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Garrett T. Arthur, *Public Interest Counsel*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 14, 2023

The Honorable Megan Johnson
Administrative Law Judges
State Office of Administrative Hearings
P.O. Box 13025
Austin, Texas 78711-3025

Re: Diamond Back Recycling and Sanitary Landfill, LP
TCEQ Docket No. 2021-1000-MSW, SOAH Docket No. 582-22-0844

Dear Judge Johnson:

The Office of Public Interest Counsel (OPIC) did not file Exceptions and will not be filing a Reply to Exceptions in the above-referenced matter. OPIC maintains the positions previously stated in our Closing Brief. Please find attached a copy of OPIC's Closing Brief to be included in future Agenda backup materials.

Sincerely,

A handwritten signature in cursive script that reads "Pranjali Mehta".

Pranjali Mehta
Assistant Public Interest Counsel
Office of Public Interest Counsel

cc: Service List

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

DIAMOND BACK RECYCLING AND SANITARY LANDFILL, LP PROPOSED PERMIT 2404	§ § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS
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**OFFICE OF PUBLIC INTEREST COUNSEL’S
CLOSING ARGUMENT**

TO THE HONORABLE ADMINISTRATIVE LAW JUDGE:

The Office of Public Interest Counsel (OPIC) at the Texas Commission on Environmental Quality (TCEQ or Commission) files this closing argument and would respectfully show as follows:

I. Background

On December 14, 2022, the Commission considered the application (Application) of Diamond Back Recycling and Sanitary Landfill, LP (Diamond Back or Applicant) for Municipal Solid Waste (MSW) Permit No. 2404, to authorize the construction and operation of a new Type I MSW landfill, with both Type I and Type IV disposal cells, proposed to be located at 2301 South FM 866, Odessa, Ector County.¹ After considering the Proposal for Decision (PFD) and Proposed Order issued on September 13, 2022, the Commission remanded Issue M to the State Office of Administrative Hearings (SOAH). Issue M asks whether the Applicant has provided a sufficient surface water drainage report. The Commission ordered SOAH to take additional evidence, including the underlying documents to support the methodologies and calculations used to meet

¹ Commission’s Interim Order dated December 20, 2022.

the burden of proof on the surface water drainage issue. The Commission further ordered that all parties should be given the opportunity to present additional evidence.

On February 6, 2023, the ALJ convened a preliminary hearing in this matter by Zoom videoconference. The following parties appeared through counsel: Diamond Back, Executive Director (ED) of TCEQ, OPIC, and Knox Real Property Development, LLC and Jason Harrington (Protestants). The hearing on the merits (remand hearing) was conducted via Zoom on April 3, 2023, through April 6, 2023.

II. Burden of Proof

By rule, the burden of proof is on the moving party by a preponderance of the evidence.² In a permit hearing, the applicant is the moving party. Therefore, Diamond Back bears the burden of proof on Issue M.

Regarding the burden of proof in an SB 709 case, 30 Texas Administrative Code (TAC) § 80.117(b) states that an applicant's presentation of evidence to meet its burden of proof may consist solely of the filing with SOAH, and admittance by the ALJ, of the administrative record. However, Section 80.17(c)(2) provides that a party may rebut an applicant's prima facie demonstration by presenting evidence demonstrating that the draft permit violates a specifically applicable state or federal legal or technical requirement. If a rebuttal case is presented, section 80.17(c)(3) states that the applicant and the ED may present additional evidence to support the ED's draft permit.

For the reasons stated herein, OPIC finds that Diamond Back failed to meet its burden of proof on Issue M regarding surface water drainage.

² 30 TAC § 80.17(a).

III. Whether the Applicant has provided a sufficient surface water drainage report

The TCEQ rules concerning MSW are found in 30 TAC Chapter 330. Rules specific to surface water drainage come from Subchapter B, Permit and Registration Application Procedures, and Subchapter G, Surface Water Drainage. TCEQ Rules 330.63(C), 330.303, 330.305, and 330.307 require the Applicant to provide a surface water drainage report that demonstrates that the owner or operator will design construct, maintain, and operate the landfill to manage run-on and runoff during the peak discharge from at least a 25-year storm and prevent the off-site discharge of waste and contaminated stormwater; provide structures to collect and control at least the water volume resulting from a 24-hour/25-year storm; protect the landfill from washouts; and demonstrate that the existing drainage pattern is not adversely altered.

