

ROEDEL PARSONS BLACHE
FONTANA PIONTEK & PISANO

A LAW CORPORATION

roedelparsons.com

June 29, 2022

VIA FAX FILE AND FEDERAL EXPRESS

H. Lynn Jones, II
Clerk of Court, 14th Judicial District
Parish of Calcasieu
1000 Ryan Street
P.O. Box 1030
Lake Charles, LA 70602
Tele: 337-437-3550
Fax: 337-437-3350
Fax filing: 337-437-3206

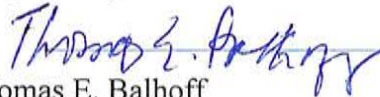
RE: H. C. Drew Estate, represented by its Trustees, Louie D. Barbe, III and C. W. Shaddock
v. Neumin Production Company v. Neumin Production Company and Stokes & Spiehler, Inc.
Docket No. 2019-4925 - Division "F" – c/o Judge Derrick Kee
***The Louisiana Department of Natural Resources, Office of Conservation's Most
Feasible Plan, Written Reasons in Support and Affidavits***

Dear Sir,

The Louisiana Department of Natural Resources, Office of Conservation, is submitting herewith the Most Feasible Plan and Written Reasons in Support in accordance with La. R.S. 30:29 (C)(3)(b). Affidavits from LDNR and LDEQ in accordance with La. R.S. 30:29 (C)(3)(b) attesting to the fact that there has been no ex parte contact, either directly or indirectly, by the agencies with any party to the litigation during the process, are also attached. With the hard copy of this document, I have enclosed an additional copy to be time stamped and returned to my office in the self addressed stamped envelope. If there is a fee for filing this document, please send an invoice via fax at 225-928-4925 to my attention.

Please call if you have any questions.

Respectfully,



Thomas E. Balhoff

***Hearing Officer for the Office of Conservation of
the Louisiana Department of Natural Resources***

TEB:asc

Attachment

cc: Judge Derrick Kee

**STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION**

IN RE:

**H.C. DREW ESTATE, represented
by its Trustees, Louie D. Barbe, III
and C.W. Shaddock**

DOCKET NO: ENV-L-2022-01

VERSUS

**NEUMIN PRODUCTION COMPANY
and
STOKES & SPIEHLER, INC.**

**DOCKET NO. 2019-4925, DIV. "F"
14TH JUDICIAL COURT,
PARISH OF CALCASIEU**

(JUDGE DERRICK KEE)

**LOUISIANA DEPARTMENT OF NATURAL RESOURCES,
OFFICE OF CONSERVATION'S MOST FEASIBLE PLAN AND WRITTEN
REASONS IN SUPPORT AS REQUIRED BY LA. R.S. 30:29**

Louisiana Department of Natural Resources, Office of Conservation ("LDNR") approves the Neumin Plan (11/10/21),¹ as supplemented by Neumin's Supplement to Plan (1/14/22),² as

¹ "Site Investigation Report & Closure Plan – Neumin Limited Admission, H.C. Drew Estate vs Neumin Production Company, North Choupique Field, Calcasieu Parish, Louisiana," November 10, 2021, Project No.: 0494259 ("Neumin Plan"). The Neumin Plan is in evidence as **Neumin Hearing Exhibit 1**, Bates Nos. N_LDNR_HCDE_00001-00114 & lettered Appendices A-O beginning at Bates No. N_LDNR_HCDE_00115 and running through Bates No. N_LDNR_HCDE_01157. Specifically, Section 7 entitled "Remediation Plan" is approved and/or accepted as the LDNR Most Feasible Plan, as amended by the Supplement. The "Remediation Plan" is located at Bates Nos. N_LDNR_HCDE_00023-25 and is separately attached hereto as "**Exhibit A**".

² "Supplement to Site Investigation Report & Closure Plan - Neumin Limited Admission" ("Supplement to Neumin Plan") is in evidence as **Neumin Hearing Exhibit 2**, Bates Nos. N_LDNR_HCDE_01158-01740. Specifically, the Section entitled "Summary and Amendment to Limited Admission Remediation Plan" is approved and/or accepted as an amendment to the Plan. This "Summary and Amendment to Limited Admission Remediation Plan" is located at Bates Nos. N_LDNR_HCDE_01159-60 and is separately attached hereto as "**Exhibit B**".

the LDNR's Most Feasible Plan. It is a "feasible plan" within the meaning of La. R.S. 30:29 (I)(4) and LAC 43:XIX.603 and is the "most feasible plan" within the meaning of La. R.S. 30:29 (C)(2)(a), (3)(a) & (3)(b) and LAC 43:XIX.627. A Preliminary MFP & Written Reasons was sent to the other appropriate agencies set forth in La. R.S. 30:29(C)(3)(b)(i) for comments prior to being finalized and filed with the Court in accordance with La. R.S. 30:29(C)(2)(a) and/or (3)(b)(ii). The other agencies comments (LDEQ and LDNR) are incorporated herein in compliance with La. R.S. 30:29 (C)(2) & (3) and LAC 43:XIX.627.A.

I. PARTIES - CHRONOLOGY

H.C. Drew Estate, a Louisiana non-profit corporation qualified under 26 U.S.C. §501(c)(4), represented by its Trustees, C. Wade Shaddock, Jr., and Louie D. Barbe, III (hereinafter "H.C. Drew Estate" and sometimes "Landowner") owns property, a portion of which is subject to this Act 312 limited admission proceeding.³ The property was used for oil and gas operations by Neumin Production Company ("Neumin"). The property, the subject of the limited admission is approximately one acre of rural agricultural land located six miles west of Sulphur, Louisiana just south of Interstate 10.⁴

³ See Affidavit of Louie D. Barbe, III, dated 2/14/22 (hereinafter "Barbe Aff."). The Barbe Aff. was submitted to LDNR under cover letter of counsel for H.C. Drew Estate, Mr. Turner Brumby. Mr. Brumby's cover letter is part of **Neumin Hearing Exhibit 11**, at Bates No. N_LDNR_HCDE_01778. The Affidavit is part of **Neumin Hearing Exhibit 11**, at Bates Nos. N_LDNR_HCDE_01822-26. In his cover letter, Mr. Brumby stated that the Landowner, H.C. Drew Estate, does "not intend to participate in any proceedings before LDNR pertaining to Neumin's Limited Admission." The Landowner did not participate in the public hearing, which was held on March 31 and April 4, 2022.

⁴ Angle hearing testimony, 4/4/22, pp. 15-16 and 19-20. Neumin Production Company's Limited Admission Under Louisiana Revised Statute §30:29, dated 10/19/21 (the "Limited Admission"), **Neumin Hearing Exhibit 9**, Bates Nos. N_LDNR_HCDE_01764-68, and particularly ¶12 which states: "Neumin admits that it is a 'responsible' party under Act 312 to evaluate and, if necessary, remediate to applicable regulatory standards any 'environmental damage' on H.C. Drew Estate's property identified on **Exhibit 1**—Limited Admission Area, associated with the HC Drew Manual '15' No. 1 well (bearing Serial No. 225207). Exhibit 1 is an aerial map of the Limited Admission Area. The narrative in the Neumin Plan states that the former H.C. Drew 15 #1 well site operational area is approximately one

On August 23, 2000, H.C. Drew Estate entered an Oil and Gas Lease with Neumin for the purpose of exploration for and the production of oil and gas. The property subject to the lease is described in Exhibit A to the lease and contained 175.55 acres. On December 1, 2000, the parties also entered a Road Servitude Agreement to grant Neumin road access to a drilling location on the property.⁵ Neumin initially completed an oil well in February 2001, the HC Drew Manual “15” No. 1 well (SN225207). The well was recompleted multiple times in 2002, 2009, and 2011, and then plugged and abandoned in 2015.⁶

Soil and shallow groundwater investigations around the SN225207 operational area were conducted by Acadian Engineers & Environmental Consultants, Inc. (“Acadian”) in November - December 2016 and February 2018, and by Southland Environmental, LLC (“Southland”) in September 2018, both on behalf of H.C. Drew Estate. A soil and shallow groundwater investigation was conducted by Environmental Resources Management (“ERM”) in September 2021 on behalf of Neumin. Southland was present during the ERM investigation and collected split samples.⁷

acre. *See* Neumin Plan, **Neumin Hearing Exhibit 1**, Section 2, “Site Setting”, at Bates No. N_LDNR_HCDE_00007. For general location of the property in relation to Sulphur, Louisiana, *see* Neumin Plan, **Neumin Hearing Exhibit 1**, Fig. 1, “Site Location”, at Bates No. N_LDNR_HCDE_00054.

⁵ Barbe Aff., ¶9, **Neumin Hearing Exhibit 11**, at Bates Nos. N_LDNR_HCDE_01823, and the Oil and Gas Lease attached as Exhibit I to Barbe Aff., Bates Nos. N_LDNR_HCDE_01827-42. *See also* H.C. Drew Estate’s Petition for Damages against Neumin, filed October 18, 2019, in the captioned suit in Calcasieu Parish which describes the property, the Oil and Gas lease (8/23/2000), and the Road Servitude Agreement (12/1/2000), both of which are attached to the Petition.

⁶ Neumin Plan, **Neumin Hearing Exhibit 1**, Section 2, “Site Setting”, subsection 2.5, “Oil and Gas Exploration and Production”, at Bates No. N_LDNR_HCDE_00009. *See* historical aerial photos showing the location of the Neumin production facility, including the wellhead, a tank battery, and production area in Figures 20 through 30. *Id.*, at Bates Nos. N_LDNR_HCDE_00073-83.

⁷ Angle hearing testimony, 4/4/22, pp. 17. Neumin Plan, **Neumin Hearing Exhibit 1**, Section 4, “Description of Investigation Activities”, subsection 4.1, “Acadian Soil and Groundwater Investigation”, subsection 4.2, “Southland

On October 14, 2021, in the pending lawsuit against Neumin brought by H.C. Drew Estate, Neumin made a limited admission of responsibility for environmental damage and accepted responsibility for that damage pursuant to Louisiana Code of Civil Procedure Article 1563.⁸ On October 25, 2021, the court issued an order requiring Neumin to develop a plan for evaluation or remediation and submit that plan to the Louisiana Department of Natural Resources, Office of Conservation (hereinafter “**LDNR**”) by November 10, 2021, and required a public hearing to be conducted in accordance with La. R.S. 30:29.⁹

Neumin submitted its Limited Admission Plan timely on November 10, 2021, based on data from the investigations in 2016, 2018, and in September 2021.¹⁰

Southland conducted a further investigation and data gathering on November 16-18, 2021. ERM was present during Southland’s November 2021 investigation and collected split samples. Due to the collection of additional samples and new analytical results, Neumin informed LDNR

Soil and Groundwater Investigation”, and subsection 4.3, “ERM Soil and Groundwater Investigation”, at Bates Nos. N_LDNR_HCDE_00013-14.

⁸ See n. 4 *supra*. The Limited Admission was made pursuant to La. C. Civ. Proc. Art. 1563 (A)(1), which in pertinent part, provides—

If any party admits liability for environmental damage pursuant to R.S. 30:29, **that party may elect to limit this admission of liability for environmental damage to responsibility for implementing the most feasible plan to evaluate, and if necessary, remediate all or a portion of the contamination that is the subject of the litigation to applicable regulatory standards,** hereinafter referred to as a “limited admission”.

⁹ See Order, signed by Judge Kee, filed 10/25/21, in the 14th JDC, Parish of Calcasieu, **Neumin Hearing Exhibit 9**, Bates Nos. N_LDNR_HCDE_01772-73.

¹⁰ See Transmittal letter from John C. Funderburk to Commissioner Richard P. Ieyoub, dated 11/10/21, **Neumin Hearing Exhibit 3**, Bates Nos. N_LDNR_HCDE_01741-42; and “Site Investigation Report & Closure Plan – Neumin Limited Admission, H.C. Drew Estate vs Neumin Production Company, North Choupique Field, Calcasieu Parish, Louisiana”, November 10, 2021, Project No.: 0494259 (“Neumin Plan”). The Neumin Plan is in evidence as **Neumin Hearing Exhibit 1**, Bates Nos. N_LDNR_HCDE_00001-00114 & lettered Appendices A-O beginning at Bates No. N_LDNR_HCDE_00115 and running through Bates No. N_LDNR_HCDE_01157. For ease of locating the Bates Number range for each of the Appendices A-O, an Exhibit Index was supplied by Neumin’s counsel to the Panel at the commencement of the public hearing.

that the Limited Admission Plan submitted on November 10, 2021, would require revision to include the additional analytical results. LAC 43:XIX.619 (Revisions to Plans, Comments or Responses Thereto).

On January 14, 2022, ERM submitted its revision to LDNR in the form of a Supplement to the Plan with the results from the November investigation and included historical soil data and related information collected in 2015-16 by Commercial Maintenance Services, a Neumin contractor that performed sampling as part of the initial closure activities.¹¹

On January 26, 2022, counsel for the Landowner sent a letter to LDNR stating that the Landowner intended to file a formal motion to dismiss the proceedings as soon as practicable for (1) failure by Neumin to timely submit the initial payment of \$100,000 contemporaneously with the Limited Admission Plan, and (2) failure by Neumin to comply with LAC 43:XIX.611.F.1. Section 611.F.1 requires that a plan submitted “compl[y] with all provisions of Statewide Order 29-B, exclusive of Section 319.” The Landowner later voluntarily withdrew any objection to the \$100,000 payment, but its motion on 3/14/22, discussed shortly, included a Section 611.F.1 objection.

On January 28, 2022, because evaluation of the additional samples and new analytical results in Neumin’s Supplement to the Plan jeopardized holding the public hearing timely within 60 days of November 10, 2021 (as required by statute and the court’s order), LDNR moved for an

¹¹ See Transmittal letter from John C. Funderburk to Commissioner Richard P. Ieyoub and Mr. Gary Snellgrove, dated 1/4/22, **Neumin Hearing Exhibit 4**, Bates Nos. N_LDNR_HCDE_01743-45; and “Supplement to Site Investigation Report & Closure Plan - Neumin Limited Admission” (“Supplement to Neumin Plan”) introduced at the public hearing as **Neumin Hearing Exhibit 2**, Bates Nos. N_LDNR_HCDE_01158-01740. There are seven attachments to the Supplement, Attachments 1-7. The Exhibit Index supplied by Neumin’s counsel (referred to in note 3) has the Bates Number range for each of the Attachments. See also Angle hearing testimony, 4/4/22, pp. 18-19.

extension of time to conduct the public hearing so LDNR would have sufficient time to complete its review. On February 8, 2022, the court granted the extension allowing the public hearing to be scheduled and held up to and including April 8, 2022.¹²

On February 14, 2022, counsel for the Landowner sent a cover letter with attachments to LDNR. The cover letter stated that Landowner “presently did not intend to participate in the proceedings.” The two attachments were an affidavit from Mr. Louie D. Barbe, III, an H.C. Drew Estate trustee, and written comments from Mr. Brent Bray, a geologist. Both included objections to the Neumin Plan.¹³

On February 16, 2022, the Commissioner’s Conference was held. The public hearing was scheduled for Thursday, March 31, 2022, and April 4 and 5, as necessary.

