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

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

DIAMOND BACK RECYCLING AND SANITARY LANDFILL, LP'S EXCEPTIONS TO PROPOSAL FOR DECISION

COMES NOW, Diamond Back Recycling and Sanitary Landfill, LP ("Applicant") and presents these Exceptions to the Proposal for Decision ("PFD") in the above-styled matter, and would respectfully show the following:

I. Introduction

The subject application was filed in 2019, undergoing 1.5 years of technical review by the staff of the Texas Commission on Environmental Quality ("TCEQ"), resulting in a checklist of 1,031 items reviewed. The TCEQ's expert reviewers ultimately found the application in compliance with all regulatory requirements for permitting a municipal solid waste ("MSW") landfill, including the requirement that existing drainage patterns not be adversely affected. In the course of their extensive review, TCEQ staff found no "fatal" impediments to permitting the proposed facility– i.e., site conditions posing a threat to human health or the environment that could not be overcome, such as depth to groundwater, floodplain incursions, wetlands, seismic impact zones, or land use compatibility.

Of twenty issues requested by the protestants, nineteen were referred to the State Office of Administrative Hearings ("SOAH") for adjudication. Four issues were later dismissed pursuant to an agreed motion to dismiss stipulated issues. Three further issues were

effectively abandoned by the protestants, who presented no evidence or argument relating to them. Out of the twelve remaining issues adjudicated in this matter, the PFD correctly concluded that the protestants had failed to present sufficient rebuttal evidence[1] on eleven of them.

Ultimately, the PFD recommended denial of the entire application based on a single referred issue: whether the Applicant provided a sufficient surface water drainage report. The recommendation is based on two related lines of analysis: 1) whether existing, pre-development drainage conditions are accurately modeled, and 2) whether the stormwater detention ponds are of adequate size. Crucially, the applicable rules provide a "roadmap" for applicants to demonstrate that existing drainage patterns will not be adversely altered in terms of modeling both existing drainage conditions, and sizing of detention ponds, based on regulation-prescribed engineering calculations. The record of this proceeding clearly establishes that Applicant followed the regulatory "roadmap." As required by 30 Tex. Admin. Code §330.305(f)(1), Applicant utilized the Rational Method to calculate "peak flows" for predevelopment and post-development conditions at the site resulting from the 25-year storm event. Applicant utilized the recognized and accepted Modified Rational Method to calculate the volume of storage necessary for the proposed detention ponds to control runoff from the 25-year storm event, including the 24-hour storm duration event, to ensure that peak flows from the site during pre- and post-development conditions would be substantially similar.

However, the recommendation to deny the subject application was based primarily on the opinion of an individual, Mr. Lawrence Dunbar, who was hired by the principal protestant

[1] Pursuant to Tex. Gov't Code § 2003.047(i-2), as implemented in 30 Tex. Admin. Code § 80.117(c)(1)-(3), the filing of the Administrative Record established a prima facie case that the draft permit proposed by the TCEQ's Executive Director ("ED") meets all state and federal legal and technical requirements, and the permit, if issued consistent with the ED's draft permit, will protect human health and safety, the environment, and physical property. To rebut the prima facie case, the protestants must present evidence to that "demonstrates that one or more provisions in the draft permit violate a specifically applicable state or federal requirement."

for the sole purpose of defeating the application. Mr. Dunbar's opinion was clearly tailored to undermine the subject application and was based not on the methodologies mandated by the applicable TCEQ regulations, but on an unrecognized methodology of Mr. Dunbar's own devising. None of Mr. Dunbar's "calculations" or drawings were sealed with his State of Texas professional engineering seal, a tactic that prevents him from being held accountable as a professional engineer and allows him to evade any potential repercussions from the Texas Board of Professional Engineers. Applicant's Surface Water Drainage Report was sealed by Mr. Todd Stiggins, which makes him accountable not only to his client, but to the TCEQ and the State of Texas. Mr. Stiggins, through application of his seal, is placing his professional reputation and career on the line.

