

permit are protective enough is the gravamen of this contested case hearing. This is not a valid basis for an expert opinion. It is akin to saying “they are protective, because they are protective.” This opinion in particular is the essence of unreliability.

If Mr. Lazaro is attempting to depend on the TCEQ to prove referred issue number two as it relates to Lake Houston, it is inappropriate not only because the Applicant has the burden of proof with respect to this issue, but also because the TCEQ’s review and analysis never considered Lake Houston.

For example, Dr. Michael Redda, the TCEQ staff member responsible for the Technical Summary in the Draft Permit, relied on three TCEQ interoffice memoranda to complete his Technical Summary. These memoranda made no reference to or mention of Lake Houston:

Q: So on any of the memorandum – any of the documents that you relied on in making that section of the permit, was Lake Houston considered?

A: No, sir.

Hearing Transcript page 147: 21-24. Later when discussing his analysis of the adequacy of the treatment process to meet the designated water quality, Dr. Redda testifies as follows:

Q: I’d like to move back to Pages 5 and 6 of your testimony. So, just going through the list of things that you review in a municipal wastewater permit application, you consider the appropriateness and adequacy of the treatment process to meet the designated water quality?

A: Yes.

Q: In that case, that wouldn’t include Lake Houston. Is that correct?

A: Yes. The water is basically made for Peach Creek, so we were working on Peach Creek.

Hearing Transcript at 154: 6-16.

In the TCEQ’s review of the proposed discharge, the staff only considered, only analyzed, and only modeled for potential impacts on Peach Creek. Impacts to bacteria levels in Lake Houston were simply not considered. The TCEQ’s other witnesses confirm what Dr. Redda testified to. Mark Rudolph, the TCEQ’s modeler for this permit application, testified

that “my analysis was exclusively for dissolved oxygen impact.” (Hearing Transcript page 195: 9-10). Robert Hansen, the TCEQ staff member responsible for the water quality standards review and author of the standards memorandum, testified as follows

Q: And as part of your work, did you undertake any analysis of Lake Houston for your testimony?

A: No, I did not.

Hearing Transcript at 232: 4-6.

The fact that the TCEQ never considered impacts on Lake Houston is important to the extent that the Applicant purports to rely on the TCEQ’s analysis to prove this issue. During the TCEQ’s mandatory review and analysis of this proposed discharge, the only analysis and review on which the Applicant may rely to meet their burden, impacts on Lake Houston were not considered. Because the Applicant’s expert purports to rely exclusively on the TCEQ’s analysis with regard to this issue, his opinion is inherently unreliable. The Applicant has again failed to meet its burden by presenting no evidence on this issue as it relates to Lake Houston, or at the very least evidence that is so inherently unsupported and unreliable as to constitute insufficient evidence.

3. Referred Issue 3: The Applicant Failed to Submit Evidence or Submitted Insufficient Evidence on Whether the Proposed Discharge Would Impact the Hearing Requestor’s Recreational Use of Peach Creek.

Once again, Mr. Lazaro, the Applicant’s sole expert witness testified that his opinions as to referred issue three relied exclusively on the TCEQ’s analysis:

Q: Now did you offer an opinion as to whether Peach Creek would be suitable for contact recreation after the - - if this permit were allowed to be issued?

A: The only thing that I can base that in - - on is the Qualtex model that was conducted by the TCEQ, and that indicates that it would not have a significant impact.

- Q: That's the Qualtex model that you haven't been able to tell me any details about. Is that the same model?
- A: That is the model that model that was conducted by the TCEQ, yes.