On March 14, 2022, counsel for the Landowner filed a Motion to Strike Neumin’s Limited Admission Plan and to Dismiss the Public Hearing scheduled to begin March 31, 2022. The motion was filed with the Hearing Officer for the public hearing, not with the court. In its motion, counsel sought to dismiss the Limited Admission public hearing, asserting that Neumin’s Plan failed to comply with Statewide Order 29-B by not submitting a plan complying with all provisions of Statewide Order 29-B exclusive of Section 319 (*see* LAC 43:XIX.611.F.1) and a separate plan that includes “sufficient proof that there is good cause to grant an exception or exceptions under §319”

¹² *See* Motion and Order Filed on Behalf of LDNR for Extension of Time to Conduct a Public Hearing Pursuant to La. R.S. 30:29(C)(2)(a), **Neumin Hearing Exhibit 10**, Bates Nos. N_LDNR_HCDE_01775-77. The order granting the extension was signed by Judge Kee on 2/8/22, at Bates Nos. N_LDNR_HCDE_01777.

¹³ *See* **Neumin Hearing Exhibit 11**, Bates Nos. N_LDNR_HCDE_01778-1842. Counsel’s letter is at Bates Nos. N_LDNR_HCDE_01778-79. The Affidavit of Mr. Barbe is at Bates Nos. N_LDNR_HCDE_01822-26 and Mr. Bray’s comments are at Bates Nos. N_LDNR_HCDE_01780-83 (exclusive of his two attachments—His CV and Written Reasons of LDNR in the Agri-South matter in 2013).

and showing the exception(s) under §319 do not endanger USDW's and a specific citation to rules, regulations or statutes sought to be applied in lieu of Statewide Order 29-B (*see* LAC 43:XIX.611.F (2)).

On March 15, 2022, the Hearing Officer denied the Landowner's motion to dismiss. The essence of the ruling was that the court ordered/directed that LDNR hold a public hearing and therefore only the court could alter that course, i.e., dismiss the hearing—with the issuance of a court order and directive to LDNR to that effect. This would have required the Landowner to go back to Judge Kee seeking the dismissal. That had not occurred. In the absence of any other direction to LDNR by order of the court to the contrary, if LDNR determined the plan was not timely filed or did not meet the Chapter 6, Section 611 specific requirements of plans, then LDNR is required to structure a plan based on the evidence submitted at the public hearing on the record to issue to the court.

With the extension authorized by the Court, LDNR timely conducted the public hearing on March 31 and April 4, 2022. LDNR employees with relevant technical backgrounds sat as a panel,¹⁴ and heard testimony from three experts.¹⁵ Two plan exhibits (Exhibits 1 and 2) and forty-eight non-plan exhibits (Exhibits 3 to 50) were offered and admitted into the record.

II. LDNR MOST FEASIBLE PLAN

The definition of "Feasible Plan" in Act 312 does not dictate a specific standard, but only says "applicable standards and regulations":

¹⁴ *See* **Addendum 1 to MFP & Reasons (Panelists and Their Backgrounds)** attached hereto.

¹⁵ *See* **Addendum 2 to MFP & Reasons (Expert Witnesses who Testified)** attached hereto.

The most reasonable plan which addresses environmental damage in conformity with the requirement of the Louisiana Constitutional Article IX, Section 1 to protect the environment, public health, safety and welfare, and **is in compliance with the specific relevant and applicable standards and regulations....**"

(Emphasis added).¹⁶ The Louisiana Supreme Court, in discussing Act 312 public hearings conducted by LDNR pursuant to La. R.S. 30:29 (C), has stated

By mandating that "applicable standards" shall be used and applied in approving or structuring the most feasible plan to evaluate or remediate the environmental damage, **the legislature has not limited the department to any one standard in its development of the most feasible plan.**

(Emphasis added).¹⁷

Conservation's Statewide Order No. 29-B (LAC 43:XIX.Chapters 1-6) ("Statewide Order 29-B") and Louisiana Department of Environmental Quality's ("LDEQ") Risk Evaluation and Corrective Action Plan (LAC 33:I.Chapter 13) ("RECAP") are the regulatory standards most often applied in Act 312 cases."¹⁸

The Statewide Order, Chapter 3 Pit Closure standards for soil are in Chapter 3, Section 313.¹⁹ These Chapter 3, Section 313 closure standards are silent as to groundwater. Chapter 3 General Requirements, Section 303.C, provides "[c]ontamination of a groundwater aquifer or a

¹⁶ La. Rev. Stat. § 30:29 is commonly referred to as "Act 312." See definition of "Feasible Plan" in the statute at La. R.S. 30:29 (I)(4) and in the Chapter 6 Hearing rules at LAC 43:XIX.603.

¹⁷ *State v. Louisiana Land and Exploration Co.*, No. 2012-C-0884 (La. 1/30/13), pp. 19-20, 110 So.3d 1038, 1052.

¹⁸ See e.g., J. Blake Canfield, Sr. Attorney, La. Office of Conservation, *Report to the House Comte on Natural Resources and Environment and Senate Comte on Natural Resources as Requested in House Concurrent Resolution 167, 2011 Legislative Session*, February 1, 2012, available at <http://www.scribd.com/doc/82935877/DNR-Report-to-House-and-Senate-NR>.

¹⁹ See particularly the metals standards in LAC 43:XIX.313.C and the oil and grease standard and the salt parameters in LAC 43:XIX.313.D.1 & 2.

USDW with E and P Waste is strictly prohibited,”²⁰ and the February 25, 2011 LDNR/LDEQ Memorandum of Understanding (“MOU”), Item No. 2, indicates that LDNR/LDEQ considers Section 303.C to be a “background concentration” requirement for groundwater under 29-B, and application of LDEQ’s RECAP procedures for evaluation or remediation of groundwater at exploration and production (“E&P”) sites is considered an “exception” to Statewide Order 29-B. LDEQ’s RECAP procedures have been recognized as containing groundwater evaluation and/or remediation standards applicable to E&P sites, and RECAP has been used as the principal regulatory standard for groundwater evaluation and/or remediation in every Act 312 where groundwater has been an issue.

Under Statewide Order 29-B, Section 319.A (“Section 319.A”), the Commissioner may grant an exception to any provision of 29-B upon proof of good cause (“Section 319.A exception”). Where USDWs are concerned, the operator must show proof that such an exception will not endanger USDW’s.²¹ Use of LDEQ’s RECAP, at least in part, to demonstrate compliance with Section 319.A has been proposed by responsible parties, considered and ultimately accepted by LDNR on a case-by-case basis for over 20 years beginning October 2001 with Guillory Landfarm Facility Closure, Site Code 0103, located in Eunice, Louisiana. To improve flexibility and efficiency amongst the two agencies, in 2011, both LDEQ and LDNR/OC entered into the Memorandum of Understanding discussed above which provides LDNR greater latitude in

²⁰ LAC 43:XIX.303.C.

²¹ LAC 43:XIX.319.A. The Landowner, through comments of Mr. Bray submitted on February 14, 2022, states that “to date, no exceptions have been granted [by the Commissioner] that would allow use of RECAP instead of the background concentration standard required under 29-B.” RBB Consulting, LLC (R. Brent Bray, PG) Comments, dated 2/14/22, section entitled “Groundwater Remediation Standard”, p. 2, at Bates No. N_LDNR_HCDE_01781.

reviewing and approving RECAP work plans and reports under certain environmental conditions and settings at oilfield sites.

Over the past 20 years, LDNR/OC's consideration and approval of proposed Section 319.A exceptions to address soil, subsurface soil and/or groundwater contamination resulting from past oilfield exploration and production activities often included use of RECAP pursuant to agency approval of no further action at this time (NFA-ATT) determinations. However, use of RECAP is not the only means available to demonstrate compliance with 29-B, Section 319.A.

LDNR considers and may approve Section 319.A exception requests with or without the use of RECAP or with use in part of RECAP principles and/or other sound and objective scientific proof in a "multiple lines of evidence" approach to demonstrate compliance with Section 319.A. ERM, on behalf of Neumin, has at least in part incorporated such an approach to address compliance with Section 319.A for areas of the landowner's property where soil and groundwater have been impacted with constituents of oilfield waste exceeding applicable 29-B regulatory criteria.

The Most Feasible Plan (Neumin's proposed plan) being approved herein (Exhibits A and B) relies on RECAP, in part, for the soil plan, and relies on RECAP entirely for the groundwater plan. Approval of this Neumin proposed plan comes only after testimonial and documentary evidence received by the LDNR panelists in the Act 312 public hearing. Since the plan must, by statutory mandate, be "the most feasible plan to evaluate or remediate the environmental damage and protect the health, safety, and welfare of the people" of Louisiana,²² the signing by the

²² La. R.S. 30:29(C)(2)(a) & (3)(a).

Commissioner of this plan constitutes a finding (under Section 319.A) that good cause exists to include exceptions to Statewide Order 29-B in the Most Feasible Plan and to use RECAP in the plan. Landowner consent is not required for a Most Feasible Plan with exceptions to Statewide Order 29-B when the plan is based on evidence at an Act 312 public hearing.²³

To address surface and subsurface soil, and groundwater contamination at the property, following previous surface equipment removal and well SN 225207 plugging and abandonment, the Neumin Plan proposed by ERM includes the following aspects of soil and groundwater evaluation, remediation, and site closure activities to demonstrate compliance with Section 319.A:

- An Effective Root Zone (ERZ) study established the minimum depth below ground surface necessary at the property for soil conditions to meet 29-B soil salt parameter regulatory limits providing for healthy plant and tree growth consistent the surrounding area and future use of the property.
- Three soil locations where one or more salt parameter exceedances were previously detected in the ERZ will be resampled, and if an exceedance(s) is detected, the area ERZ will be excavated or treated, confirmatory sampling conducted, and the area returned to grade elevation of the surrounding area.

²³ See Memorandum from John W. Adams, Attorney, LDNR/Office of Conservation to Richard P. Ieyoub, Commissioner of Conservation, dated 12/12/18, re Landowner Consent, attached hereto as “**Exhibit C.**” Mr. Barbe, in his Affidavit, submitted on February 14, 2022, states that he does not consent to the application of Statewide Order 29-B regulations and does not consent to any exceptions to the Statewide Order 29-B regulations, including but not limited to, the RECAP regulations. Affidavit of Louie D. Barbe, III, dated 2/14/22, ¶¶ 14-15, p. 3, at Bates No. N_LDNR_HCDE_01824. Mr. Barbe states that the Landowner relies on language in the Lease requiring Neumin to restore the property to pre-oil and gas condition. *Id.* But, as indicated in the Adams 12/12/18 Memorandum, Landowner consent is not needed.

- Rock and gravel material remaining onsite will be removed from the location and berms remaining will be graded level with surrounding ground surface.
- ERM demonstrates the vertical and horizontal extent of impacted soil with elevated salt parameters above regulatory criteria (source material) has been delineated to the satisfaction of LDNR using sample salt parameter analytical results, soil boring logs and constituent mobility Synthetic Precipitation Leaching Procedure (SPLP) analytical results.
- ERM demonstrates the shallow groundwater to be RECAP groundwater classification 3 (GW3).
- ERM demonstrates soil to groundwater protection and vertical and horizontal delineation of contaminated shallow groundwater at the property to the satisfaction of LDNR using constituent mobility SPLP results, monitoring well installation analytical results and soil boring logs.
- ERM demonstrates with RECAP that the shallow groundwater poses no risk to human health and the environment, nor to the deeper usable Chicot aquifer underlying the property.
- After source material removal has been addressed, ERM will plug and abandon the remaining monitoring wells at the property.
- When bullet items two and three are complete, based on findings of all other bulleted items above, the source of the contamination in soil will be fully addressed to the satisfaction of LDNR in accordance with Statewide Order 29-B, Section 319.A.

The plan submitted by ERM on behalf of Neumin, as supplemented and presented during public hearing with expert testimony, in summary above and all documentation submitted in support thereof, was not substantively refuted or contradicted after submittal to LDNR.

A. SOIL PLAN

LDNR approves the proposed Neumin Soil Remediation Plan (“Soil Plan”) set forth in Section 7.1 of the Plan, as filed on November 10, 2021, as amended in the January 14, 2022, supplement to the Plan. Specifically, The Soil Plan requires the re-sampling at B19, SE SB-27, and SE SB-31 in the 0-2-foot interval, and soil blending the upper two feet in these areas if resampling confirms 29-B exceedances. The Plan also requires leveling the berm around the Production Area and Tank Battery. The Plan requires final sampling to confirm EC, SAR, and ESP are within limits. LDNR also approves removal of the gravel pad, road, and fence set forth in Section 7.2 of the Plan. (See **Exhibits A and B**).²⁴

A.1. WRITTEN REASONS IN SUPPORT OF SOIL PLAN

A.1.1 STATEWIDE ORDER 29-B EVALUATION/REMEDIATION

A.1.1.a. HYDROCARBONS

There were no exceedances of the Statewide Order 29-B HEM oil and grease (O&G) one percent standard in the soil samples collected by Acadian or Southland. Because of field observations of odor at SE-SB09, ERM resampled this location and analyzed intervals from 4 to 10 feet below ground surface (“bgs”). The O&G levels were well below the 29-B standard.²⁵

²⁴ The “Soil Remediation Plan” is in **Neumin Hearing Exhibit 1** at Bates Nos. N_LDNR_HCDE_00023 and is included in “**Exhibit A**” attached hereto. The amendment is in **Neumin Hearing Exhibit 2**, at Bates Nos. N_LDNR_HCDE_01159-60 and is included in “**Exhibit B**” attached hereto.

²⁵ Neumin Plan, **Neumin Hearing Exhibit 1**, Section 5 “Investigation Results”, subsection 5.1 Soil, sub-subsection 5.1.2 “Hydrocarbons”, at Bates Nos. N_LDNR_HCDE_00016. See O&G standard of < 1 percent (dry weight). LAC

A.1.1.b. SALT EXCEEDANCES

Mr. David G. Angle, a geologist, testified on April 4, 2022. He was tendered and accepted as an expert in the areas of geology, hydrogeology, site assessment, remediation, environmental regulatory standards, and soil and groundwater fate and transport.²⁶ Mr. Angle was the lead remediation scientist with oversight for Neumin’s investigation. He testified that the soil is categorized “upland” for Chapter 3 Pit Closure Standards purposes. LAC 43:XIX.313.D sets forth the 29-B salt parameter standards for Electrical Conductivity (“EC”), Sodium Adsorption Ratio (“SAR”), and Exchangeable Sodium Percentage (“ESP”).²⁷ These are agronomy-based (as opposed to human health) standards. The salt parameters for upland areas in Section 313.D.3 (*see* Neumin Hearing Exhibit 1)²⁸ are:

Electrical Conductivity (“EC”)	< 4 mmhos/cm
Sodium Adsorption Ratio (“SAR”)	< 12
Exchangeable Sodium Percentage (“ESP”)	< 15%

According to Mr. Angle, there were over 250 soil samples from 74 boring locations—375 samples counting split samples—in the very small area—less than one acre—where the Production, Wellhead, and Tank Battery areas—were located.²⁹ The soil results from all the

43:XIX.313.D.1. *See* Angle hearing testimony, 4/4/22, p. 101 (“We had no 29-B oil and grease exceedances”). *See also* Levert hearing testimony, 4/4/22, pp. 162-66 (conclusion that this was not a hydrocarbon site).

²⁶ Angle hearing testimony, 4/4/22, pp. 7-13 (as to his background) and p. 14 (as to his tender and acceptance). Mr. Angle’s background is set forth in “**Addendum 2**” attached hereto. His CV is admitted in evidence as Neumin Hearing Exhibit 48, Bates Nos. N_LDNR_HCDE_02505-12.

²⁷ Angle hearing testimony, 4/4/22, pp. 26-27 and 61 (Based on Fish & Wildlife Wetland Map, there are no wetlands on or near the vicinity of the site, so ERM applied 29-B upland standards in its analysis of the soil data).