The administrative law judge's ("ALJ") analysis reached an erroneous conclusion based on misinformation and confusion generated by Mr. Dunbar's incorrect, unrecognized methodologies and assumptions. This flawed analysis resulted in erroneous findings of fact and conclusions of law on the issue of Applicant's surface water drainage report, and ultimately in the erroneous recommendation of denial.

II. Applicant's Surface Water Drainage Report Meets All Applicable Regulatory Standards

The TCEQ rule located at 30 Texas Administrative Code § 330.63(c)(1) mandates that an application for a MSW facility permit must contain a surface water drainage report, one component of which is a drainage analysis, including the following:

> (C) sample calculations provided to verify that existing drainage patterns will not be adversely altered;
>
> (D) a description of the hydrologic method and calculations used to estimate peak flow rates and runoff volumes including justification of necessary assumptions:
>
> (i) the 25-year rainfall intensity used for facility design including the source of the data; all other data and necessary input parameters used in

conjunction with the selected hydrologic method and their sources should be documented and described;

(ii) hydraulic calculations and designs for sizing the necessary collection, drainage, and/or detention facilities;

(iii) discussion and analyses to demonstrate that existing drainage patterns will not be adversely altered as a result of the proposed landfill development… [emphasis added].

Further rules pertaining to this issue are located in Subchapter G of the same Title. Specifically, Rule § 330.303(a) requires that "[a] facility must be constructed, maintained, and operated to manage run-on and runoff during the peak discharge of a 25-year rainfall event…." Rule § 330.305 contains additional requirements specific to landfills, including the following relevant provisions describing a framework for applicants to demonstrate that drainage patterns will not be adversely altered:

(a) Existing or permitted drainage patterns must not be adversely altered.

(b) The owner or operator shall design, construct, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during the peak discharge from at least a 25-year rainfall event.

(c) The owner or operator shall design, construct, and maintain a runoff management system from the active portion of the landfill to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

***

(f) The owner or operator shall assess the existing and proposed drainage characteristics of the facility using the following methods.

(1) Calculations for areas of 200 acres or less must follow the rational method and utilize appropriate surface runoff coefficients, as specified in the Texas Department of Transportation (TxDOT) Bridge Division Hydraulic Design Manual. Time of runoff concentration as defined within the manual generally will not be less than ten minutes for rainfall intensity determination purposes. The owner or operator may use equivalent or better methods approved by the executive director [emphasis added].

As demonstrated in the original application, at the hearing on the merits, in briefing, and herein, Applicant's surface water drainage report meets all applicable standards, demonstrating, through the clearly prescribed methodology, that existing drainage patterns will not be adversely altered.

A. There is no competent evidence that peak discharge was not correctly calculated based on the applicable regulatory standards.

The ALJ improperly favored Mr. Dunbar's unrecognized methodology over the Applicant's Rational Method calculation, effectively substituting Mr. Dunbar's opinion and unnamed methodology over the governing regulatory standard. Mr. Dunbar's calculations produce a result that appears unfavorable to Applicant precisely because they were intentionally tailored to do so. However, this is not credible evidence that the Applicant's methods were incorrect, and no credible evidence to that effect appears in the record.

Section 330.305(b) requires calculating peak discharge of a 25-year rainfall event. As noted above, TCEQ Rule § 330.305(f)(1) specifically requires pre-development drainage characteristics for areas of 200 acres or less, including peak discharge, to be assessed using the Rational Method.[2] TCEQ guidance document RG-417[3] provides the Rational Method equation: $Q = CIA$. The elements of this equation are explained in the original application.[4] "Q" represents the maximum rate of runoff in cubic feet per second ("cfs"), i.e. "peak discharge"; "C" represents the runoff coefficient; "I" represents average rainfall intensity in inches per hour based on the location and the time of concentration of a given drainage area; "A" represents the surface area of the drainage area in acres.[5] The application also presents