Hearing Transcript at 34: 12-23. Unfortunately for the Applicant, the TCEQ's QUAL-TX model has nothing to do with whether the proposed discharge would be protective of contact recreation. The TCEQ's QUAL-TX model is used exclusively to determine what effect the discharge will have on dissolved oxygen levels in the receiving stream and has no relationship to *E. coli* or the presence of other pathogens that may harm people in the water. Mark Rudolph, the TCEQ staff member responsible for the QUAL-TX modeling of the proposed discharge, explains this fully in his supplemental direct testimony:

- Q: And, Mr. Rudolph, I just have a few questions for you, if you don't mind turning to your prefiled testimony, Page 5. I believe there have been a lot of questions asked regarding bacteria and DO modeling. And on Line 29, the question was asked, "Did the bacteria impairment affect your analysis or any of your recommendations?" Can you please tell me what your answer was?
- A: The answer was, "No."
- Q: And can you please explain to me why you answered no?
- A: The bacteria impairment referred to here is based on those bacteria standards designed to protect for contact recreation, and **my analysis was exclusively for dissolved oxygen impact**. While it's true that bacteria play a role in the assimilation of oxygen main constituents, that's a separate class of bacteria than those referenced here. These here are the contact recreation specific bacteria.

Hearing Transcript at 198: 20-199:15 (emphasis added). Mr. Rudolph testifies as follows in his prefiled testimony:

- Q: Briefly, what are your job duties at the TCEQ specifically related to the technical review of the application for the wastewater discharge permit for the City of Patton Village?
- A: My responsibility with regard to this application is the evaluation of the proposed discharge with respect to its potential to negatively affect on [sic] dissolved oxygen (DO) in Peach Creek (Segment 1011). More specifically, I evaluate potential effluent sets using mathematical models, or other analytical techniques, to determine what level of treatment is required to

meet the average daily DO criteria assigned to the receiving waters. Based on the results of the analyses, I recommend specific requirements for oxygen-related constituents.

Exhibit ED-7 at 2: 32-3: 2. It might be standard practice or common practice for an applicant to rely on the TCEQ's modeling in relation to a proposed discharge's effect on dissolved oxygen levels of the receiving waters and by natural extension the proposed discharges effects on aquatic life uses as they relate to dissolved oxygen.³ However, relying on the TCEQ's modeling for anything else is improper. Mr. Lazaro testimony on issue number three amounts to no evidence or at the very least is so inherently unreliable as to constitute insufficient evidence. Either way, the Applicant has failed to carry its burden on this issue and the permit should be denied.

C. Evidence Presented and Developed by Protestant

1. The Presence of Endocrine Disruptors in the Wastewater Discharge.

Peach Creek is a tributary of Lake Houston, which is the primary source of drinking water for the City of Houston. With the exception of Mark Rudolph, the testimonies of all expert witness in this case contained a significant discussion on endocrine disruptors, as a class of toxic pollutants some of which are known to be present in wastewater discharges. Endocrine disruptors that are known to be associated with municipal wastewater discharge include estrogen, synthetic estrogens (birth control and hormone replacement products), phthalates, and nonionic surfactants mainly alkyphenol ethoxylates the most talked about of which is nonylphenol.

Nonylphenol is, in fact, so well studied that the EPA, in December of 2005, published a national water quality criteria for protection of aquatic life for nonylphenol. See Protestant's Exhibit P-13. As EPA Document EPA-822-R-05-005 titled *Aquatic Ambient Water Quality*

³ For more information on TCEQ QUAL-TX modeling see TCEQ guidance document RG-194(Revised), January 2003, and titled *Procedures to Implement the Texas Surface Water Quality Standards* at 17-21. The section on modeling is titled "Modeling Dissolved Oxygen."

Criteria – Nonylphenol discusses, nonylphenol is known to be both acutely toxic and chronically toxic to aquatic life. *Id.* at 9-12; *Id.* at 13-16. As this EPA document describes, nonylphenol has been shown to be one of the most commonly occurring organic wastewater contaminants and has been measured at higher concentrations than most other organic contaminants of concern. *Id.* at 3. Nonylphenol is known to accumulate in sediments and bioconcentrate in aquatic life. *Id.* 4-6. Exposure of rainbow trout to seemingly insignificant concentrations of nonylphenol (as small as 1µg/L) significantly reduced the mortality rate and reproductive success of their progeny, meaning that seemingly insignificant adult exposure has been shown to have significant effects on subsequent offspring. *Id.* at 29. Nonylphenol has been repeatedly shown to have estrogenic effects on aquatic life. *Id.* at 26-27. The EPA final criteria document, admitted into evidence as Protestant’s Exhibit P-13, sets the national criteria for protection of aquatic life at a one hour average concentration not to exceed 28 µg/L more than once every three years on average and a four day average concentration of nonylphenol not to exceed 6.6 µg/L more than once every three years. *Id.* at 34.