²⁸ Neumin Plan, **Neumin Hearing Exhibit 1** at Bates Nos. N_LDNR_HCDE_00010.

²⁹ Angle hearing testimony, 4/4/22, pp. 68 and 103.

investigators (Acadian, Southland, and ERM) are published in Table 3A, and salt exceedances are highlighted.³⁰ The results, and highlighted salt exceedances, are depicted on Figure 37A—Stepout locations; Figure 38A—Production Area; Figure 39A—Wellhead Area; Figure 40A—Tank Battery Area.³¹

Mr. Patrick M. Ritchie, a professional wetland scientist, testified on March 31, 2022.³² He was tendered and accepted as an expert in the areas of botany, plant ecology, soils and wetlands, and root zone analysis.³³ He performed a review of plant conditions and a vegetation root zone study at the approximately one acre site of the former Neumin E&P operations.³⁴ He testified he studied five herbaceous and two tree species in proximity to the HC Drew Manual “15” No. 1 well (SN225207). The study was introduced into evidence.³⁵ He testified that all the areas he visited (which were all in the one acre E&P area) were green, growing, healthy, and showed no signs or

³⁰ Table 3A—Soil Analytical Data for Tank Battery Area, at Bates Nos. N_LDNR_HCDE_01174-78 (depths starting at the 0–2-foot interval, and proceeding at 2-foot intervals going down to 30 feet); for Production Area, at Bates Nos. N_LDNR_HCDE_01179-83 (same intervals); Wellhead Area, at Bates Nos. N_LDNR_HCDE_01184-88 (same intervals); one sample site, SE-SB01 on 9/24/18 at the 10-11 foot interval, identified in the Table as Background-Southland, at Bates No. N_LDNR_HCDE_01188; and Stepouts at Bates Nos. N_LDNR_HCDE_01188-94 (same intervals).

³¹ Figure 37A is at Bates No. N_LDNR_HCDE_01167; Figure 38A is at Bates No. N_LDNR_HCDE_01168; Figure 39A is at Bates No. N_LDNR_HCDE_01169; and Figure 40A is at Bates No. N_LDNR_HCDE_01170.

³² Mr. Ritchie’s background is set forth in “**Exhibit D**” attached hereto. His CV is in evidence at **Neumin Hearing Exhibit 1**, Appendix F, Bates No. N_LDNR_HCDE_00514-18. See Ritchie hearing testimony, 3/31/22, p. 47.

³³ Ritchie hearing testimony, 3/31/22, p. 47.

³⁴ Ritchie hearing testimony, 3/31/22, pp. 44 & 48-49 (referencing 11/10.21 Holloway Environmental Services, Inc. study entitled “Review of Plant Conditions and Vegetation Root Study on the H.C. Drew Manual Estate ‘15’ No.1”, **Neumin Hearing Exhibit 1**, Appendix F, Bates No. N_LDNR_HCDE_00444-00518).

³⁵ Review of Plant Conditions and Vegetation—Root Study on the H.C. Drew Manual Estate “15” No. 1 in Calcasieu Parish, Louisiana, **Neumin Hearing Exhibit 1**, Appendix F: Effective Root Zone Study, at Bates Nos. N_LDNR_HCDE_00444-518.

indication of any kind of impact from former E&P operations.³⁶ He testified there were three different types of soils at the site, Prairieland, Midland, and Mowata/Vidrine, all of which are poorly drained soils.³⁷ He defined “effective root zone” as the depth at which the roots go into the soil profile which root depth is necessary for a plant’s growth and reproduction.” He testified it is “not the deepest roots, but it is the majority of the roots that help produce a growing vegetation and complete its life cycle that constitutes the effective root zone” (ERZ). He testified that it was important to make a site-specific assessment as to rooting depth of the vegetation to determine the ERZs so as to determine the depth of necessary soil remediation.³⁸

The root zone study, which was carried out with Dr. Luther Holloway, was documented with numerous pictures depicting the rooting patterns of two trees and five herbaceous types of vegetation.³⁹ Based on the study, the ERZs for the trees, a Live Oak and a Sugarberry (Hackberry), were determined to be ten (10) inches below ground surface (bgs); for Bermuda grass, ten (10) inches and seven (7) inches (bgs); for Shortbristle Horne Beaksedge, seven (7) inches (bgs); for Annual Marsh-Elder, six (6) inches (bgs); and for Crabgrass, six (6) inches (bgs).⁴⁰ Mr. Ritchie testified that if any area had exceedances which required remediation, remediation to a level of 12 inches would be adequate except small areas containing gravel road material or pads for E&P

³⁶ Ritchie hearing testimony, 3/31/22, p. 52.

³⁷ Ritchie hearing testimony, 3/31/22, p. 53.

³⁸ Ritchie hearing testimony, 3/31/22, pp. 57-58.

³⁹ See Ritchie hearing testimony, 3/31/22, pp. 55-64. For photographs, see Appendix B, beginning at Bates Nos. N_LDNR_HCDE_00470.

⁴⁰ Ritchie hearing testimony, 3/31/22, pp. 67-84.

structures which may have to be removed to greater depth.⁴¹ In response to a question from one of the Panel members, he testified that the species of vegetation he studied were representative of the vegetation at the site.⁴²

Because the ERZ does not exceed 10 inches for any plant-type at the site, the Most Feasible Plan only requires remediation of salt exceedances in the 0-2-foot interval.⁴³ There are only three sample locations with salt exceedances in the 0–2-foot interval, and the exceedances are marginal.⁴⁴ The three locations are depicted on Figure 36A.⁴⁵ Detail by investigators conducting the sampling is available in Table 3A: (1) B19 is in the Tank Battery Area (Acadian sample on 2/19/18—EC, 4.29; SAR, 17.0; ESP, 26.6);⁴⁶ (2) SE-SB27 is in the Production Area (Southland sample on 11/16/21, ERM split sample—SAR, 15.9);⁴⁷ and (3) SE-SB31, step-out sample area (Southland sample on 11/17/21—EC, 4.88; ERM split sample EC, 4.89).⁴⁸

⁴¹ Ritchie hearing testimony, 3/31/22, p. 84. His “Opinions and Conclusion,” which he testified to, are at Bates Nos. N_LDNR_HCDE_00459-60.

⁴² Ritchie hearing testimony, 3/31/22, pp. 90-94.

⁴³ Angle hearing testimony, 4/4/22, pp. 61-62.

⁴⁴ Angle hearing testimony, 4/4/22, pp. 76-78 and 101 (“We had three locations that ... slightly exceeded 29-B salt standard in the root zone”).

⁴⁵ Supplement to Neumin Plan, **Neumin Hearing Exhibit 2**, Figure 36A, Statewide Order 29-B Salt Exceedances (0-2 Foot Interval), is at Bates No. N_LDNR_HCDE_01166.

⁴⁶ Supplement to Neumin Plan, **Neumin Hearing Exhibit 2**, Table 3A, Soil Analytical Data, Tank Battery Area, B19-S1, 2/19/18, 0-2.5 feet, Bates No. N_LDNR_HCDE_001174.

⁴⁷ Supplement to Neumin Plan, **Neumin Hearing Exhibit 2**, Table 3A, Soil Analytical Data, Production Area, SE-SB27, 11/16/21, 0-2 feet, Bates No. N_LDNR_HCDE_001183. Southland’s split sample result for SAR on this date at the same location and depth was 14.4. So, it was within the acceptable limit. *Id.*

⁴⁸ Supplement to Neumin Plan, **Neumin Hearing Exhibit 2**, Table 3A, Soil Analytical Data, Stepouts, SE-SB31, 11/17/21, 0-2 feet, Bates No. N_LDNR_HCDE_001192.

While there is no depth limitation included in the 29-B salt standards, LDNR has not applied the specific numerical standards for salt parameters in LAC 43:XIX.313.D below the root zone in the Act 312 hearings where that issue has arisen and there was no adverse impact on the reasonably anticipated future use of the property. The Plan approved here will not require salt exceedances at greater depths than the ERZ to be remediated because there will be no adverse impact to the reasonably anticipated future use of the property.⁴⁹

Mr. Brent Bray for the Landowner, in his submittal on February 14, 2022, argues that the *Agri-South* case, a previous Act 312 case, required remediation of salt exceedances below the 0–2-foot interval. That case was significantly different than here for several reasons. The responsible party there offered to remediate salt exceedances down to three feet. The landowner proposed remediating down to thirty feet. After cross-examination, and questions from the Panel, the

⁴⁹ Previous equipment removal activities have been conducted by Davies Construction at the time of plugging and abandonment in 2015. Then extensive investigation of the soil at the site was conducted on behalf of the landowner in 2016 and 2018. Neumin Plan, Neumin Hearing Exhibit 1, “Introduction”, at Bates No. N_LDNR_HCDE_00006. The landowner’s investigators, Acadian and Southland, together with Neumin’s investigator ERM, have conducted extensive vertical and horizontal delineation of salt indicators in the soil, and the investigations have shown salt parameters generally within 29-B limits at depths greater than the 0–2-foot interval and that chloride concentrations decrease rapidly with distance from the former operational area. *Id.*, Section 5, “Investigation Results”, subsection 5.1 “Soils”, sub-subsections 5.1.3, “29-B Salt Parameters” and 5.2.4, “Chloride”, Bates Nos. N_LDNR_HCDE_00017-18. Neumin proposes resampling and remediating as necessary the three instances of salt parameters higher than 29-B standards and leveling the gravel berms around the production area and the tank battery area. *Id.*, Section 7, “Remediation Plan”, subsection 7.2, “Contingent Removal of Gravel Pad, Road, and Fence”, Bates No. N_LDNR_HCDE_00023. The site soil and shallow groundwater conditions do not endanger a USDW. *Id.*, Section 7, “Remediation Plan”, subsection 7.3, “Groundwater”, Bates No. N_LDNR_HCDE_00024. Multiple lines of evidence show that conditions in the soil and shallow groundwater are protective of the deeper Chicot Aquifer groundwater. There is a 120- to 140-foot-thick clay confining layer separating the shallow water zone from the Chicot Aquifer. *See* Angle hearing testimony, 4/4/22, pp. 34, 39-40, and 89. The additional soil and groundwater data after the submission of the original Neumin Plan confirmed the findings in the original Plan that “remediation of soil and Class 3 shallow groundwater is not necessary to support the existing and anticipated future use of the property for agriculture and/or cattle grazing”. Supplement to Neumin Plan, Neumin Hearing Exhibit 2, Summary and Amendment to Limited Admission Remediation Plan, at Bates No. N_LDNR_HCDE_01159. Angela Levert, the RECAP expert for Neumin, testified that the concentrations of constituents detected in the soil or in soil leachate were less than the RECAP non-industrial screening standards, so they are protective of ongoing land use, for alternative residential land use, and for unrestricted land use at the screening level. Levert hearing testimony, 4/4/22, p. 141; and in Ms. Levert’s expert opinion there are no restrictions on the future use of the property. Levert, at p. 147.

landowner's expert conceded that the roots of vegetation at issue only went down to eight feet based on his root zone analysis for vegetation at that site. The Most Feasible Plan in that case did not require any remediation below 8 feet, which is what the Landowner's expert conceded was the root zone.⁵⁰ Also, significantly, the concept of "effective" root zone was not raised, and that concept was described by Mr. Ritchie as "not the deepest roots", but the ERZ is, in essence, "the majority of the roots that help produce a growing vegetation" and help complete its life cycle. In *Agri-South* both sides offered expert testimony, and both experts were subjected to cross-examination by opposing counsel. Both were subjected to questions from the Panel. Importantly, Mr. Bray's written critique here offers no vegetative analysis and no root zone study of his own.⁵¹ Significantly, the Landowner, H.C. Drew Estate, voluntarily declined to participate in the hearing⁵²—a hearing mandated by Act 312 and required by order of the Court.

Thus, Mr. Ritchie's study stands unchallenged as the only evidence in the record as to the depth of the "effective root zone," and thus the depth of necessary and feasible remediation of salt.

A.1.1.c. METALS

⁵⁰ *Louisiana Dept. of Natural Resources, Office of Conservation's Written Reason in Support of Most Feasible Plan as Required by La. R.S. 30:29* (signed by James H. Welsh, Commissioner of Conservation, October 3, 2013), in *Agri-South, LLC v. Exxon Mobil Corp., et al*, Docket No. Env-L-2013-02 (submitted to 7th JDC, Parish of Catahoula). As noted, the soil exceeded the applicable salt parameters—most notably electrical conductivity ("EC"), the most commonly referenced salt standard for soils under Statewide Order 29-B of 4 mmhos/cm for upland areas—to a depth of at least 30 feet below ground surface based on sampling, but the LDNR Plan only required remediation down to a depth of 8 feet based on the expert root zone testimony for the type of vegetation/crops in that case. See Neumin Hearing Exhibit 11, Bates Nos. N_LDNR_HCDE_01795-1814. See particularly Bates Nos. N_LDNR_HCDE_01799 and 1804, the pages documenting the Landowner's requested remediation of the salt exceedances to a level of 30 feet and LDNR decision to only require remediation down to 8 feet because of the expert root zone testimony.

⁵¹ See Brent Bray of RBB Consulting, Review of the Neumin Plan, dated February 14, 2022, at Bates Nos. N_LDNR_HCDE_01780-1783.

⁵² See n. 3 *supra*.

Arsenic with a concentration of 13.6 mg/kg was detected on 2/19/18 by Acadian in the Wellhead area in the B29-S5 sample at 10-12.5 feet (bgs).⁵³ This is above both the Statewide Order 29-B standard of 10 mg/kg⁵⁴ and the RECAP Soil SSni standard of 12 mg/kg.⁵⁵ ERM resampled this interval (B-29R, at 10-12.5 feet) on 9/9/21, calculated the average of the Acadian B29-S5, ERM B-29R and Southland B-29R arsenic results (8.29mg/kg), and concluded investigation of arsenic at this location as the average arsenic result was below both the Statewide Order 29-B and RECAP Soil SSni standards.⁵⁶

A.1.1.d. RECAP EVALUATION OF SOIL

Ms. Angela Levert of ERM testified on April 4, 2022. She was tendered and accepted as an expert in the areas of environmental data evaluation, RECAP, and environmental chemistry.⁵⁷ She compared RECAP standards to soil sample data collected from ERM, Acadian, and Southland

⁵³ Neumin Plan, Neumin Hearing Exhibit 1, Section 5 “Investigation Results”, subsection 5.1 Soil, sub-subsection 5.1.1 Metals, at Bates Nos. N_LDNR_HCDE_00016. See Table 3A, Soil Analytical Data, Wellhead Area, B-29-S5, 2/19/18, 10-12.5 feet, Bates No. N_LDNR_HCDE_001184.

⁵⁴ LAC 43:XIX.313.C.2.

⁵⁵ LAC 33:I Chapter 13 (“RECAP”), LDEQ RECAP Table 1, Screening Option—Screening Standards for Soil and Groundwater.

⁵⁶ Neumin Plan, Neumin Hearing Exhibit 1, Section 5 “Investigation Results”, subsection 5.1 Soil, sub-subsection 5.1.1 Metals, at Bates Nos. N_LDNR_HCDE_00016. See Table 3A, Soil Analytical Data, Wellhead Area, B-29R, 9/9/21, 10-12.5 feet, Bates No. N_LDNR_HCDE_001184. See Angle hearing testimony, 4/4/22, pp. 100-01 (“We only had one metals detection above the 29-B standard. It was an arsenic detection. Subsequent splits of that same location could not confirm that. No other metals exceedances of 29-B”). See also Levert hearing testimony, 4/4/22, pp. 160-61.