[2] 30 Tex. Admin. Code § 330.305(f)(1).
[3] Exhibit Knox-15, p. 7.
[4] Exhibit Applicant-202.
[5] *See id.* at III.C-3 (Rev 00 – 05.31.19).

the equations used for calculating the runoff coefficient and rainfall intensity values based on data contained in and supported by the Texas Department of Transportation ("TxDOT") Hydraulic Design Manual.[6]

A basic assumption of the Rational Method is that the peak flow occurs when the storm duration is the same as the time of concentration.[7] Therefore, the value of "Q" (peak discharge) is calculated with a storm duration equal to the time of concentration. Time of concentration is defined in the TxDOT Hydraulic Design Manual as "the time required for an entire watershed to contribute to runoff at the point of interest for hydraulic design; this time is calculated as the time for runoff to flow from the most hydraulically remote point of the drainage area to the point under investigation."[8] The maximum rate of discharge in pre-development conditions is not based on a 25-year storm event lasting precisely 24 hours;[9] it is not regulatorily required to be based on a 24-hour duration storm event, and it is not scientifically valid for it to be based on a 24-hour duration storm event.[10] Pursuant to the Rational Method, as mandated by the applicable rule, the maximum rate of discharge is based on a 25-year storm event with a duration equal to the time of concentration for a given drainage area.

Mr. Dunbar's method introduces additional, unsubstantiated, unverified terms into the Rational Method equation, namely the length of the permit boundary and the length of the

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[6] *See id.* at III.C-3 and III.C-4 (Rev 00 – 05.31.19).
[7] CAMILLE THOMASON, HYDRAULIC DESIGN MANUAL Ch. 4 § 12 (Tex. Dept. of Transportation 2019).
[8] *See* CAMILLE THOMASON, HYDRAULIC DESIGN MANUAL Ch. 4 § 11 (Tex. Dept. of Transportation 2019). Note that TxDOT does not refer to a "discharge point" but rather to the "point of interest." This is an important distinction, as the Rational Method is capable of determining a peak flow rate for runoff at a point of interest (i.e., a comparison point) regardless of the type of flow; *see* further discussion, *infra*.
[9] *See* Tr. Vol. III, 122:23 – 123:15, 125:5-11: Mr. Stiggins on cross-examination confirms statements he made during his deposition to the effect that a "25-year, 24-hour" storm is not a storm that "lasts 24 hours," but a "rainfall event that you would expect to see statistically every 25 years and if that event only happened once in a 24-hour period."
[10] 30 Tex. Admin. Code § 330.305(b).

weir, which, in addition to departing from the TCEQ-mandated method, have the effect of artificially reducing the calculated maximum rate of runoff. In his testimony, Mr. Dunbar explained that he "kind of did a proration based on the – kind of weighting the area and the length of that permit boundary and estimated it would be around 5 cfs or less than 5 cfs, something like that."[11] Mr. Dunbar's "proration," which he accomplished by introducing additional terms for permit boundary length and weir length, transforms the equation from the rule-mandated Rational Method into an unqualified and unsupported method that is incongruous with TCEQ regulations. Moreover, despite the fact that this calculation is performed for pre-development conditions, Mr. Dunbar includes the weir proposed to be constructed for the detention ponds serving the landfill in his calculation – a structure that is not present in pre-development conditions. To include such a term in this calculation is not only improper, but completely divorced from TCEQ guidance.[12] Mr. Dunbar's unnamed methodology is not recognized by the TCEQ or TxDOT; it was designed to artificially reduce the calculated maximum rate of runoff to a much lower value than the actual Rational Method equation would produce. In other words, Mr. Dunbar's calculations attempt to replace the TCEQ-mandated method with an untested, unrecognized standard of his own invention. It is erroneous and improper for the PFD to accept Mr. Dunbar's unrecognized method in place of the rule-mandated Rational Method.

Furthermore, contrary to Mr. Dunbar's claims, the Applicant's use of "comparison points" to calculate velocity and peak flow at the permit boundary is the proper, recognized method required by TCEQ regulations and regulatory guidance documents. TCEQ RG-417

[11] Tr. Vol. II, 65:6-9.