The TCEQ regulatory guidance provides that a point-by-point analysis of the surface water drainage conditions must be included to demonstrate that existing drainage patterns will not be adversely altered.³ To perform such analysis, Applicant must compare peak flow rate, velocity, and volume under existing conditions with the peak flow rate, velocity, and volume under fully developed landfill conditions, to ensure that the drainage patterns will not be adversely altered.⁴ According to the TCEQ regulatory guidance, the existing drainage patterns of the site are intended to provide: “(1) a baseline for comparison with the post-development drainage patterns of the facility and (2) a basis for the demonstration that the existing drainage patterns will not be adversely altered.”⁵

³ Knox-15 at 3.

⁴ *Id.*

⁵ Knox-15 at 4.

A. Peak Flow Under the Existing Conditions

According to the Surface Water Drainage Report submitted with the Application, the Rational Method was used to calculate the peak flow rates for both the existing and proposed condition hydrology.⁶ Todd Stiggins, the expert witness for the Applicant who certified the report, explained that the existing conditions involve diffuse overland flow to the east, with calculated flow rate, velocity, and volume.⁷ However, the proposed conditions will involve a runoff management system that collects stormwater and directs it towards the detention ponds, and from there, the stormwater will be redistributed back into the flow conditions.⁸

According to calculations using the Rational Method, the peak flow rates for Drainage Area A and Drainage Area B under existing conditions are 65 cubic feet per second (cfs) and 54 cfs, respectively.⁹ Mr. Stiggins testified that these peak flow rates are not a single point discharge but rather represent the sum total of distributed discharge at the eastern boundary.¹⁰

Under the proposed conditions, the runoff from Drainage Area A will be directed to the North Pond, while the runoff from Drainage Area B will be directed to the South Pond.¹¹ Using the Rational Method, the peak flow rates for runoff flowing into the North Pond and South Pond are 177 cfs and 130 cfs, respectively.¹² The North Pond is designed with an 86-foot-wide weir at its discharge structure and the South Pond uses a 71-foot-wide weir at its discharge point.¹³ The peak flow rate leaving the North Pond is calculated as 65 cfs, while the peak flow rate leaving the

⁶ Application, Part III, Attachment C.

⁷ Tr. Vol. 3 at 23.

⁸ *Id.*

⁹ Application, Part III, Attachment C, Table III.C.C.

¹⁰ Tr. Vol. 2 at 117.

¹¹ Application, Part III, Attachment C at III.C-8.

¹² Application, Part III, Attachment C, Table III.C.E.

¹³ Application, Part III, Attachment C, Table III.C.H.

South Pond is 54 cfs.¹⁴ In Mr. Stiggins' opinion, the post-development drainage patterns mimic the existing conditions.¹⁵

For this remand hearing, Mr. Stiggins used the Hydrological Engineering Center-River Analysis System (HEC-RAS) computer model to create a 2-dimensional simulation of stormwater runoff on the site to verify the drainage areas delineated in the Surface Water Drainage Report¹⁶ and to observe the stormwater runoff paths based on the site's surface topography.¹⁷ Applicant's expert witness, Dr. Theodore Cleveland, created a Storm Water Management Model (SWMM) to verify the results of the Rational Method equation used in the Surface Water Drainage Report.¹⁸ Dr. Cleveland explained that the SWMM program allows for approximation of distributed flow behavior which the Rational Method does not provide.¹⁹ He acknowledged that he did not adjust the site elevations while running the SWMM program to simulate fully developed landfill conditions.²⁰

Protestants do not take issue with Applicant's use of the Rational Method for computing peak flow rates, but they do not agree with Applicant's comparison of the peak flows under the existing condition to the fully developed condition. According to Protestant's expert witness, Lawrence Dunbar, Applicant's comparison of the existing overland flow across the approximate 900 feet eastern property boundary to the post development conditions where the flow would be leaving the 86 feet weir for North Pond and 71 feet weir for South Pond is not an appropriate comparison required under the TCEQ rules and regulatory guidance.²¹

¹⁴ Id.

¹⁵ Tr. Vol. 3 at 23.

¹⁶ Tr. Vol. 2 at 74:19-22, 77:14-25.

¹⁷ Tr. Vol. 2 at 78:7-9, Remand Exhibit Applicant-2000 at 1.