⁵⁷ Levert hearing testimony, 4/4/22, pp. 136-38 (as to her background) and p. 139 (as to her tender and acceptance). Ms. Levert’s background is set forth in “Exhibit D” attached hereto. Her CV is admitted in evidence as Neumin Hearing Exhibit 50, Bates Nos. N_LDNR_HCDE_02519-23.

for non-Statewide 29-B parameters and the evaluation included soil where Southland had identified odors at SE-SB09 in the Wellhead area and at SE-SB22 in the Tank Battery area.⁵⁸

At SE-SB09 in the Wellhead area, ERM completed a boring in the locations where the odors had been previously detected, and samples were collected by ERM for hydrocarbon fraction and PAH analysis in accordance with Appendix D of RECAP. At SE-SB22 in the Tank Battery area. Results were non-detect.⁵⁹ Soil concentrations were compared to RECAP non-industrial limiting screening standards to identify constituents warranting further site-specific evaluation.⁶⁰ The limiting standards were the lower of the screening standard protective of non-industrial direct contact (Soilssni) and the groundwater protection screening standard (Soilsgw). Data from all depths were included in the comparison to health-protective screening standards. The comparison of maximum reported concentrations in soil to limiting screening standards were provided in Neumin's Table 6A.⁶¹

Soil concentrations for metals in each area were below the screening standards. One hydrocarbon indicator constituent, naphthalene, was above the default screening standard for groundwater protection in one sample from the Wellhead area, but a site-specific demonstration

⁵⁸ Lvert hearing testimony, 4/4/22, pp. 147-51 and 162-65.; and Neumin Plan, Neumin Hearing Exhibit 1, Section 6.2 Development and Comparison to RECAP Standards, 6.2.1 Soil, at Bates Nos. N_LDNR_HCDE_00020.

⁵⁹ Lvert hearing testimony, 4/4/22, pp. 153-54 and 162-66.

⁶⁰ Lvert hearing testimony, 4/4/22, pp. 147-an 156-58. See RECAP, §2.1, RECAP definition of "Non-industrial", at RECAP p.18: "any property that does not meet the exclusive definition of an industrial property (see Appendix E). Such properties may be residential, farming (livestock or vegetative), or undeveloped lands that are not included in the industrial property description (privately-owned lands, wetlands, state and national parks). Non-industrial sites shall be managed through comparison with non-industrial standards and/or remediated to non-industrial standards."

⁶¹ *Id.* See Exhibit 45, Table 6A, Soil Screening Evaluation-Non-Industrial Direct Contact, at Bates Nos. N_LDNR_HCDE_00042-43.

of groundwater protection was performed on the sample using SPLP testing and comparison of the leachate concentration in Table 6A to the screening level for leachate (protective of all classes of groundwater) demonstrated that the concentration complied with the RECAP screening standard.⁶² A supporting MO-1 analysis of the soil to groundwater pathway was performed for naphthalene, as shown in Neumin's Table 7. The supporting assessment confirmed that naphthalene was below the default MO-1 standard protective of underlying Class 3 groundwater, prior to use of any dilution-attenuation factors. Accordingly, it was concluded that no further action is required for soil to comply with RECAP requirements for groundwater.⁶³

Ms. Levert testified that no further action is required for soil to protect human health and underlying groundwater or to comply with RECAP requirements.⁶⁴

B. GROUNDWATER PLAN

The shallow groundwater beneath the site has been classified as Class 3 groundwater based on slug test data.⁶⁵ There is no useable shallow groundwater zone beneath the site or within a mile.⁶⁶ Groundwater chloride results at the site have been horizontally delineated and the residual chloride concentrations do not present a threat to surface water quality of the nearest downgradient

⁶² Neumin Plan, **Neumin Hearing Exhibit 1**, Section 6.2 Development and Comparison to RECAP Standards, 6.2.1 Soil, at Bates Nos. N_LDNR_HCDE_02419-20.

⁶³ Levert hearing testimony, 4/4/22, pp. 159-60. *See also* Table 6A referred to in note immediately above. *See also* Neumin Plan, **Neumin Hearing Exhibit 1**, Section 6 "RECAP Evaluation", subsection 6.2 "Development and Comparison to RECAP Standards", sub-subsection 6.2.1 Soil, at Bates Nos. N_LDNR_HCDE_00020-21. *See also* Table 7, MO-1 Soil Evaluation—Protection of Groundwater, at Bates No. N_LDNR_HCDE_00044.

⁶⁴ *Id.* *See also* Levert hearing testimony, 4/4/22, pp. 167 and 177-80.

⁶⁵ Angle hearing testimony, 4/4/22, pp. 43-45.

⁶⁶ Angle hearing testimony, 4/4/22, pp. 34-36 and 42-43.

surface water, and no source remains.⁶⁷ The clay-confining unit underlying the Class 3 shallow water-bearing zone is protective of the USDW (Chicot Aquifer) underlying the site.⁶⁸ LDNR approves the proposed Neumin Groundwater Plan (“Groundwater Plan”) set forth in subsection 7.3 of the Plan, as filed on November 10, 2021, which is to plug and abandon the existing monitoring wells on the site (MW-1 through MW-4). (See Exhibit A).⁶⁹

B.1. WRITTEN REASONS IN SUPPORT OF GROUNDWATER PLAN

While LAC 43.XIX.303.C provides “[c]ontamination of a groundwater aquifer or a USDW with E and P Waste is strictly prohibited,” pursuant to a February 25, 2011 Memorandum of Understanding between LDNR and LDEQ, LDEQ’s RECAP procedures have been recognized as containing groundwater evaluation and/or remediation standards applicable to E&P sites, and RECAP has been used as the principal regulatory standard for groundwater evaluation and/or remediation in every Act 312 where groundwater has been an issue. Both Mr. Angle and Ms. Levert testified at the public hearing concerning the groundwater data and results, and ERM’s groundwater evaluation under RECAP.⁷⁰

Shallow groundwater underlies the former E&P operational area at between 7 and 15 feet bgs. The thickness of this shallow water zone ranges from one to seven feet with an average

⁶⁷ See n. 49 *supra*. The chloride results document that any impacts from former oil and gas operations have been horizontally delineated. “The massive thickness of the clay-confining unit underlying the thin Class 3 shallow water-bearing zone is protective of the useable Chicot Aquifer underlying the site.” Neumin Plan, Neumin Hearing Exhibit 1, Section 7 “Remediation Plan”, subsection 7.3 “Groundwater”, Bates No. N_LDNR_HCDE_00024.

⁶⁸ Angle hearing testimony, 4/4/22, pp. 33-36, 39-40, and 89.

⁶⁹ The “Groundwater Plan” is in Neumin Hearing Exhibit 1, at Bates No. N_LDNR_HCDE_00024 and is included in “Exhibit A” attached hereto.

⁷⁰ As to evaluation of groundwater under RECAP, see generally Angle hearing testimony, 4/4/22, at pp. 43-45, 62-63, 85-89 and 92, and Levert hearing testimony, 4/4/22, at pp. 140, 142-44 and 167-80.

thickness of three feet. There are confining clay layers both above and below.⁷¹ The clay-confining unit underlying this shallow water-bearing zone is protective of the Chicot Aquifer underlying the site.⁷² Investigation has shown that this shallow ground water zone has not been used as a water source and does not represent a viable future source of water due to low yield and poor quality.⁷³ ERM slug test data documents that this shallow ground water zone has an overall yield of 103 gallons per day,⁷⁴ which is consistent with the RECAP classification of a Class 3A groundwater.⁷⁵ The shallow groundwater flows generally to the southwest with a gradient of 0.0013 feet.⁷⁶ The nearest down-gradient surface water body is an unnamed stream that is 2,000 feet south-southwest

⁷¹ Neumin Plan, Neumin Hearing Exhibit 1, Section 2 “Site Setting”, subsection 2.4 “Hydrology and Groundwater”, at Bates No. N_LDNR_HCDE_00008, and Figs. 10-12, Cross Section Locations of Wells, at Bates Nos. N_LDNR_HCDE_00063-65. *See also* Angle hearing testimony, 4/4/22, pp. 32 and 123.

⁷² *See* discussion as to Chicot Aquifer underlying the site. Neumin Plan, Neumin Hearing Exhibit 1, Section 2 “Site Setting”, subsection 2.4 “Hydrology and Groundwater”, at Bates No. N_LDNR_HCDE_00008 and Fig. 13, “Thickness of Chicot Confining Unit”, at Bates No. N_LDNR_HCDE_00066. *See also* Angle hearing testimony, 4/4/22, pp. 33-36, 39-40, and 89.

⁷³ Neumin Plan, Neumin Hearing Exhibit 1, Section 2 “Site Setting”, subsection 2.4 “Hydrology and Groundwater”, at Bates Nos. N_LDNR_HCDE_00008-09. *See also* Angle hearing testimony, 4/4/22, p. 45; and Levert hearing testimony, 4/4/22, pp. 143-44 and 176.

⁷⁴ Neumin Plan, Neumin Hearing Exhibit 1, Section 2 “Site Setting”, subsection 2.4 “Hydrology and Groundwater”, sub-subsection 2.4.1 “Groundwater Classification”, at Bates No. N_LDNR_HCDE_00009, and Section 5 “Investigative Results”, subsection 5.2 “Groundwater”, sub-subsection 5.2.1 “Groundwater Classification”, at Bates No. N_LDNR_HCDE_00017. *See* Table 1, Slug Test Results (from MW-2, MW-3, and MW-4), at Bates No. N_LDNR_HCDE_00027. *See also* Appendix E, individual slug test evaluation reports, at Bates Nos. N_LDNR_HCDE_00437-43. *See also* Angle hearing testimony, 4/4/22, p. 45.

⁷⁵ Neumin Plan, Neumin Hearing Exhibit 1, Section 2 “Site Setting”, subsection 2.4 “Hydrology and Groundwater”, sub-subsection 2.4.1 “Groundwater Classification”, at Bates No. N_LDNR_HCDE_00009. *See* RECAP, §2.1, RECAP definition of “Groundwater Classification 3-Class 3A, at RECAP, p. 14: Groundwater within an aquifer that is sufficiently permeable to transmit water to a well at a maximum sustainable yield of less than 800 gpd.”. *See also* Angle hearing testimony, 4/4/22, p. 45.

⁷⁶ Neumin Plan, Neumin Hearing Exhibit 1, Section 2 “Site Setting”, subsection 2.4 “Hydrology and Groundwater”, sub-subsection 2.4.2, “Groundwater Flow”, at Bates No. N_LDNR_HCDE_00009, and Fig. 19, “September 10, 2021, “Potentiometric Surface Map”, at Bates No. N_LDNR_HCDE_00072. *See also* Levert hearing testimony, 4/4/22, pp. 173-74.

from the former E&P operational area.⁷⁷ The site is in LDEQ drainage basin subsegment #031001 which is designated estuarine.⁷⁸

Groundwater data collected by ERM, Acadian, and Southland were used in the RECAP investigation and evaluation by ERM. Samples were collected from eighteen monitoring wells and were analyzed for salt indicators.⁷⁹ Samples from eight monitoring wells were analyzed for select metals. In 2016, Acadian had reported arsenic, chromium, and/or lead above RECAP screening standards, which were measured as total, unfiltered samples. In 2021 ERM found no exceedances of the RECAP screening standards for these metals in the ERM or Southland split samples and

⁷⁷ Neumin Plan, Neumin Hearing Exhibit 1, Section 2 “Site Setting”, subsection 2.1 “Hydrology”, at Bates No. N_LDNR_HCDE_00007. *See also* Levert hearing testimony, 4/4/22, p. 143.

⁷⁸ *Id.* *See also* Fig. 4, “Surface Water Features”, at Bates No. N_LDNR_HCDE_00057, and Fig. 5, “LDEQ Drainage Basin Subsegment”, at Bates No. N_LDNR_HCDE_00058. *See also* Angle hearing testimony, 4/4/22, p. 27; and Levert hearing testimony, 4/4/22, p. 143.

⁷⁹ *See* Neumin Plan, Neumin Hearing Exhibit 1, Section 6 “RECAP Evaluation”, subsection 6.2 “Development and Comparison to RECAP Standards”, sub-subsection 6.2.2 “Groundwater”, Bates No. N_LDNR_HCDE_00021. *See also* Angle hearing testimony, 4/4/22, pp. 68 and 103; and Levert hearing testimony, 4/4/22, p. 168.

See Figure 33A, Groundwater Sample Locations, at Bates No. N_LDNR_HCDE_01164, and Figure 34A, Groundwater Sample Locations-Zoom, at Bates No. N_LDNR_HCDE_01165. *See also* Groundwater Analytical Data reported in Table 4, Bates No. N_LDNR_HCDE_00038-39, and Table 4A, Bates No. N_LDNR_HCDE_01195-97.

As can be seen on Figure 34A:

- Acadian had three Areas of Investigation (“AOI” s), designated on the Figure as the Wellhead Area, the Production Area, and the Tank Battery Area.
- There are five (5) Acadian GW sample locations shown on Fig. 34A—TW-1 and TW-5 in the Wellhead Area, TW-2 and TW-3 in the Production Area, and TW-4 in the Tank Battery Area. Tables 4 and 4A indicate that the samples at these locations were collected by Acadian in 2016.
- There are seven (7) Southland GW sample locations in Fig. 34A, all outside the initial AOIs—SE-SB02 (8-13’), SE-SB03 (8-13’), SE-SB04 (8-13’), SE-SB05 (10-15’), SE-SB06 (8-13’), SE-SB35 (10-15’), and SE-SB36 (5-15’). There is an eighth, SE-SB01 (9.5-14.5’) not shown in the Figure but reported in Tables 4 and 4A. The Tables indicate that samples were collected by Southland in the fall of 2018.
- There are four (4) ERM GW sample locations, three (3) of them are outside the initial AOIs—MW-1 (8-13’), MW-2 (8-13’), and MW-3 (8-13’), and the fourth one, MW-4 (9-14’) is inside the Tank Battery AOI. Tables 4 and 4A indicate that samples were collected by ERM in the fall of 2021.

ERM’s MW-4 well was located inside the Tank Battery AOI less than 20 feet from Acadian’s TW-4 well where the highest metals levels had been detected.⁸⁰

Elevated chloride concentrations in the shallow groundwater are limited to the area in and immediately around the former E&P operational area, with a maximum concentration of 7,200 mg/L in the Production Area AOI (sample date, 12/2/16), with concentrations decreasing rapidly with distance. The chlorides have been horizontally delineated, and the concentrations fall off outside the AOIs to a background level of between 42 mg/L and 155 mg/L, below the US EPA Secondary Drinking Water Standards for chlorides (SMCL (“secondary maximum contaminant level”) of 250 mg/L) as can be seen on Figure 42 and the chart below.⁸¹

Well	Location	Sample date	Chlorides (mg/L)
SE-SB02	west of AOIs	09/24/2018	155 (SL)
SE-SB06	east of AOIs	09/25/2018	141 (SL)
MW-1	north of AOIs	09/09/2021	156/111 (ERM/SL)
MW-03	southeast of AOIs	09/09/2021	57.8/42.4 (ERM/SL)
MW-02	southwest of AOIs	09/09/2021	123/91.9 (ERM/SL)

Table 8 compares the maximum reported groundwater concentrations to screening standards from RECAP Table 1. Table 8 shows that hydrocarbon fractions and BTEX (benzene, toluene, ethylbenzene, and xylene) were not detected, and metals concentrations are below

⁸⁰ Neumin Plan, Neumin Hearing Exhibit 1, Section 5 “Investigation Results”, subsection 5.1 “Soil”, sub-subsection 5.2.3 “Metals”, at Bates No. N_LDNR_HCDE_00018. *See also* n. 56 *supra*.