[12] "The existing drainage patterns for a new landfill or compost facility are the patterns at the time the application is submitted . . . Post-development or proposed development drainage patterns for new landfills, compost facilities, and for expansions of an existing permitted facility are the drainage patterns which occur at the proposed site closure conditions (i.e., post-development conditions)" Exhibit Knox-15, p. 4.

requires an applicant to calculate velocity and peak flow at "discharge points," points being, by definition, single locations along the permit boundary, and not linear boundaries. Discharge points include "locations where storm water runoff leaves the permit boundary by open channel flow, overland flow, flow through hydraulic structures, etc. [emphasis added]."[13] In no way does the applicable rule or regulatory guidance recommend or require Applicant to include the length of the permit boundary or the length of the currently non-existent weir in its pre-development drainage calculations. Shoehorning these terms into the Rational Method equation is improper and fails to meet the applicable regulatory standards cited above.

To rebut the prima facie case established by the filing of the Administrative Record, protestants were required to show that the draft permit if issued would violate a specifically applicable state or federal regulatory requirement. In this case, the subject application met all regulatory requirements by using the Rational Method. The Application utilized the Rational Method to calculate the peak flow ("Q") at a single discharge point by using the area ("A"), the runoff coefficient based on of the TxDOT Hydraulic Design Manual ("C"), and the intensity based on of the intensity coefficients ("I") included in the TxDOT Hydraulic Design Manual for the location and the calculated time of concentration for the drainage area. It is important to note that Mr. Dunbar did not dispute any of the inputs that Applicant utilized with the Rational Method. Mr. Dunbar has not challenged the way the Rational Method was calculated, but instead he is challenging the Rational Method itself. Mr. Dunbar's opinion is based on his own unsubstantiated and manipulated process, not the applicable regulatory requirements. Thus, his opinion is not competent evidence to rebut the prima facie demonstration established by the filing of the Administrative Record.

[13] Exhibit Knox-15, p. 3.

B. There is no competent evidence that the detention ponds are not sized correctly based on the applicable regulatory standards.

On the subject of detention pond sizing, the PFD is incorrect in at least three critical ways. First, the conclusion that Applicant's engineer, Mr. Stiggins, did not use the 25-year, 24-hour storm in designing the detention ponds is incorrect and is inconsistent with the evidentiary record. Second, the PFD fails to recognize that Applicant utilized the Modified Rational Method for determining stormwater runoff volume, as opposed to "a modified rational method." Finally, the analysis again allows Mr. Dunbar to substitute his own unrecognized, unproven methodology in place of the applicable regulatory standard.

1. Applicant properly utilized 25-year storm data to size the detention ponds.

Applicant utilized the correct storm data in its calculations, as the record makes abundantly clear. The relevant portions of the application state that "[s]urface water has been analyzed for the 25-year, 24-hour rainfall event, consistent with 30 TAC §330.63(c)(1)(D)(i)."[14] "Detention ponds and weir outfall structures have been sized to mitigate runoff flow rates, velocities, and volumes during a 25-year, 24-hour rainfall event…. Increase in volume for Drainage Areas A and B is detained during high-flow conditions and allowed to drain during low-flow conditions to meet design requirements of a 25-year, 24-hour storm event."[15] "Perimeter drainage system (channels and ponds) are designed in accordance with rules to accommodate peak runoff from the 25-year, 24-hour rainfall event."[16] In reference to Exhibit Applicant-204, Mr. Stiggins states in his prefiled testimony that "[t]he lines on these graphs represent hydrographs for different durations of a 25 year, 24 hour rainfall event."[17]

[14] Exhibit Applicant-202 at III.C-2 (Rev 00 – 05.31.19).
[15] *Id.* at III.C-10.
[16] *Id.* at III.C-14.
[17] Exhibit Applicant-200 at p. 18, lines 19-20.