¹⁸ Remand Exhibit Applicant-1000 at 5, Tr. Vol. 1 at 44:15-23.

¹⁹ Tr. Vol. 1 at 45:7-10.

²⁰ Tr. Vol. 1 at 86.

²¹ Tr. Vol. 3 at 145:23-25.

According to TCEQ regulatory guidance, the existing drainage patterns of the site are critical in providing a baseline for comparison with the post-development drainage patterns of the facility to demonstrate that the existing drainage patterns will not be adversely altered. In this case, the baseline condition for comparison is the existing overland flow.²² The weirs of the ponds are designed to limit and meter the flow to match the peak flow that leaves through the overland flow under the existing conditions.²³ However, the peak flow leaving by overland flow under the existing condition is not measured at the property boundary along with the perimeter of the future North Pond and South Pond weirs. Therefore, OPIC cannot find that the existing drainage patterns are accurately characterized to provide a baseline condition for comparison with the post-development drainage patterns of the facility.

For areas of 200 acres or less, like Diamond Back, TCEQ rule § 330.305 requires the use of the Rational Method for peak discharge calculations.²⁴ However, § 330.305 also allows an owner or operator to use equivalent or better methods approved by the ED.²⁵ Furthermore, the TCEQ regulatory guidance does not mandate the use of only the Rational Method for baseline conditions. Mr. Stiggins testified that the drainage areas could have been further divided into smaller areas to apply the Rational Method, as long as the drainage areas were appropriately sized so that the time of concentration for the Rational Method application did not go below ten minutes, as required by the rules.²⁶ However, he acknowledged that he did not perform that analysis.²⁷

During his testimony, Mr. Stiggins highlighted the importance of considering various hydrological factors, such as the behavior of water on the site, the receiving area for the discharged

²² Tran vol. 2 at 114:16-18.

²³ Tran vol. 4 at 115:1-4.

²⁴ 30 TAC § 330.305(f)(1).

²⁵ *Id.*

²⁶ Tr. Vol. 3 at 11: 12-24.

²⁷ Tr. Vol. 4 at 12.

water, and other variables like velocities and volumes.²⁸ In his opinion, peak flows are just one element of the baseline condition to compare with the post-development conditions.²⁹ OPIC is not convinced. While Mr. Stiggins' approach may provide a more comprehensive analysis, it is important to consider the appropriate baseline condition for comparison as outlined in the TCEQ regulatory guidance. Therefore, OPIC supports Protestants' approach to consider the peak flow rates as they leave the same area under both existing and proposed conditions which would provide a more appropriate baseline for comparison. For these reasons, OPIC cannot find that the existing drainage patterns have been accurately characterized to compare with the post-development conditions to demonstrate that existing drainage patterns will not be adversely altered.

B. Pond Sizing

According to the Surface Water Drainage Report, the detention ponds were designed using the Modified Rational Method which takes into account uniform rainfall distribution.³⁰ The report also provides a volume calculation for the North Pond and South Pond, taking into consideration storm durations from 10 to 100 minutes.³¹ The maximum required storage volume for the North Pond is calculated for a 70-minute storm duration and the South Pond's maximum required storage volume is calculated for a 60-minute storm duration.³²

Mr. Stiggins explained that the Modified Rational Method used in the sizing calculations for the detention ponds assumes that the intensity of rainfall decreases as the duration of a storm increases.³³ The Surface Water Drainage Report does not provide the required storage volume for a 24-hour duration, and Mr. Stiggins testified that it is not relevant to the critical storage volume.³⁴

²⁸ Tr. Vol. 3 at 104:19-25, 105:1-7.

²⁹ *Id.*

³⁰ Application, Part III, Attachment C at III.C-2; Tr. Vol. 3 at 65: 14-15.

³¹ Application, Part III, Attachment C at III.C-8.

³² Application, Part III, Attachment C at III.C-8.

³³ Tr. Vol. 3 at 75:6-9.