⁸¹ Neumin Plan, Neumin Hearing Exhibit 1, Section 5 “Investigation Results”, subsection 5.1 “Soil”, subsection 5.2.4 “Chloride”, at Bates No. N_LDNR_HCDE_00018. Section 6 “RECAP Evaluation”, subsection 6.2 “Development and Comparison to RECAP Standards”, at Bates No. N_LDNR_HCDE_00022: “Chloride concentrations are delineated to below the SMCL.” *See* Fig. 41, “Chloride in Groundwater”, at Bates No. N_LDNR_HCDE_00094 and Fig. 42, “Chloride in Groundwater-Zoom”, at Bates No. N_LDNR_HCDE_00095. The EPA secondary drinking water guideline for chlorides in drinking water (“SMCL”) is less than 250 mg/L. *See also* Angle hearing testimony, 4/4/22, pp. 85-89; and Levert hearing testimony, 4/4/22, pp. 176-77.

screening standards. Chloride is the site-related COC in shallow groundwater. Chloride and TDS were reported above the SMCL (250 mg/L and 500 mg/L, respectively) in screening wells closest to the former E&P operational areas, but as noted in the above chart, chloride horizontally delineates to below the SMCL of 250 mg/L (SMCLs are non-enforceable aesthetic guidelines for public water supplies and are not applicable to a Class 3 water-bearing zone). An MO-1 groundwater evaluation was conducted to ensure protection of surface water that could potentially receive discharge from this groundwater zone. Based on the site hydrology, GW_{3NDW} is the applicable standard for metals; there are no promulgated standards for chloride and TDS. The MO-1 Evaluation is in Table 9A. The maximum groundwater concentrations are less than standards protective of surface water quality.⁸² Ms. Levert testified that the chloride concentrations, and all other constituent concentrations, in the groundwater do not pose a risk to human health or the environment, and no action is further required to protect human health or comply with RECAP standards for groundwater.⁸³

Finally, Ms. Levert testified that consistent with RECAP guidance she considered current and potential future land use in the evaluation of risk to human health. She testified her risk evaluation used the RECAP default non-industrial (residential) exposure scenario, which is the most conservative assessment under RECAP.⁸⁴ The Landowner has objected to the use of the

⁸² Neumin Plan, Neumin Hearing Exhibit 1, Section 6 “RECAP Evaluation”, subsection 6.2 “Development and Comparison to RECAP Standards”, sub-subsection 6.2.2 “Groundwater”, at Bates No. N_LDNR_HCDE_00021-22. Table 8, “Groundwater Screening Evaluation” and Table 9, “Groundwater Screening Evaluation”, at Bates Nos. N_LDNR_HCDE_00045-47. See Levert hearing testimony, 4/4/22, pp. 173-76.

⁸³ Neumin Plan, Neumin Hearing Exhibit 1, Section 6 “RECAP Evaluation”, subsection 6.3 “RECAP Evaluation Conclusions”, at Bates No. N_LDNR_HCDE_00022. See Levert hearing testimony, 4/4/22, p. 176.

⁸⁴ Neumin Plan, Neumin Hearing Exhibit 1, Section 6 “RECAP Evaluation”, subsection 6.1.1 “Summary of Exposure Pathway Analysis and Exposure Scenarios”, at Bates No. N_LDNR_HCDE_00019. See Levert hearing testimony, 4/4/22, pp. 178-80.

RECAP standard, but as noted earlier, Landowner consent is not required to approve a Most Feasible Plan based on evidence at an Act 312 public hearing.⁸⁵

C. COST ESTIMATE TO IMPLEMENT MOST FEASIBLE PLAN

The cost necessary to implement the Most Feasible Plan is the total of the cost estimates Neumin has proposed (1) to conduct the additional soil sampling, the berm leveling and blending, and project management and reporting, with a 20% contingency, \$22,738;⁸⁶ (2) for the removal of gravel pad, road, and fence, \$42,960;⁸⁷ and (3) to plug and abandon the existing monitoring wells (MW-1 through MW-4), \$8,820.⁸⁸ LDNR accepts these cost estimates as set forth in Tables 10A, 11, and 12 (with markups noted in the footnotes) necessary to carry out the Most Feasible Plan.

III. COMMENTS FROM OTHER AGENCIES

As provided by law and regulation, the Office of Conservation provided to the Louisiana Department of Agriculture and Forestry (LDAF), Louisiana Department of Environmental Quality (LDEQ) and Louisiana Department of Natural Resources (LDNR), a Preliminary MFP & Written Reasons together with copies of the Neumin feasible plan and Neumin supplemental plan for review. Comments were received by LDEQ and LDNR. LDAF did not provide comments.

⁸⁵ See n. 23 *supra*.

⁸⁶ Supplement to Neumin Plan, Neumin Hearing Exhibit 2, Summary and Amendment to Limited Admission Remediation Plan, at Bates No. N_LDNR_HCDE_01160; and Table 10A, "Proposed Soil Remediation Plan Cost Estimate" at Bates No. N_LDNR_HCDE_01201.

⁸⁷ Neumin Plan, Neumin Hearing Exhibit 1, Section 7 "Remediation Plan", subsection 7.2 "Contingent Removal of Gravel Pad, Road, and Fence", at Bates No. N_LDNR_HCDE_00023-24; and Table 11, "Contingent Removal of Gravel Pad, Road, and Fence Cost Estimate", at Bates No. N_LDNR_HCDE_00049. Note subcontractor Diversified 11/3/21 Quote includes a 10% markup.

⁸⁸ Neumin Plan, Neumin Hearing Exhibit 1, Section 7 "Remediation Plan", subsection 7.3 "Groundwater", Bates No. N_LDNR_HCDE_00024; and Table 12, "Proposed Monitoring Well P&A Cost Estimate", at Bates No. N_LDNR_HCDE_00050. Note subcontractor Walker Hill 10/28/21 Quote includes a 10% markup.

A. LDEQ COMMENTS. Within the time stipulated by law and regulation, LDEQ provided comments on February 2, 2022, and May 24, 2022.⁸⁹ LDEQ comments with Conservation's responses are as follows:

1. LDEQ Comment 1 - "With so few data points for groundwater flow determination the groundwater flow may be more southerly. The shortest distance to the unnamed stream is about 1200 feet not 2000 feet. This would change the DAF to 173; however, it would not change the conclusion of the Risk Evaluation Corrective Action Program (RECAP) investigation. So, the only geology comment made was to show the point of exposure (POE) on a map."

- **Conservation Response to Comment 1** - A map showing the nearest southern distance from the site to the unnamed stream POE is an Addendum to this MFP.⁹⁰

2. LDEQ Comment 2 - "Section 2.4.1 Slug test collected from small diameter wells underestimate the hydraulic conductivity. Demonstrate through the proper calculations how the hydraulic conductivity was corrected for in the small diameter wells."

- **Conservation Response to Comment 2** - After further review of the slug test calculations in Section 2.4.1, it was determined that the proper calculations were provided by ERM. This comment was therefore dismissed by LDEQ as evident in their May 24, 2022, comments.

3. LDEQ Comment 3 - "5.1.1 Cannot resample soil for the purpose of disconfirming a detection; however, additional data may be collected for delineation and Limiting RECAP

⁸⁹ See Addendum 3-1, Permit Review Log Sheet, 2/2/2022 & Addendum 3-2, Permit Review Log Sheet, 5/24/2022.

⁹⁰ See Addendum 4, Map of Distance to POE, compiled by LDNR Office of Conservation, Environmental Division, 6/8/22.

Standards (LRS) calculations. The elevated arsenic concentrations detected in sample B29-S5 (10-12.5 feet below ground surface [bgs]) still needs to be addressed.”

- **Conservation Response to Comment 3** - One initial soil sample collected and analyzed for arsenic at sample location B29-S5 at a depth interval of 10-12.5 feet within the wellhead area of investigation showed a result of 13.6 mg/kg, above the RECAP screening standard and LDEQ established soil arsenic statewide average background concentration of 12 mg/kg. ERM resampled this interval (B-29R at 10-12.5 feet) for arsenic analysis. Split sample was provided to Southland. Arsenic analytical results for the ERM and Southland split samples were 2.73 mg/kg and 8.55 mg/kg, respectively. Using all three above soil arsenic results and calculating an average arsenic concentration result of 8.29 mg/kg, ERM concluded their arsenic investigation at B29-S5/B-29R.⁹¹

4. LDEQ Comment 4 – “6.2.2 Please show on a figure the distance from the site to the unnamed stream or POE.”

- **Conservation Response to Comment 4** - A map showing the nearest southern distance from the site to the unnamed stream POE is provided herein as an Addendum.⁹²

5. LDEQ Comment 5 – “Section 2.4.1 Appendix E states that the screen length is 1.9 feet, but it is 5 feet. Please confirm that 5 feet was used in the AQTESOLV calculations.”

⁹¹ See Exhibit 45, Table 6A, Soil Screening Evaluation-Non-Industrial Direct Contact, at Bates Nos. N_LDNR_HCDE_00042-43; and Levert hearing testimony, 4/4/22, pp. 160-61.

⁹² Addendum 4, *supra*, n. 90.

- **Conservation Response to Comment 5** - The screen length in the monitoring wells used for groundwater classification slug tests is confirmed to be 5 feet. The screen length that ERM used in the AQTESOLV calculations was not the entire 5-foot screen length as only a portion of the screen at each well location penetrated into the water bearing interval in the shallow groundwater aquifer being tested. ERM used the length in feet of the screen from the top of water bearing interval to the total depth of the bottom of the screen at each well location for the screen length AQTESOLV input value. Use of the portion of screen less than the total 5-foot screen length in the AQTESOLV calculation produces a calculated well yield higher than would be the calculated value at each well location if the total 5-foot screen length was used in the calculations. However, use of these higher conductivity values results in higher water yield results which still were still significantly lower than the RECAP well water yield criteria to consider the shallow groundwater aquifer underlying the subject landowner property to be anything other than groundwater classification 3.

B. LDNR COMMENTS. On January 21, 2022, LDNR staff confirmed that the property subject to the Neumin Limited Admission was not located in the Coastal Zone.⁹³

IV. CONCLUSION

In consideration of, and based on, all the evidence, this LDNR Most Feasible Plan, supported by written reasons, after having been submitted for consultation with the Louisiana Department of Environmental Quality, the Louisiana Department of Natural Resources, and the Louisiana Department of Agriculture and Forestry, is considered the most reasonable plan which

⁹³ See Addendum 5, email dated 1/21/2022 from Karl Morgan to Gary Snellgrove and James Devitt.

addresses the admitted environmental damage to soil, in conformity with the Louisiana Constitution, Article IX, Section 1 to protect the environment, public health, safety and welfare, and is in compliance with the specific relevant and applicable standards and regulations as mandated by La. R.S. 30:29.



Richard P. Ieyoub, Sr., Commissioner of Conservation

Date 6-22-2022

**STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION**

IN RE:

**H.C. DREW ESTATE, represented
by its Trustees, Louie D. Barbe, III
and C.W. Shaddock**

DOCKET NO: ENV-L-2022-01

VERSUS

**NEUMIN PRODUCTION COMPANY
and
STOKES & SPIEHLER, INC.**

**DOCKET NO. 2019-4925, DIV. "F"
14TH JUDICIAL COURT,
PARISH OF CALCASIEU**

(JUDGE DERRICK KEE)

ADDENDUM 1 TO MFP & WRITTEN REASONS
(PANELISTS AND THEIR BACKGROUNDS)

The three panelists who served for the public hearing in the captioned case on Thursday, March 31, 2021, and Monday April 4, 2022, were:

1. **Mr. Gary W. Snellgrove**. Mr. Snellgrove has a Bachelor of General Studies from Louisiana State University in 1988 and an M.S. in Environmental Science from McNeese State University in 1992. His training at McNeese concentrated in environmental technology, waste treatment/minimization and site remediation. Graduate course study included environmental law, environmental toxicology, solid and hazardous waste management, and groundwater contamination. After working in the petrochemical industry in environmental matters for the next five years, including project manager for the Citgo Refinery in industrial hygiene and wastewater filtration services, he joined LDNR in 1998. He started as the section supervisor for the Injection and Mining Division, E&P Waste Management Program. In 2007, he became the Environmental Division Director at LDNR with responsibility for the Legacy Site Remediation, E&P Waste, Groundwater Resources and Water Well Programs. He is currently in that position today. He previously served on the LDNR panels for Public Hearings held pursuant to ACT 312 in *Tensas Poppadoc*

(2009), *Savoie* (2012), *Avahoula Resources* (2013), *Agri-South, LLC* (2013), *Moore* (2015) and *Vermilion Parish School Board* (2016) cases.

2. **Ms. Jamie C.T. Love**. Ms. Love has a B.S. in geology from University of Missouri-Kansas City (UMKC) in 2005, and an M.S. in Geosciences from Mississippi State University in 2008. She is a licensed geoscientist in the State of Louisiana, license number 258. Her training at UMKC focused in environmental methods, natural hazards, and paleo-seismic studies. Her research at Mississippi State concentrated on suspended sediment transport. She worked as a hazardous materials cleanup manager from 2004 to 2006. In 2008 she joined LDEQ as a Geologist focusing on RCRA remediation. While at LDEQ she participated in Hurricane Incident Command and the BP Oil Spill. She joined LDNR in 2015 as a Geologist Supervisor. This position oversees the management of the Groundwater Resources and Water Well Programs. Other duties of her position include the review of legacy cases for 29-B and RECAP compliance. In 2019 the position title was changed to a Petroleum Scientist Manager. She previously served on the LDNR panels for Public Hearings held pursuant to Act 312 in *Moore* (2015), *Sterling Sugars* (2015), *Vermilion Parish School Board* (2016), *Sweet Lake* (2016), *Hero Lands* (2020), *SNG* (2021), *LA Wetlands* (2021) and *Jeanerette Lumber* (2021) cases.
3. **Mr. Stephen Olivier**. Mr. Olivier has a B.S. in Renewable Natural Resources from Louisiana State University in 2006. He worked as an Environmental Scientist at C.H. Fenstermaker and Associates from June 2006 to September 2007. There he performed wetland delineations, endangered species surveys, and phase I surveys. He joined LDNR in 2007 as an Environmental Impact Specialist working in the Environmental Division, Exploration and Production Waste (E&P Waste) Program. His duties included management of E&P Waste commercial facilities and transfer stations where he performed permit compliance review site inspections, enforcement matters, permit applications, commercial class II monthly injection well pressure reports, and closure plan and cost estimates. In 2017 he began supervising personnel in both the Legacy Site Remediation and E&P Waste Management Programs. In addition, his responsibilities include continued duties in the E&P Waste Program as well as above ground issues in the Legacy Site Remediation Program, mainly evaluation of data pertaining to soils, vegetation, and groundwater, particularly with regard to standards under RECAP. He served on the LDNR panel in the *Hero Lands* (2020), *SNG* (2021), *LA Wetlands* (2021) and *Jeanerette Lumber* (2021) cases.

**STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION**

IN RE:

**H.C. DREW ESTATE, represented
by its Trustees, Louie D. Barbe, III
and C.W. Shaddock**

DOCKET NO: ENV-L-2022-01

VERSUS

**NEUMIN PRODUCTION COMPANY
and
STOKES & SPIEHLER, INC.**

**DOCKET NO. 2019-4925, DIV. "F"
14TH JUDICIAL COURT,
PARISH OF CALCASIEU**

(JUDGE DERRICK KEE)

**ADDENDUM 2 TO MFP & WRITTEN REASONS
(EXPERT WITNESSES WHO TESTIFIED)**

There were three expert witnesses who testified on behalf of Neumin during the public hearing held in the captioned case on March 31 and April 4, 2022. They were:

Expert witnesses who testified on behalf of Neumin:

1. **Mr. Patrick Ritchie**. Mr. Ritchie has a B.S. in Ecology and Evolutionary Biology from Tulane University (2005) and an M.S. in Soil and Water Science from University of Florida (2015). He is a Registered Professional Wetland Scientist. His CV is admitted in evidence as Neumin Hearing Exhibit 47, Bates Nos. N_LDNR_HCDE_02500-04. He was tendered and accepted as an expert in the areas of botany, plant ecology, soils and wetlands, and root zone analysis. He testified at the hearing on 3/31/22.

2. **Mr. David G. Angle**. Mr. Angle has a B.S. in Geology from the University of Delaware (1982) and an M.S. in Geology from North Carolina State University (1985). He is a Certified Professional Geologist, a Certified Ground Water Professional, and a Registered Geologist in Louisiana, Mississippi, and Texas. His CV is admitted in evidence as Neumin Hearing Exhibit 48, Bates Nos. N_LDNR_HCDE_02505-12. He was tendered and accepted as an expert in the areas of geology, hydrogeology, site assessment, remediation, environmental regulatory standards, and soil and groundwater fate and transport. He testified at the hearing on 4/4/22.

3. **Ms. Angela M. Levert**. Ms. Levert has a B.S. in Chemistry from Spring Hill College (1988) and an M.S. in Environmental Chemistry from the University of North Carolina (1990). Her CV is admitted in evidence as Neumin Hearing Exhibit 50, Bates Nos. N_LDNR_HCDE_02519-23. She was tendered and accepted as an expert in the areas of environmental data evaluation, RECAP, and environmental chemistry. She testified at the hearing on 4/4/22.

**Office of Environmental Assessment
Remediation Division
Permit Review Log Sheet**

Site name: HC Drew Est. v Neumin Production Company	Reviewed by: Timothy Seiler
Permit#/site ID#: Legacy # 014-020-001	Date of document/cover letter: November 10, 2021
Name of document: Site Investigation Report & Closure Plan v 1&2 and Supplemental to SIR & CP (EDMS#13094552)	Agency interest: 231499
Date received: February 1, 2022	February 2, 2022
Comments: NOD Attached	Permit writer: NA

Note:

With so few data points for groundwater flow determination the groundwater flow may be more southerly. The shortest distance to the unnamed stream is about 1200 feet not 2000 feet. This would change the DAF to 173; however, it would not change the conclusion of the Risk Evaluation Corrective Action Program (RECAP) investigation. So, the only geology comment made was to show the point of exposure (POE) on a map.

Geologist Comments

Section 2.4.1 Slug test collected from small diameter wells underestimate the hydraulic conductivity. Demonstrate through the proper calculations how the hydraulic conductivity was corrected for in the small diameter wells.

5.1.1 Cannot resample soil for the purpose of disconfirming a detection; however, additional data may be collected for delineation and Limiting RECAP Standards (LRS) calculations. The elevated arsenic concentrations detected in sample B29-S5 (10-12.5 feet below ground surface [bgs]) still needs to be addressed.

6.2.2 Please show on a figure the distance from the site to the unnamed stream or POE.



Supplement to Site Inspection Report & Closure Plan (EDMS#13094552)

This report only discusses 29-B constituents inadvertently omitted from the November 10, 2021 report; therefore, there are no geology comments on this report.

ADDENDUM 3-1 to MFP & Written Reasons

**Office of Environmental Assessment
Remediation Division
Permit Review Log Sheet**

Site name: HC Drew Est. v Neumin Production Company	Reviewed by: Timothy Seiler
Permit#/site ID#: Legacy # 014-020-001	Date of document/cover letter: November 10, 2021
Name of document: Supplement to Site Investigation Report & Closure Plan v 1&2 and Supplemental to SIR & CP (EDMS#13094552)	Agency interest: 231499
Date received: May 24, 2022	May 24, 2022
Comments: NOD Attached	Permit writer: NA

Note:

Supplement provided at

<http://www.dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=1619>

There are no significant additions provided with the supplement. The following comments were not addressed:

Geologist Comments

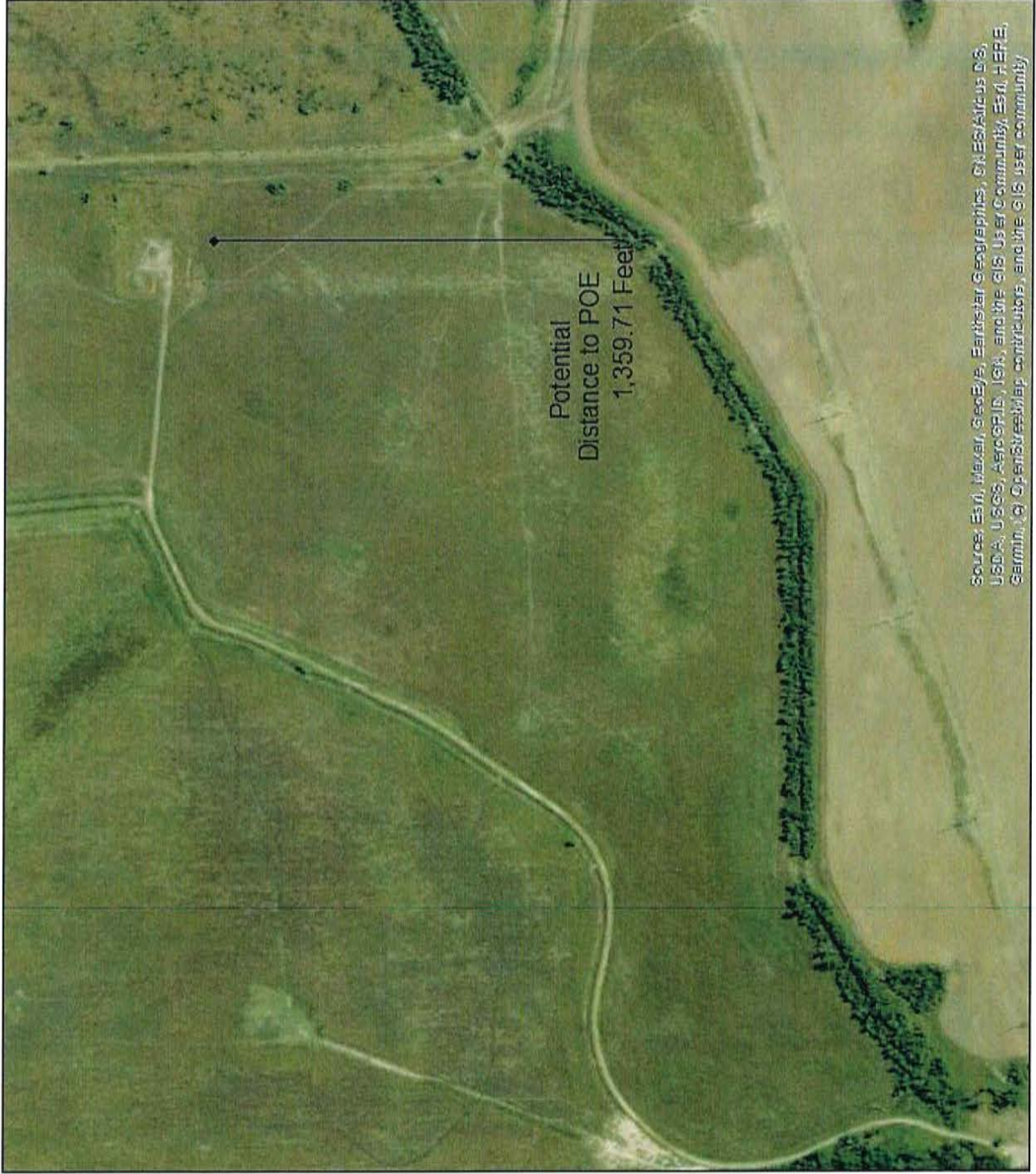
Section 2.4.1 Appendix E States that the screen length is 1.9 feet but it is 5 feet. Please confirm that 5 feet was used in the AQTESOLV calculations.

5.1.1 Cannot resample soil for the purpose of disconfirming a detection; however, additional data may be collected for delineation and Limiting RECAP Standards (LRS) calculations. The elevated arsenic concentrations detected in sample B29-S5 (10-12.5 feet below ground surface [bgs]) must be addressed.

6.2.2 Please show, on a figure, the distance from the site to the unnamed stream or POE.

ADDENDUM 3-2 to MFP & Written Reasons

Map of Distance to POE



ADDENDUM 4 to MFP and Written Reasons

Map Compiled By:
LDR Office of Conservation
Environmental Division JB
Coordinate System: NAD 1983
June 8, 2022

From: [Karl Morgan](#)
To: [Gary Snellgrove](#); [James Devitt](#)
Subject: RE: H.C. Drew Estate v. Neumin Production Co., et al OC 014-020-001 Neumin Limited Admission Supplement Report & Plan
Date: Friday, January 21, 2022 4:16:35 PM
Attachments: [image001.jpg](#)

The CZ boundary follows the north boundary of T-11-S, R-11-W, which would be a couple miles south of the site.

From: Gary Snellgrove <Gary.Snellgrove@LA.GOV>
Sent: Friday, January 21, 2022 3:57 PM
To: James Devitt <James.Devitt@LA.GOV>; Karl Morgan <Karl.Morgan@LA.GOV>
Subject: RE: H.C. Drew Estate v. Neumin Production Co., et al OC 014-020-001 Neumin Limited Admission Supplement Report & Plan

Here is the location.

From: James Devitt <James.Devitt@LA.GOV>
Sent: Friday, January 21, 2022 3:19 PM
To: Karl Morgan <Karl.Morgan@LA.GOV>
Cc: Gary Snellgrove <Gary.Snellgrove@LA.GOV>
Subject: RE: H.C. Drew Estate v. Neumin Production Co., et al OC 014-020-001 Neumin Limited Admission Supplement Report & Plan

Sorry, Karl. I saw Calcasieu Parish and assumed it was totally within the CZ

From: Karl Morgan <Karl.Morgan@LA.GOV>
Sent: Friday, January 21, 2022 3:03 PM
To: James Devitt <James.Devitt@LA.GOV>
Cc: Gary Snellgrove <Gary.Snellgrove@LA.GOV>
Subject: RE: H.C. Drew Estate v. Neumin Production Co., et al OC 014-020-001 Neumin Limited Admission Supplement Report & Plan

Do you have a map of the location? The only plat I see if for North Choupique field, which is outside the CZ.

From: James Devitt <James.Devitt@LA.GOV>
Sent: Friday, January 21, 2022 2:47 PM
To: Karl Morgan <Karl.Morgan@LA.GOV>
Subject: FW: H.C. Drew Estate v. Neumin Production Co., et al OC 014-020-001 Neumin Limited Admission Supplement Report & Plan

Karl,
Below find correspondence regarding a legacy suit in the coastal zone.
Jim

From: Gary Snellgrove <Gary.Snellgrove@LA.GOV>
Sent: Friday, January 21, 2022 1:53 PM
To: Carey Dicharry <Carey.Dicharry@LA.GOV>; James Devitt <James.Devitt@LA.GOV>; joey_b@ldaf.state.la.us
Cc: Jamie Love (DNR) <Jamie.Love@la.gov>; Stephen P. Olivier <Stephen.Olivier@LA.GOV>; John Adams (DNR) <Johnny.Adams@LA.GOV>; Jonathan Rice <Jonathan.Rice@la.gov>
Subject: H.C. Drew Estate v. Neumin Production Co., et al OC 014-020-001 Neumin Limited Admission Supplement Report & Plan

Good Afternoon Agency Representatives,

ADDENDUM 5 TO MFP AND WRITTEN REASONS



Site Investigation Report & Closure Plan – Neumin Limited Admission

H. C. Drew Estate vs Neumin Production
Company
North Choupique Field
Calcasieu Parish, Louisiana

EXHIBIT A
To MFP and
Written Reasons

10 November 2021
Project No.: 0494259

EXHIBIT
1

The business of sustainability



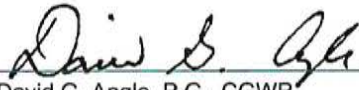
N_LDNR_HCDE_00001

Signature Page

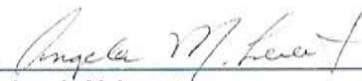
10 November 2021

Site Investigation Report & Closure Plan – Neumin Limited Admission

H. C. Drew Estate vs Neumin Production Company
North Choupique Field
Calcasieu Parish, Louisiana



David G. Angle, P.G., CGWP
Associate



Angela M. Levert
Associate



Lance R. Cooper, PhD, P.E. (LA)
Partner

Environmental Resources Management Southwest, Inc.

CityCentre Four
840 West Sam Houston Parkway North, Suite 600
Houston, Texas 77024-3920
281-600-1000 (T)
281-520-4625 (F)

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or by any means, without the prior written permission of ERM.

ADMISSION

H. C. Drew Estate vs Neumin Production Company
North Choupique Field
Calcasieu Parish, Louisiana

7. REMEDIATION PLAN

The remediation plan proposed in this section complies with Statewide Order 29-B and RECAP, which is the State's risk-based protocol for environmental evaluation and remediation. A remediation plan that fully complies with Statewide Order 29-B without exceptions is included in Appendix N. Supporting contractor cost estimates are provided in Appendix O.

7.1 Proposed Soil Remediation Plan

The soil analytical data indicates only one location, B-19, slightly exceeds 29-B salt parameters within the effective root zone. However, no split sampling or resampling has been conducted at this location to confirm the detected 29-B standard exceedances. Additionally, gravel berms are still present on the site around the tank battery area and the production area. Remediation of soil at the site is not necessary to support the previous and anticipated future use of the property for cattle grazing. Soil conditions support grass across the site, and healthy vegetation was observed throughout the former operational area except on small portions of the berms and where apparently inhibited by vehicle traffic (i.e., the gravel road and the center of the gravel pad). However, the following is proposed to address the B-19 location and gravel berms:

- Resample B-19 in the 0-1', 1-2', and 2-3' intervals for EC, ESP, and SAR;
- Level gravel berms around the production area and tank battery area; and
- If resampling of B-19 confirms 29-B salt parameter exceedances, blend the upper two feet of soil in the tank battery area, and collect confirmation samples for EC, ESP, and SAR.

Locations of proposed berm removal and contingent soil blending areas are shown on Figure 44. The estimated cost of this plan is presented on Table 10, and is approximately \$14,000.

7.2 Contingent Removal of Gravel Pad, Road, and Fence

It is our understanding that the existing gravel pad, gravel road, and fence may need to be removed and restored to use for cattle grazing based on conditions of the lease (Figure 45). Both the gravel pad and road are approximately one foot thick, and are also approximately one foot higher in elevation than the surrounding field. Therefore, it is anticipated that the ground surface would be approximately level with the surrounding field after removal of the gravel material. It is anticipated that the gravel removal and subsequent grading process would naturally blend the soil to levels below 29-B salt parameter standards. Although this work is not required to meet state regulations, the following is proposed contingent on the requirements of the lease:

- Removal of the approximate 1,000-foot barbed-wire fence surrounding the former operational area;
- Removal and relocation of the approximately 200' x 200' gravel pad and 15' x 580' gravel road to be used as fill by the landowner if desired, or otherwise removed from the site;
- Placement of backfill material, if needed, to level the area; and
- Reseeding the area.

