

**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

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

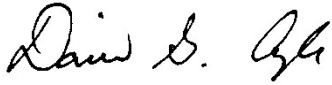
The additional soil and groundwater data discussed above generally confirm the findings presented in the Limited Admission, i.e., remediation of soil and Class 3 groundwater is not necessary to support the existing and anticipated future use of the property for agriculture and/or cattle grazing. Slight 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)

ATTACHMENT 1 FIGURES

ATTACHMENT 2 TABLES

ATTACHMENT 3 2015-2016 DATA

ATTACHMENT 4 BORING LOGS

ATTACHMENT 5 FIELD NOTES

ATTACHMENT 6 PHOTOGRAPHS AND PHOTOGLOGS

ATTACHMENT 7 LABORATORY ANALYTICAL REPORTS