Most nonylphenol enters the environment as 4-alkylphenol polyethoxylate surfactants which degrade into nonylphenol, in part, through the sewage treatment process. *Id.* at 3-4. Protestant’s expert, Ms. Mary Ellen Whitworth, testified that that the influent to the City of Patton Villages proposed wastewater treatment plant will contain alkylphenol ethoxylates and specifically nonylphenol in its influent as a result of these chemicals being common ingredients in household detergents. Hearing Transcript at 118: 23- 119: 7; Protestant Exhibit P-2 at 11: 21-12: 3-8. The testimony of the ED’s expert witness, Dr. Michael Redda, also tends to be supportive of nonylphenol presence in the effluent as well. Hearing Transcript at 166: 3-169: 22.

There is ample evidence in the record to show than alkyphenol ethoxylates will more than likely be present in the wastewater influent. We know from the EPA national criteria document that nonylphenol is one of the most commonly occurring wastewater contaminants and that it is a known degradant of alkyphenol ethoxylates. On the strength of the referenced testimony and documentation, Protestant argues that nonylphenol is virtually certain to be present in the wastewater discharge proposed by the Applicant.

Based on the known toxicity of nonylphenol, the strict prohibition against toxicity in the TSWQS, and the near certainty that nonylphenol will be present in the discharge. Protestant believes that at a minimum, the TSWQS and related guidance require an analysis of this dangerous substance especially considering that Peach Creek is a tributary for the source of the majority of the City of Houston's drinking water. *See generally* 30 TEX. ADMIN. CODE §§ 307.5 and 307.6; *Procedures to Implement the Texas Surface Water Quality Standard*, TCEQ Document RG-194, pages 51-85 (Revised) (January 2003).

Similarly, we know that phthalates are present in at least some wastewater discharges. Protestant Exhibit P-15 at 23, Table 3. Protestant Exhibit P-15, a U.S. Geological study on the endocrine disruption of wastewater effluent on fish in California, concludes that exposure to endocrine disrupting compounds followed the gradient of proximity to wastewater treatment discharges, and the most significant effects were found at the point source. *Id.* at 1. This same study shows a strongly negative correlation between blood testosterone levels in fish and concentrations of phthalates in the water. *Id.* at 38, Figure 31; *Id.* at 39. The ED's expert, Dr. Michael Redda also testified about the presence of estrogens and synthetic estrogens in the wastewater effluent and that based on mammal studies he was aware of, *in utero* exposure to tiny concentration of these substance can have significant and lifelong detrimental effects on the

subsequent individuals. Hearing Transcript at 169: 24- 171: 15. None of these endocrine disruptors or their potential effects on the downstream human and aquatic populations were addressed by the Applicant or the ED. Protestant believes, that there is sufficient evidence of the endocrine disrupting effects of these substances and their probably presence in the proposed effluent to warrant further review and analysis under the TSWQS sections relating to toxicity and antidegradation. *See generally* 30 TEX. ADMIN. CODE §§ 307.5 and 307.6; *Procedures to Implement the Texas Surface Water Quality Standard*, TCEQ Document RG-194, pages 51-85 (Revised) (January 2003).

2. *E. coli* is has not been Shown to be Reliable as an Indicator of Pathogens.