The process of removing the gravel pad, if needed, would eliminate the need to perform the proposed work presented in Section 7.1. Removing the gravel pad would also expose the underlying material (i.e., the current approximate 1-2 foot interval would become the effective root zone). Soil sampling data indicate that only the B19 location slightly exceeds 29-B salt parameters in this interval. If the resampling at this location confirms 29-B salt parameter exceedances, this location would be blended with

H. C. Drew Estate vs Neumin Production Company
North Choupique Field
Calcasieu Parish, Louisiana

surrounding soil during the gravel pad removal and confirmation samples would be collected for 29-B salt parameters.

Locations of the gravel pad, gravel road, and fence are shown on Figure 45. The estimated cost of the removal of the gravel pad, road, and fence is presented on Table 11 and is approximately \$43,000.

7.3 Groundwater

The groundwater chloride results document that any impacts from former oil and gas operations have been horizontally delineated. Additionally, the site and nearest downgradient surface water body fall within an estuarine surface water subsegment, and the residual chloride concentrations in the shallow groundwater do not present a threat to surface water quality. The massive thickness of the clay-confining unit underlying the thin Class 3 shallow water-bearing zone is protective of the useable Chicot Aquifer underlying the site. The site soil and shallow groundwater conditions do not endanger a USDW. ERM proposes to plug and abandon the existing monitoring wells on the site (MW-1 through MW-4) at a cost of approximately \$7,000 (Table 12).

8. SCHEDULE AND REPORTING

The implementation schedule for the proposed remediation activities is provided below. The following milestones for the implementation schedule have been established:

- Begin implementation of remediation activities within 60 days following LDNR approval of the plan. The estimated field activities are estimated to take approximately one to two months and the groundwater monitoring well plugging and abandonment activities can be performed within this same timeframe; and
- Submit letter report to LDNR documenting remediation activities completed within 60 days of completion and receipt of final analytical laboratory reports and field documentation.



840 West Sam Houston Pkwy N
Suite 600
Houston, Texas
77024-4613

Telephone: +1 281 600 1000
Fax: +1 281 520 4625

www.erm.com

Via Email

14 January 2022

Mr. Gary Snellgrove, Director
Environmental Division, Office of Conservation
Louisiana Department of Natural Resources
617 North Third Street
Baton Rouge, Louisiana 70802



EXHIBIT B To MFP and Written Reasons

Reference: 0494259

Subject: Supplement to Site Investigation Report & Closure Plan – Neumin Limited Admission
H. C. Drew Estate vs Neumin Production Company and Stokes & Spiehler, Inc.
North Choupique Field
Petition No. 2019-4925 "F"
14th Judicial District Court, Parish of Calcasieu

Dear Mr. Snellgrove:

Environmental Resources Management (ERM) is pleased to provide the Louisiana Department of Natural Resources (LDNR), Office of Conservation with this supplement to the Site Investigation Report and Closure Plan – Neumin Limited Admission document dated November 10, 2021 that was submitted to LDNR. This supplement provides split sampling results and related data gathered by ERM during investigation activities conducted by plaintiff's expert, Southland Environmental, on November 16-18, 2021. Southland Environmental's additional investigation and data gathering activities were conducted after ERM's submittal of the Limited Admission; therefore, we are providing this supplement so LDNR has the additional data for their evaluation. In addition, historic soil data and related information collected in 2015-2016 by Commercial Maintenance Services, a former Neumin contractor that performed some sampling that was part of initial closure activities that were inadvertently omitted from the November 10, 2021 report, are provided in Attachment 3. The sampling methods (i.e., use of open hole/solid flight auger and/or excavator sampling), limited records documenting how sampling was conducted, and any soil excavation/scraping/removal/replacement activities conducted during the equipment removal and oil well plugging and abandonment activities in the 2015-2016 time frame limit the utility of the historic data. Nevertheless, the historic data are provided for a complete record. Extensive subsequent soil and groundwater testing by both Neumin contractors (Acadian Engineers and ERM) and Southland Environmental using well-defined and documented sampling methods, including the collection of discrete samples from the same former operational areas tested in 2015-2016 and laboratory analyses [following Statewide Order 29-B and Louisiana Department of Environmental Quality (LDEQ) methods], have been relied upon in the Limited Admission and this supplement.

A brief summary of the Southland investigation and results of the additional soil and groundwater sampling activities is provided below and the pertinent data are provided in attachments to this letter including updated data summary tables, sample location and soil and groundwater constituent concentration figures, field notes, photographs and photologs, and laboratory reports.

November 2021 Southland Environmental Testing

During November 16-18, 2021 Southland Environmental collected 106 additional discrete soil samples from 14 soil borings to depths up to 35 feet below the ground surface with a Geoprobe® drill rig equipped with a dual tube sampling system. In addition, Southland installed and sampled two small diameter (one-inch) temporary, groundwater monitoring wells. The additional Southland soil boring and temporary monitoring well locations as well as the previous soil boring and monitoring well locations are provided on Figures 31A, 32A, 33A, and 34A, which represent updated versions of the original Figures 31, 32, 33, and 34 presented in the Limited Admission. ERM personnel observed the Southland investigation activities, visually logged the soil cores collected during the completion of the soil borings, collected split soil and groundwater samples, and documented the field activities via the recording of field notes and photographs. Soil boring logs prepared based upon ERM's visual observations of the soil cores are provided in Attachment 4. The ERM field notes are provided in Attachment 5 and the photographs and photologs are provided in Attachment 6.

ERM's samples were analyzed by Element Materials Technology (Element) for Statewide Order 29-B soil parameters and by Waypoint Analytical for RECAP soil and groundwater parameters. Both laboratories are Louisiana Environmental Laboratory Accreditation Program (LELAP) accredited. Both the ERM and Southland split sample results and groundwater field parameters are presented on Tables 3A, 4A, and 5A, which represent updated versions of the original Tables 3, 4, and 5 presented in the Limited Admission. The ERM split sample results are generally similar to the Southland split results.

Both the ERM and Southland laboratory reports are provided in Attachment 7.

Summary and Amendment to Limited Admission Remediation Plan

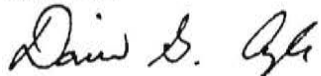
The additional soil and groundwater data discussed above generally confirm the findings presented in the Limited Admission, i.e., remediation of soil and Class 3 groundwater is not necessary to support the existing and anticipated future use of the property for agriculture and/or cattle grazing. Slight exceedances of Statewide Order 29-B standards for electrical conductivity (EC) and sodium adsorption ratio (SAR) have been identified within the root zone (0-2 feet as previously determined by Dr. Luther Holloway and Mr. Patrick Ritchie) in two additional Southland soil sample locations, SE-SB-27 0-2' interval and SE-SB-31 0-2' interval. The SE-SB-31 borehole is located outside the known former operational area and the soil results from below the upper two-foot sample interval are well below the Statewide Order 29-B salt standards. Because the source of the SE-SB-31 0-2' exceedance is uncertain and the results just slightly exceed the 29-B standard, the location will be resampled (0-1', and 1-2' intervals) for confirmation of the EC results (See Figure 32A). In addition, two additional locations will be sampled (0-1' and 1-2' intervals) for delineation purposes at the locations shown on Figure 32A in the event that the resampling confirms the exceedance.

To address the SE-SB-27 0-2' SAR exceedance and the SE-SB-31 0-2' EC exceedance identified above and assuming the SE-SB-31 0-2' exceedance is confirmed, ERM proposes to blend the upper two feet of soil in the SE-SB-27 and SE-SB-31 areas as well as in the B-19 former tank battery area (as previously proposed), if the resampling proposed in the Limited Admission for the B-19 location confirms the salt exceedances. The estimated cost of approximately \$14,000

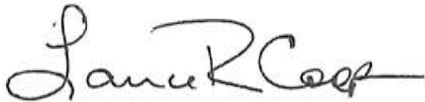
presented in the Limited Admission to address the B-19 location has been updated to approximately \$23,000 to include the cost of additional resampling and soil blending activities, if necessary. The updated cost estimate is provided in Table 10A, which is an update to Table 10 presented in the Limited Admission.

With the exception of the items specifically identified in this supplement, the findings and proposals in ERM's November 10, 2021 Site Investigation Report and Closure Plan remain unchanged by this new data. ERM maintains that the November 10, 2021 Site Investigation Report and Closure Plan, as supplemented herein, provides the most feasible plan to evaluate or remediate the environmental damage identified in Neumin's Limited Admission.

Sincerely,



David G. Angle, P.G., CGWP
Associate



Lance R. Cooper, PhD, P.E.
Partner

cc: John Funderburk – Kean Miller, LLP, Baton Rouge, LA (via email)



JOHN BEL EDWARDS
GOVERNOR

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION

THOMAS F. HARRIS
SECRETARY

RICHARD P. IEYOUNG
COMMISSIONER OF CONSERVATION

MEMORANDUM

TO: Richard P. Ieyoub, Commissioner of Conservation

FROM: John W. Adams, Attorney, LDNR/Office of Conservation

DATE: December 12, 2018

RE: Landowner Consent

EXHIBIT C
To MFP and
Written Reasons

ISSUE

Should landowner consent be required for a Most Feasible Plan (MFP) including exceptions to LAC 43:XIX.Subpart 1 (Statewide Order 29-B) which is approved or developed by the Agency as a result of evidence at an Act 312 public hearing?

THERE IS NO BASIS FOR REQUIRING LANDOWNER CONSENT FOR MFP ISSUED TO A REVIEWING COURT IN CONTEXT OF AN ACT 312 PUBLIC HEARING

Landowner consent has not been required by Louisiana Department of Natural Resources, Office of Conservation (hereinafter "LDNR/OC" or "Agency") when a case goes through an Act 312 public hearing and a Most Feasible Plan including exceptions to LAC 43:XIX.Subpart 1 (29-B) is approved or developed as a result of evidence at an Act 312 public hearing. The reason is that the court is an active participant in that situation, as explained more fully below.

Act 312 took effect in 2006 when the Governor signed Senate Bill 655 of the 2006 Regular Session into law. La. Acts 2006, No. 312, eff. June 8, 2006, which is codified at La. R.S. 30:29. Act 312 set forth requirements for pursuing claims for environmental damages caused by oilfield operations. It was immediately challenged as unconstitutional by landowner, M.J. Farms, Ltd., which owned property in Catahoula Parish on which it claimed certain defendants had caused environmental damage from oil and gas operations. The constitutional basis for the landowner's challenge was that Act 312 violated La. Const. art. V, § 16 (divestiture of the district courts of original jurisdiction), the Fifth Amendment of the United States Constitution (the deprivation of a landowner of his property without due process), and La. Const. art. I, § 4 (divestiture of the landowner's right to acquire, own, control, use, enjoy, protect and dispose of private property). The first basis was a denial of "access to courts" argument. The Seventh Judicial District Court in Catahoula Parish entered a judgment declaring Act 312 unconstitutional. On appeal, the Louisiana Supreme Court concluded the district court erred in finding Act 312

of 2006 unconstitutional. *M.J. Farms, Ltd. v. Exxon Mobil Corp.*, 2007-2371 (La. 7/1/08), 998 So.2d 16. On the “access to courts” argument, the Court said the following:

Although Act 312 changes the remedy available to M.J. Farms in its efforts to obtain surface restoration of its immovable property, we do not find this denies it access to the courts. To the contrary, under the provisions of Act 312 the district court remains an active participant in the entire restoration process. It is the filing of pleadings in the district court making demand for environmental damages that triggers implementation of Act 312. See La.Rev.Stat. § 30:29(B)(1). Furthermore, it is in the district court that it is determined whether environmental damages exists, who caused the damage, and it is the district court that orders the development of a restoration plan. La.Rev.Stat. § 30:29(C)(1). Finally, it is the district court who considers the various restoration plans, including any that the surface owner may choose to submit, determines which one is most feasible, and oversees the implementation of the restoration plan. La.Rev.Stat. § 30:29(C)(5). Accordingly, we find no merit to M.J. Farms' contrary assertion.

Id., at 37-38. See also *State v. Louisiana Land & Exploration Co.*, 2012-0884 (La. 1/30/13, 110 So.3d 1038, 1057.

LDNR/OC has required landowner consent for cleanup plans which include exceptions to 29-B in regulatory actions, including those pursuant to Act 312, for site evaluation and/or remediation of oilfield sites in cases where no Act 312 contradictory public hearing is involved. Landowner consent is required even though this is not explicitly set forth as a requirement for a cleanup plan anywhere in the regulations. LDNR/OC has looked to the definition of “contamination” in Statewide Order No. 29-B, specifically in LAC 43:XIX.301, which is “the introduction of substances or contaminants into a groundwater aquifer, a USDW or soil in such quantities as to render them unusable for their intended purposes.” It is in reliance on this definition that LDNR/OC has required landowner consent as a matter of practice in cases where there is no contradictory hearing because, as it has said, “only a landowner or court of law can truly make a decision as to what a given property’s “intended purpose” is.” See *e.g.*, Letter of James H. Welsh, Commissioner of Conservation, to Louis E. Buatt, Esq., attorney for BP, dated 10/27/15.

But the Act 312 public hearing cases with an issued Most Feasible Plan with 29-B exceptions have been treated differently because the court is an active participant. There have been seven cases where a MFP with 29-B exceptions was issued to a reviewing court as a result of evidence at an Act 312 public hearing, which as described below, is a contradictory hearing. Landowner consent has not been required by the reviewing court in any of those cases. (See Appendix A at the end of this Memorandum). It is important to recognize that the Agency’s consistent application of the law and regulations in accepting or developing MFP’s with 29-B exceptions issued to reviewing courts specific to the issue of landowner consent has been, to date, accepted by the reviewing courts and participating parties.

There is a valid basis for making a distinction between the public hearing cases and the non-public hearing cases on the issue of whether landowner consent is required. Unlike the non-public hearing cases, in the public hearing cases the landowner has the opportunity to put forth a competing plan and/or comments to the responsible party’s plan. Also, during the public hearing, the landowner has the right and opportunity to put on evidence to protect and/or advance the landowner interest. The hearing is contradictory in nature and permits cross-examination of the responsible party’s witnesses by the landowner, and also permits cross-examination of the landowner’s witnesses by the responsible party. The LDNR/OC panelists also get to ask their own questions of witnesses about the competing plans. Since the landowner is present to defend and advance the landowner interest, LDNR/OC panelists can focus on the public interest as intended by Act 312. In addition to this contradictory hearing, the Act 312 process includes substantial opportunity for active court involvement after the MFP is structured by LDNR/OC (see steps 6 and 7 below). The process from start to finish includes:

1. Step 1 The plaintiff/landowner files suit, and the court holds a trial to determine that environmental damage exists and the party or parties who caused the damage.” La. R.S. 30:29(B) & (C)(1).
2. Step 2 The court orders the responsible party to develop and submit a remediation plan(s) to LDNR/OC for review and consideration. La. R.S. 30:29(C)(1).
3. Step 3 The plaintiff/landowner is given the opportunity to provide a landowner plan or provide comment or response to the other plan(s). La. R.S. 30:29(C)(1).
4. Step 4 LDNR/OC conducts a public hearing—a contradictory hearing—on the plan(s). La. R.S. 30:29(C)(2)(a).
5. Step 5 LDNR/OC accepts a plan submitted, or structures a plan, based on the evidence, which LDNR/OC determines to be the Most Feasible Plan to evaluate or remediate the environmental damage and protect the health, safety and welfare of the people. La. R.S. 30:29(C)(2)(a).
6. Step 6 The court adopts the LDNR/OC plan unless a party proves to the court by a preponderance of the evidence that another plan is a more feasible plan to adequately protect the environment and the public health, safety and welfare. La. R.S. 30:29(C)(5).
7. Step 7 The court issues such orders as necessary to ensure that funds are expended in a manner consistent with the adopted plan, retains oversight to ensure compliance with the plan, and retains continuing jurisdiction until such time as the evaluation or remediation is completed. La. R.S. 30:29(D) & (F).