The ALJ's claim that Mr. Stiggins "testified" that he did not use the 25-year, 24-hour storm when designing the detention ponds is simply not supported by the evidence in the record.[18] Mr. Stiggins actually testified that a particular hydrograph does not show a 24-hour duration, because a 25-year storm with a 24-hour duration has a much lower intensity than a storm with a shorter duration, resulting in lower peak flow rates that would not be sufficient to fill the detention ponds.[19] The significance of this distinction is visible in the graphic presented as Exhibit Applicant-204, which illustrates the relationship between the duration of a storm event, the peak flow rate generated, and the storage volume required. The "Pond A Storm Duration and Volume Hydrographs" shows that a storm duration of approximately 34 minutes produces a peak flow rate of approximately 177 cfs, a storm duration of 110 minutes produces a peak flow rate of approximately 75 cfs, and so on. Extrapolating from the trends shown on the graph, a storm duration of 24 hours (1,440 minutes) would produce a peak flow rate far less than the allowable outflow rate. There was no need for the hydrograph to show a storm with a duration of 24 hours because the intensity of such a storm would be too low to produce a peak flow rate capable of resulting in storm water detention.

Mr. Dunbar distorts his evidence by claiming that a 25-year, 24-hour storm event could possibly have a peak flow of 177 cfs. As discussed above, the Rational Method requires the assumption that peak flow occurs when the storm duration is equal to the time of concentration. Another basic assumption of the Rational Method, which is therefore also applicable to the Modified Rational Method, is that rainfall intensity is uniform throughout the duration of the storm.[20] As such, the peak flow of 177 cfs is based on a 25-year storm

[18] Again, part of the confusion stems from conflating a storm's duration with a storm's statistical likelihood of recurrence within a given period of time; see FN 10, *supra*.
[19] *See* Tr. Vol. III, 124:19 – 125:9; Exhibit Knox-12, pp. 1-2.
[20] CAMILLE THOMASON, HYDRAULIC DESIGN MANUAL Ch. 4 § 12 (Tex. Dept. of Transportation 2019).

event with a duration of 34 minutes, and therefore an intensity of 3.66 inches per hour, as determined by the TxDOT hydraulic design manual.[21] As a storm's duration increases, its intensity decreases, and therefore the peak flow rate decreases. A 25-year storm event with a duration of 24 hours will have a much lower intensity (around 0.18 inches per hour based on data available through the TxDOT Hydraulic Design Manual[22]) and therefore a much lower flow rate than that of a 25-year storm event with a shorter duration and higher intensity. With the extremely low intensity of a 25-year, 24-hour storm, no detention would be required because the runoff rate would not exceed pre-development conditions. The graphs in Exhibit Applicant-204 show the results of a series of design storm events, including the event that would require the maximum amount of detention required to regulate flow to pre-development condition levels. The Applicant correctly provided a volume that in fact exceeded the maximum amount of detention required to regulate flow to the pre-development conditions in the proposed detention ponds, as determined by the Modified Rational Method.

2. *The Modified Rational Method is recognized and accepted by TCEQ for determining storm water volume.*

The PFD repeatedly refers to the Applicant utilizing "a modified rational method" in its calculations. This characterization misrepresents the facts, implying that the Applicant or its contractors themselves "modified" the Rational Method in some unknown fashion. In fact, the Modified Rational Method is a recognized and approved methodology for calculating detention pond sizes that was developed in 1974 by Herbert G. Poertner.[23] The Modified Rational Method was approved for use in the subject application by the TCEQ and is also

[21] CAMILLE THOMASON, HYDRAULIC DESIGN MANUAL Ch. 4 § 12 (Tex. Dept. of Transportation 2019): *see* subsection on Rainfall Intensity.
[22] *Ibid.*
[23] HERBERT G. POERTNER, PRACTICES IN DETENTION OF URBAN STORMWATER RUNOFF (American Public Works Association 1974).