Finally, Protestant's expert, Ms. Whitworth, testified that "using *E. coli*, which is a type of fecal coliform, as the sole indicator organism for pathogens has not been proved to accurately predict the presence or absence of pathogens." Protestant's Exhibit P-2 at 9: 24-26. In fact, Ms Whitworth relied on and testified concerning an EPA literature review in which the EPA recommends that regulators will need to use more than one indicator species to accurately predict the presence or absence of pathogens. Protestant's Exhibit P-2 at 9: 1-7; Protestant's Exhibit P-6. Ms. Whitworth also testifies concerning the study by Harwood et al. on the ineffectiveness of using fecal coliform and other traditional indicators of pathogens and the need to use more than one indicator organism. Protestant's Exhibit P-2 at 9: 7-19; Protestant's Exhibit P-8. As Ms. Whitworth asserts this causes a potential lack of safety that will likely impact the downstream use of Peach Creek. Protestant's Exhibit P-2 at 9: 26-27. Ms. Whitworth also recommended that the testing for the protzoa *Giardia* and infectious *Cryptosporidium* as they can make people very sick and are known to be treatment resistant. Protestant's Exhibit P-2 at 9:29-31.

VIII. TRANSCRIPT COSTS

Under the Administrative Procedures Act, the costs of the transcript for a contested case may be assessed to one or more parties. TEX. GOV'T CODE § 2001.059. The TCEQ contested case rules require the Commission to consider the following factors in assessing transcript cost:

1. the party who requested the transcript;
2. the financial ability of the party to pay the costs;
3. the extent to which the party participated in the hearing;
4. the relative benefits to the various parties of having a transcript;
5. the budgetary constraints of a state or federal administrative agency participating in the proceeding;
6. in rate proceedings, the extent to which the expense of the rate proceeding is included in the utility's allowable expenses; and
7. Any other factor which is relevant to a just and reasonable assessment of costs.

30 TEX. ADMIN. CODE § 80.23(d)(1). An evaluation of these factors reflects that the City of Patton Village, the Applicant in this proceeding, should pay all of the transcription cost of this proceeding.

The Applicant is the party seeking the privilege of operating a wastewater treatment facility and discharging effluent in the waters of the State of Texas. Such a facility will likely constitute a source of revenue for the Applicant, and this benefit will come at the expense of burdening the downstream users, which includes the Protestant Ms. Casenave. At the same time the Applicant has presented testimony and evidence that the facility will be built with of federal funding and loans. The Applicant can hardly complain about the negligible cost associated with transcription when compared with the substantial benefit it expects to receive from this permitting process. The Applicant knew that there were existing landowners bordering the creek near its proposed discharge, that its proposed discharge was into a tributary of the main source of drinking water for the City of Houston, and that Peach Creek is well used for recreational

purposed and highly regarded as a natural resource. The Applicant either knew or should have known that the proposed discharge could have led to a contested case hearing with the associated expenses.

Ms. Casenave, on the other hand, has nothing to gain from this proceeding. Ms Casenave, with few resources, is merely trying to maintain her position and that of the public interest. Ms. Casenave's burden of participating in this proceeding should not be further compounded by requiring her to pay transcription fees. The Applicant proposes to burden its neighbors with a wastewater discharge directly upstream of their properties. Any cost associated with gaining this privilege and its resulting benefits should in fairness be borne by them alone.

IX. SUMMARY

The Applicant has failed to carry its burden and failed to heed the evidentiary requirements of the TCEQ, SOAH, and the State of Texas. The cumulative impact of this proposed discharge and many other existing discharges into the Lake Houston watershed have major public health implications, including the potential toxic effects on the citizen of the largest city in Texas. Despite well settled science on the presence of environmental estrogens, nonylphenol, phthalates, and other notorious endocrine disruptor in wastewater effluent, both the TCEQ and the Applicant have failed to consider the effects these toxic substances will have on the uses of the receiving water and the health of the downstream public.

Ms. Casenave, as an affected landowner, protested this application to discharge wastewater into the creek that borders her property in good faith. The Applicant has had every opportunity to prepare for and present credible evidence and utterly failed to do so. The Applicant's sole expert, Mr. Lazaro, repeatedly based his opinions on the TCEQ's QUAL-TX modeling. Mr. Lazaro failed to demonstrate even the most basic gasps of what QUAL-TX

modeling is and even what the TCEQ models for. Mr. Lazaro repeated proved himself to be wholly incredible and unreliable with respect to the opinions he presents in this case. In summary, the Applicant failed to carry its burden of proof and this permit should be denied.