Since 1) landowner consent is not explicit in the regulations, 2) the public hearing process is a contradictory process giving the landowner the opportunity to offer a competing plan and/or comments to the responsible party’s plan, of cross-examination the responsible party’s witnesses, and to put on evidence, and 3) the court has continuing oversight of the entire process after the structuring of the MFP in the public hearing, including conducting a preponderance hearing if necessary, ensuring funding of the plan, and ensuring compliance of the plan right up to the time remediation is completed, there is no basis for landowner consent as a requirement in Act 312 public hearing cases.

The overriding interest in Act 312 is the public interest. *See* La. R.S. 30: 29(A). Requiring landowner consent for a plan in all events, even if the evidence at the public hearing does not support a finding that such a plan (i.e., the plan requiring landowner consent) is the most feasible plan, would, or could, result in the structuring of a plan by LDNR/OC that is not the most feasible from the standpoint of the public interest (i.e., from the standpoint of protection of the environment, public health, safety and welfare).

Finally, should a party feel aggrieved by the Agency’s acceptance or development of an MFP and issuance to a reviewing court following court referral pursuant to the agency mandated Act 312 public hearing process, the aggrieved party’s legal recourse is and remains with the reviewing court.

APPENDIX A

The seven LDNR/OC Act 312 public hearing cases with issued MFP to date are as follows:

1. **In Re: Tensas Poppadoc, et al v. Chevron (USA), Inc., et al, LDNR/OC Docket No. ENV 2008-L-01:**
(Responsible Party—Chevron) (Act 312 public hearing February 9-13 and 16, 2009):

This was the first Act 312 public hearing case. It came shortly after Act 312 was held constitutional in 2008. Numerous defendants, including Chevron, were sued by Tensas Poppadoc in 2006 pursuant to La. R.S. 30:29 alleging soil and groundwater contamination on the Tensas Poppadoc property. The case was tried to a jury in Concordia Parish in 2008. Following the jury trial, the trial court signed an order which sent the matter to LDNR/OC for consideration of a remediation plan submitted by Chevron. The court's order stated that the trial court retained jurisdiction pending approval and completion of an approved remediation. An LDNR/OC three-person panel conducted an Act 312 hearing on February 9-13 and 16, 2009. The Most Feasible Plan adopted by LDNR/OC required further collection of site data before a final remedy could be approved. Plaintiff objected to the Most Feasible Plan and appealed to the trial court in Concordia Parish. The case settled in 2014. Following settlement, Chevron moved forward with implementation of the Most Feasible Plan. The Final Report on the last round of data is due to be submitted to LDNR/OC in January 2019.

2. **In Re: Clyde Reese, et al v. Carl Oil & Gas Co., et al, LDNR/OC Docket No. ENV-2012-L-001:**
(Responsible Party—UNOCAL) (Act 312 public hearing March 21, 2012):

The landowners sued Union Oil Company of California (UNOCAL) and other operators in 2006 for alleged damage to approximately 692 acres in Sections 4 and 5, Township 12 South, Range 2 West, Vermilion Parish, West Gueydan Field, arising from oil and gas operations. UNOCAL and/or its predecessor, The Pure Oil Company, operated four wells on approximately 50 acres of the property at issue ("UNOCAL Operational Tract" or "UOT"). UNOCAL filed a limited admission of liability under Act 312, admitting that "environmental damage" existed on the UOT (that portion of the acreage at issue referred to by landowners as the "Benoit Tract"), and praying for an order accepting that admission, ordering UNOCAL to develop an evaluation/remediation plan, and otherwise ordering the post-admission actions required under Act 312. The court signed an order on September 12, 2011 accepting UNOCAL's admission and ordering submission of a plan to LDNR/OC. The UNOCAL plan was submitted to LDNR/OC on November 28, 2011. A public hearing was held before LDNR/OC on March 21, 2012. On May 17, 2012, LDNR/OC submitted the Most Feasible Plan to the trial court. On July 16, 2012, the court issued an order adopting the MFP. Work is ongoing on the Benoit Tract pursuant to the MFP. The underlying litigation is still pending.

3. **In Re: Hazel Richard Savoie, et al v. Alice T. Richard, et al, LDNR/OC Docket No. 2012-L-002**
(Responsible Party—Shell) (Act 312 public hearing August 7-10 and 13, 2012):

Shell Oil Company was sued along with subsequent operators in a lawsuit by the landowners, Hazel R. Savoie and family, in state district court in Cameron Parish relating to historical operations in the Kings Bayou Field. After a 2011 jury trial and verdict finding the existence of environmental damage and Shell as a responsible party, a public hearing was held at LDNR/OC from August 7-10 and 13, 2012 to determine the most feasible plan for the site. During the hearing, the landowner presented the LDNR/OC panel with an affidavit attesting to their intended use of the property and refusal to consent to any exceptions to Statewide Order No. 29-B. Following the hearing, in consideration of the landowner's testimony presented during the public hearing, LDNR/OC made modifications to the Shell plan, which LDNR/OC then recommended to the court as the most feasible plan. The landowners filed a motion for a preponderance hearing in the trial court to challenge the plan but withdrew the

motion on the second day of the hearing. The court then adopted the LDNR/OC-recommended plan as the most feasible plan. Shell is currently implementing the plan and continues to work with LDNR/OC on the remediation. In 2015, Shell and the landowners settled ancillary issues, and LDNR/OC issued a letter of no objection.

4. **In Re: Agri-South, LLC, et al v. Exxon Mobil, et al, LDNR/OC Docket No. ENV-2013-L-02**
(Responsible Party—Tensas Delta) (Act 312 public hearing August 5-9 and 13-16, 2013):

Tensas Delta Exploration Company and ExxonMobil Corporation were sued along with others in a legacy lawsuit by the landowners, Agri-South Group, LLC; Plug Road, LLC; and King Brothers Land Company, LLC., in state district court in Catahoula Parish. In connection with this litigation, Tensas Delta made a limited admission of responsibility and submitted its remediation plan pursuant to La. CCP art. 1563 and La. R.S. 30:29 on January 25, 2013. Plaintiffs/landowners submitted an alternative remediation plan for LDNR/OC's consideration. LDNR/OC held a public hearing August 5-9 and 13-16, 2013 for the purpose of approving or structuring a final plan. On October 3, 2013, LDNR/OC submitted its most feasible plan to the court as required by La. R.S. 30:29(C)(3)(b)(ii). Following submission of the most feasible plan, the litigation progressed until the parties reached a settlement agreement. A redacted form of the settlement between the parties was submitted to LDNR/OC. LDNR issued a letter of no objection to the proposed settlement dated December 16, 2014.

5. **In Re: Martha Zoe Moore, et al v. Denbury Onshore, LLC, LDNR/OC Docket No. ENV-2015-L-01:**
(Responsible Party—Denbury) (Act 312 public hearing August 25-26, 2015):

The Moore family landowners filed suit against Denbury Onshore, LLC over a spill incident in March 2013. Denbury made a limited admission of responsibility pursuant to La. C.C.P. art. 1563 and La. R.S. 30:29 on January 25, 2013. On March 23, 2015, Magistrate Judge Karen Hayes of the federal Western District of Louisiana, Monroe Division, signed the requested order and referred the matter to the LDNR/OC for a public hearing. Remediation plans were submitted by both Denbury and the Moore family. A public hearing was held on August 25-26, 2015 and LDNR/OC issued its Most Feasible Plan which was filed with the federal court in Monroe, Louisiana on October 22, 2015. The *Moore* case settled on the eve of trial in 2016. Part of the settlement involved an agreed to scaling back of the scope of the Most Feasible Plan adopted by the LDNR/OC, and LDNR/OC agreed to the revised plan. The settlement was approved by the court. Denbury is still executing part of the revised plan that involves groundwater monitoring in one well, and a vegetative recovery assessment that will be conducted in mid-2019.

6. **In Re: State of Louisiana and the Vermilion Parish School Board v. The Louisiana Land and Exploration Co., Union Oil Company of California, Union Exploration Partners, Ltd., Carrollton Resources, L.L.C. and Phoenix Oil & Gas Corporation, LDNR/OC Docket No. ENV-L-2016-01**
(Responsible Party—UNOCAL) (Act 312 public hearing March 2-4, 7-10, 2016):

This case was filed by the Vermilion Parish School Board against numerous defendants in 2004. In 2010, UNOCAL filed an admission of environmental damage under R.S.30:29. The case was tried to a jury in Vermilion Parish in 2015, with UNOCAL and Chevron as the only remaining defendants. Based upon UNOCAL's admission, the jury found environmental damage and found UNOCAL responsible. After a jury verdict with a remediation plan of \$3 million, the court referred the matter to LDNR/OC, where a public hearing was held on March 2-4 and 7-10, 2016 before a LDNR/OC panel. LDNR issued its Most Feasible Plan in July 2016. Plaintiff landowner objected to this plan in so far as it ordered UNOCAL, and not plaintiff, to implement the plan. The Most Feasible Plan was affirmed by the trial court and the court of appeal. UNOCAL is currently in the process of implementing the Most Feasible Plan. A final judgment has been entered in the trial court and various matters

are awaiting appeal, except plaintiff's motion for attorney's fees which is set for hearing beginning December 4, 2018.

7. **In Re: The Sweet Lake Land & Oil Company, LLC v. Oleum Operating Company, LLC, LDNR/OC Legacy Project No. 014-006-001** (Responsible Party—BP) (Act 312 public hearing April 25-28, 2016):

Sweet Lake Land & Oil Company, LLC, filed a petition on March 5, 2010, seeking damages caused by oil and gas operations from BP Products North America, Inc. and other defendants, to property Sweet Lake owned in Section 34, Township 10 South, Range 6 West, in Calcasieu Parish, in the East Bell City Oil and Gas Field. BP predecessors operated 10 wells, including two saltwater disposal wells on the property. By the time of trial, May 11, 2015 through May 27, 2015, the only remaining defendants were BP and Oleum/AKSM. The jury found that BP was responsible for "environmental damage" under Act 312 and estimated the remediation costs to be \$1,500,000.00. The trial court referred the matter to LDNR/OC for Act 312 public hearing proceedings. BP and Sweet Lake submitted proposed plans to LDNR/OC. A public hearing was held from April 25-28, 2016. On October 3, 2016 LDNR/OC issued its Most Feasible Plan, essentially agreeing with the soil remediation plan of BP's experts, including soil restoration where proposed, with additional requirements for sampling and delineation. The MFP rejected both parties' experts' groundwater plan and ordered BP to submit a comprehensive groundwater investigation and aquifer characterization work plan. The MFP adopted by LDNR/OC require soil remediation for 29-B salt exceedances to root zone depth and used RECAP to address constituents with no standards in Statewide Order No. 29-B. A hearing in the trial court was held February 15, 2017 on BP's motion to adopt the MFP. The court denied the motion and ordered LDNR/OC to "submit a final plan to the court that includes a remediation plan for all environmental damage to be remediated." The court ordered LDNR/OC to state remediation options based on different outcomes in the further evaluation of shallow groundwater. The court also ordered LDNR/OC to "specify the flowlines on the property and include a remediation plan for flowlines that must be removed." BP sought writs from this ruling, which were denied. On October 26, 2017, LDNR/OC issued a compliance order in response to the court's ruling, which stated that in order to obtain the necessary information pursuant to satisfying the court's directive for additional information pertaining to final remediation of the Sweet Lake property, specific aspects of LDNR/OC's Plan must be completed and reported to the Agency for consideration, all incumbent upon the responsible party, BP, of which the court and all parties were informed with no subsequent response provided to the Agency from any party in opposition or to the contrary. The Agency's application of the law and regulation on the matter of landowner consent and its MFP decision was not an apparent issue before the court. On October 5, 2018 LDNR/OC approved HET's (BP's expert's) January 19, 2018 evaluation plan and work under the plan commenced on November 2, 2018.

AFFIDAVIT OF GARY SNELLGROVE

STATE OF LOUISIANA)
)
PARISH OF EAST BATON ROUGE)

I, Gary Snellgrove, having first been duly sworn, did depose and say:

1. My name is Gary Snellgrove and my business address is 617 North 3rd Street, Baton Rouge, Louisiana 70802.
2. I am employed as the director of the Environmental Division of the Louisiana Department of Natural Resources, Office of Conservation and am commenting on behalf of the Office of Conservation.
3. I hereby state that, to the best of my knowledge and in compliance with the restrictions of La. R.S. 30:29 C(2)(b), no party to the litigation entitled, H. C. Drew Estate, represented by its Trustees, Louie D. Barbe, III and C. W. Shaddock v. Neumin Production Company and Stokes & Spiehler, Inc., Docket No. 2019-4925, Division "F," 14th Judicial District Court, State of Louisiana, has not had ex parte communication with any employee, contractor, or representative of Conservation regarding the formation of the feasible plan from the date legally responsible parties submitted a plan to the date of this affidavit.

FURTHER AFFIANT SAITH NOT.


Gary Snellgrove

Subscribed and sworn to before me this 29th day of June, 2022.


Notary Public

H. BARLOW HOLLEY
Notary Public
Bar No. 38275 - ID No. 156381
State of Louisiana
My Commission is issued for Life.

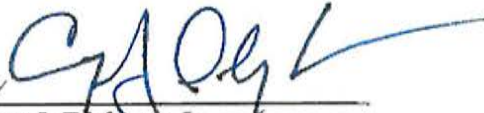
AFFIDAVIT OF CAREY DICHARRY
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

STATE OF LOUISIANA)
)
PARISH OF EAST BATON ROUGE)

I, CAREY J. DICHARRY JR., of my own personal knowledge and having first been duly sworn do hereby attest to the following:

1. That I am an employee of the Louisiana Department of Environmental Quality (LDEQ).
2. That in that capacity, I am the designated LDEQ contact for review of feasible plans for cleanup approved by the Louisiana Department of Natural Resources for contamination resulting from exploration and production of oil and gas, which plans are required under La. R.S.29(B).
3. That such a plan was submitted to LDEQ for review in the matter H. C. Drew Estate, represented by its Trustees, Louie D. Barbe, III and C. W. Shaddock v. Neumin Production Company and Stokes & Spiehler, Inc., Docket No. 2019-4925, Division "F," 14th Judicial District Court, State of Louisiana.
4. That personnel from LDEQ have not had ex parte communication with any employee, contractor, or representative of any party to the litigation, regarding the formation of the feasible plan from the date LDEQ received the plan to the date of this affidavit.

SWORN TO AND SUBSCRIBED BY ME, Carey J. Dicharry Jr., on the 27 day, June 2022, East Baton Rouge, Louisiana.



Carey J. Dicharry Jr.