³⁴ Tr. Vol. 2 at 91:12-15

He also testified that the calculation takes into account the 25-year frequency storm event for all durations, once the critical volume is determined.³⁵ Mr. Stiggins further testified that shorter duration storms have higher intensities, but they produce less volume than longer duration storms due to their shorter duration.³⁶

Dr. Cleveland supports the use of the Modified Rational Method for pond sizing as specified under the Surface Water Drainage Report.³⁷ In addition, Dr. Cleveland utilized the SCS Type II method, which is a nonuniform rainfall distribution method, to analyze the 25- year, 24-hour storm event under his SWMM model.³⁸

Protestants have raised concerns regarding the Applicant's use of the Modified Rational Method and uniform rainfall distribution to design detention ponds that meet TCEQ rules for the 25-year, 24-hour rainfall event.³⁹ During his testimony, Mr. Dunbar opined that the Modified Rational Method is not the best approach when a duration of the storm is required.⁴⁰ Instead, Mr. Dunbar recommends the use of variable or nonuniform rainfall distribution to develop a design storm similar to the SCS Type II method used by Dr. Cleveland.⁴¹ To further support his argument, Mr. Dunbar created a simple depiction of the inflow hydrograph for the 25-year, 24-hour storm event, illustrating the non-uniform distribution of rainfall.⁴² Mr. Dunbar testified that he relied on the triangular hydrograph method from the SCS manual to create that inflow hydrograph for the 25-year, 24-hour storm as required by TCEQ.⁴³ He concluded that the Applicant did not correctly

³⁵ Tr. Vol. 3 at 52:1-5

³⁶ Tr. Vol. 3 at 77:20-23

³⁷ Remand Exhibit Applicant – 1000 (Amended) at 6:14-27.

³⁸ Tr. Vol. 1 at 114:11-14.

³⁹ Remand Exhibit Knox-400 at 9.

⁴⁰ Tr. Vol. 3 at 135.

⁴¹ Tr. Vol. 3 at 132: 1-9.

⁴² Knox-204.

⁴³ Tr. Vol. 3 at 164.

apply the 25-year, 24-hour storm event when designing the ponds, resulting in undersized and inadequate detention ponds that fail to meet the TCEQ requirements.⁴⁴ OPIC agrees.

TCEQ Rules and regulatory guidance do not explicitly require using the Modified Rational Method for post-development conditions. Based on the preliminary decision of the ED, OPIC understands that the Applicant's use of a Modified Rational Method was approved by the ED. According to the testimony of ED's expert witness, Chandra Yadav, he had reviewed 12 original MSW permit applications including MSW major amendment applications, as well as around 100 MSW modifications,⁴⁵ and he testified that he had not reviewed any original MSW permit applications or MSW major amendment applications in the past that used the Modified Rational Method for designing detention ponds.⁴⁶

By rule, Applicant must 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.⁴⁷ Therefore, Applicant must ensure that the North Pond and South Pond can effectively control and convey a 24-hour, 25-year storm event, irrespective of its purported intensity to ensure that the existing drainage patterns are not adversely altered. It is crucial to ensure the proper design and size of the detention ponds to avoid any potential runoff and environmental impact on the surrounding areas.

IV. Transcript Costs

Under 30 TAC § 80.23(d)(2), OPIC, as a statutory party, cannot be assessed reporting or transcription costs. Therefore, OPIC takes no position on this issue and defers to those parties who have incurred or may be responsible for transcript costs.

⁴⁴ Remand Exhibit Knox-400 at 11.

⁴⁵ Remand ED Exhibit 1 at 2.

⁴⁶ Tr. Vol. 3 at 83: 1-11.


⁴⁷ 30 TAC §330.305.

V. Conclusion

For the reasons discussed above, OPIC concludes that Applicant has not provided a sufficient surface water drainage report. Applicant's failure to meet its burden of proof on Issue M is a basis to deny the Application.

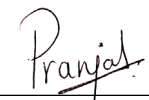
Respectfully submitted,

Garrett T. Arthur
Public Interest Counsel

By  _____
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CERTIFICATE OF SERVICE

I hereby certify that on April 24, 2023, the foregoing document was filed with SOAH, the TCEQ Chief Clerk, and copies were served to all parties on the attached mailing list via hand delivery, facsimile transmission, electronic mail, inter-agency mail, or by deposit in the U.S. Mail.

 _____
Pranjal M. Mehta

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I hereby certify that on July 14, 2023, the foregoing document was filed with SOAH and the TCEQ Chief Clerk, and all parties listed below were served via email.



Pranjal M. Mehta

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Pranjali Mehta
Assistant Public Interest Counsel
Office of Public Interest Counsel

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