X. FINDINGS OF FACT

Adriana Casenave offers the following Findings of Fact regarding the issues briefed above:

1. The Commission referred the following disputed, relevant and material issues of fact to SOAH for consideration:
 - a. Will the proposed discharge impact Peach Creek's ability to meet TCEQ water quality standards;
 - b. Whether the proposed discharge would contribute to excess bacteria in Peach Creek and Lake Houston; and
 - c. Will the proposed discharge impact the hearing requestor's use of Peach Creek for recreational purposes.
2. The Applicant rested its direct case without offering sufficient and admissible evidence to prove that the proposed discharge would not impact Peach Creek's ability to meet TCEQ water quality standards.
3. The Applicant rested its direct case without offering sufficient and admissible evidence to prove that the proposed discharge would not contribute to excess bacteria in Peach Creek and Lake Houston.
4. The Applicant rested its direct case without offering sufficient and admissible evidence to prove that the proposed discharge would not impact the hearing requestor's use of Peach Creek for recreational purposes.

XI. CONCLUSIONS OF LAW

Adriana Casenave offers the following Conclusions of Law regarding the issues briefed above:

1. Pursuant to 30 TEX. ADMIN. CODE §§ 80.17(a) and (e), 80.108(e), and 80.117(b), Applicant had the burden of proof on all issues in controversy.
2. The Applicant failed to offer sufficient and admissible evidence proving that, in accordance with TEX. WATER CODE §§ 26.023 and 26.027, the proposed wastewater treatment plant under the terms of the draft permit would maintain and protect the existing instream uses and Texas Surface Water Quality Standards of the receiving waters.
3. The Applicant failed to offer sufficient and admissible evidence to meet its burden of proving that, in accordance with TEX. WATER CODE § 26.041, the proposed wastewater treatment plants discharge under the terms of the draft permit would not be injurious to public health and are consistent with the Texas Surface Water Quality Standards.
4. The Applicant failed to offer sufficient and admissible evidence to meet its burden of proving that, in accordance with the policy of the State of Texas, as set forth in TEX. WATER CODE § 26.003, discharges pursuant to the draft permit would allow the state to maintain the quality of water in the state consistent with the public health and enjoyment, the propagation and protection of terrestrial and aquatic life, and the operation of existing industries, taking into consideration the economic development of the state.

5. The City of Patton Village's application should be denied and TPDES Permit No. WQ0014926001 should not be issued.

XII. ORDERING PROVISIONS

Adriana Casenave hereby recommends that the following provisions be ordered:

1. That the Application of the City of Patton Village be denied and TPDES Permit No. WQ0014926001 should not be issued.
2. That the Applicant, City of Patton Village, pay all transcription and reporting costs.
3. That all motions, requests for entry of specific Findings of Fact or Conclusions of Law, and any other requests for general or specific relief, if not expressly granted, be denied.
4. That the effective date of the Administrative Law Judge's Order be the date the Order is final, as provided by 30 TEX. ADMIN. CODE § 80.273 and TEX. GOV'T CODE § 2001.144.
5. That the Commission's Chief Clerk forward a copy of Administrative Law Judge's Order to all parties.
6. That if any provision, sentence, clause, or phrase of the Administrative Law Judge's Order is for any reason held to be invalid, the invalidity of any provision shall not affect the validity of the remaining portions of the Order.

Respectfully submitted,

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by



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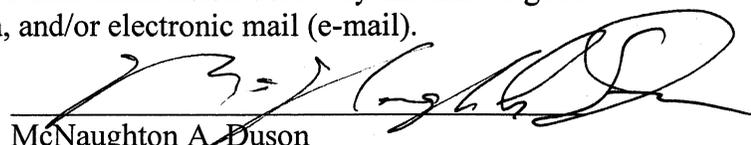
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**COUNSEL FOR PROTESTANT
ADRIANA CASENAVE**

CERTIFICATE OF SERVICE

On this 12th day of May, 2010, a true and correct copy of the foregoing instrument was served on the attorneys of record and unrepresented individual listed below by the undersigned via regular U.S. Mail, and/or facsimile transmission, and/or electronic mail (e-mail).


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