recognized in TxDOT regulatory guidance.[24] As Mr. Stiggins explained in his pre-filed testimony, the Modified Rational Method was selected because it provided results consistent with the Rational Method, as required by the applicable rules for the pre-development drainage characterization; other hydrology methods differ significantly enough that they cannot reliably be compared.[25]

3. Mr. Dunbar's unrecognized methodology is not a substitute for the applicable regulatory standards.

Notably, Mr. Dunbar agreed on cross-examination that the Modified Rational Method is an acceptable method used in the state of Texas to calculate stormwater runoff volumes.[26] However, he admitted that he did not use the Modified Rational Method in constructing his own hydrograph.[27] Furthermore, he was unable to specify what method he actually did use.[28] Mr. Dunbar's opinion again fails to carry the protestants' burden of rebuttal. Just because Mr. Dunbar's erroneous and unrecognized methodology produced a different result, does not mean that the Applicant's methodology did not meet the regulatory standard. His use of an unspecified, unknown, and unrecognized method of his own devising cannot demonstrate that Applicant's use of the Modified Rational Method was incorrect or inadequate, nor can his methods be accepted as a substitute for the proper regulatory standards.

III. Conclusion

The TCEQ regulations and guidance provide a clear mandate for how an applicant is to establish that existing drainage patterns will not be adversely affected by the development of a landfill facility. The regulations definitively establish that an applicant must provide

[24] THEODORE G. CLEVELAND, DAVID B. THOMPSON, XING FANG, USE OF THE RATIONAL AND MODIFIED RATIONAL METHOD FOR HYDRAULIC DESIGN (Tex. Dept. of Transportation 2011); https://library.ctr.utexas.edu/hostedpdfs/techmrt_0-6070-1.pdf .
[25] Exhibit Applicant-200, p. 18, lines 1-6.
[26] Tr. Vol. II, 13:11-14.
[27] *Id.* at 95:14-23.
[28] *Ibid.*

calculations utilizing the Rational Method to estimate peak flow off of the proposed site for pre-development conditions. Similarly, applicants are required to utilize an acceptable hydraulic model to estimate the volumes of runoff from the developed site. The TCEQ regulations and guidance provide that calculations showing similar peak flows between pre- and post-development conditions are sufficient to demonstrate that drainage patters will not be adversely affected by the proposed project. The Applicant has provided such calculations using the regulation-mandated Rational Method and the TCEQ-accepted Modified Rational Method.

On the issue of the adequacy of Applicant's surface water drainage report, the PFD is incorrect. The analysis misrepresents the evidentiary record and incorrectly favors Mr. Dunbar's unrecognized methodologies in place of the recognized, rule-mandated methodologies utilized by Applicant. As a result, the PFD's findings of fact numbers 63 and 65, conclusions of law numbers 16 and 22, and the final recommendation of the PFD should be amended to comport with the regulatory standard and the evidence presented, and recommend approval of the application. Applicant has attached alternative findings of fact and conclusions of law to be substituted for those above referenced.

Respectfully Submitted,

HANCE SCARBOROUGH, LLP

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CERTIFICATE OF SERVICE

I certify that a true and correct copy of Diamond Back Recycling and Sanitary Landfill, LP's Exceptions to Proposal for Decision was served by email to the following parties on this 3rd day of October, 2022.

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ATTACHMENT TO APPLICANT'S EXCEPTIONS

Diamond Back Recycling and Sanitary Landfill, LP
Proposed Permit No. 2404

Applicant's Proposed Findings of Fact and Conclusions of Law
On Issue "M"
"Sufficient Water Drainage Report"

FINDINGS OF FACT

1. As mandated by 30 Tex. Admin. Code §330.63(c), The Application contained a surface water drainage report that satisfies the requirements of 30 Tex. Admin. Code Subchapter G, Chapter 330.

2. The Applicant submitted drawings that show the drainage area and drainage calculations.

3. The Applicant submitted designs of all drainage facilities within the facility area, including all necessary features.

4. The Applicant submitted sample calculations that verify the proposed landfill development will not be adversely alter existing drainage patterns.

5. Existing and proposed conditions were evaluated in the Application for peak flow rates, runoff volumes, and velocities for each comparison point.

6. The Applicant used the Rational Method and provided the underlying calculations used to estimate peak flow rates.

7. The Applicant's surface water drainage report uses appropriate runoff coefficients and the rainfall intensity for the 25-year storm event. The source of these inputs is the Texas Department of Transportation Hydraulic Design Manual.

8. The Applicant submitted all hydraulic calculations and designs used to size the necessary detention facilities.

9. The Application provides structural designs of the collection and drainage facilities within the facility area.

10. The Applicant assessed the proposed drainage characteristics of the facility and calculated runoff volumes utilizing the modified rational method with appropriate inputs, as specified in the Texas Department of Transportation Bridge Division Hydraulic Design Manual.

11. The executive director has approved the use of the Modified Rational Method when assessing the proposed drainage characteristics of the facility.

12. The Application includes discussion and analyses demonstrating that existing drainage patterns will not be adversely altered as a result of the proposed landfill development.

CONCLUSIONS OF LAW

1. The Application contains a surface water drainage report that satisfies the requirements of 30 Tex. Admin. Code Subchapter G, Chapter 330, in accordance with 30 Tex. Admin. Code § 330.63(c).

2. The Application contains the necessary drawings showing the drainage area and drainage calculations, designs of the drainage facilities, calculations verifying that existing drainage will not be adversely altered and a description of the hydrologic methods and calculations used to estimate peak flow rates and runoff volumes in accordance with 30 Tex. Admin. Code § 330.63(c)(1).

3. The Application provides a description of hydrologic methods and calculations used to estimate peak flow rates and runoff volumes with the required assumptions in accordance with 30 Tex. Admin. Code §330.63(c)(1)(D)(i)-(iv).

4. The Application contains an assessment of the existing drainage characteristics of the facility according to the Rational Method, utilizing appropriate surface runoff coefficients, as specified in the Texas Department of Transportation (TxDOT) Bridge Division Hydraulic Design Manual in accordance with 30 Tex. Admin. Code § 330.305(f).

5. The Application utilized the Modified Rational Method to calculate the storage volume necessary of detention ponds to collect and control the volume of water resulting from the 24-hour, 25-year storm in accordance with 30 Tex. Admin. Code § 330.305(f).

6. The Executive Director approved the use of the Modified Rational Method to calculate the volume of runoff from the facility in accordance with 30 Tex. Admin. Code § 330.305(f)(1).

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Associated Case Party: Knox Real Property Development, LLC

Name	BarNumber	Email	TimestampSubmitted	Status
Marisa Perales		marisa@txenvirolaw.com	10/3/2022 4:50:25 PM	SENT
Gwyneth Lonergan		gwyneth@txenvirolaw.com	10/3/2022 4:50:25 PM	SENT
Eric Allmon		eallmon@txenvirolaw.com	10/3/2022 4:50:25 PM	SENT
Raymond Rivas		ray@txenvirolaw.com	10/3/2022 4:50:25 PM	SENT

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Barton Hejny on behalf of Michael Woodward
Bar No. 21979300
bhejny@hslawmail.com
Envelope ID: 68852914
Status as of 10/4/2022 8:47 AM CST
Associated Case Party: MattieIsturiz

Name	BarNumber	Email	TimestampSubmitted	Status
Mattie Isturiz		mattie.isturiz@tceq.texas.gov	10/3/2022 4:50:25 PM	ERROR

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Barton Hejny on behalf of Michael Woodward
Bar No. 21979300
bhejny@hslawmail.com
Envelope ID: 68852914
Status as of 10/4/2022 8:47 AM CST
Associated Case Party: Diversity Trucking

Name	BarNumber	Email	TimestampSubmitted	Status
Davenand Mangal		diversitytrucking@yahoo.com	10/3/2022 4:50:25 PM	SENT