

Appendix N Hypothetical 29-B Plan

ERM's proposed most feasible plan (MFP) is located in the main body of this document and complies with the Louisiana Department of Environmental Quality's Risk Evaluation/Corrective Action Program (RECAP), the State's risk-based protocol for environmental evaluation and remediation, Statewide Order 29-B (29-B), and LDNR's interpretation of Order 29-B, utilizing recognized exceptions approved and accepted by LDNR in developing remediation plans for exploration and production sites.

As required by LAC 43:XIX.611.F.1, this Appendix presents a hypothetical plan to address groundwater that complies with the provisions of Order 29-B, exclusive of Subchapter 319, and is submitted solely in fulfillment of that requirement. Unlike its soil standards, 29-B contains no groundwater standards. Therefore, this Hypothetical 29-B Plan includes a theoretical cost estimate, if RECAP was ignored, to assess groundwater to comply with the technical requirements of LAC 43:XIX.611.F.1 and ERM does not support or endorse such response as an alternative approach to RECAP. The cost estimate associated with this appendix represents an unnecessary cost.

Statewide Order 29-B's standards apply to soil and do not apply to groundwater; RECAP instead contains the recognized and accepted evaluation methodology. The RECAP regulation provides the recognized and accepted assessment methods and standards for groundwater and has been applied to E&P sites subject to LDNR review and Most Feasible Plan approval or development. The implementation of this Hypothetical 29-B Plan would be excessive and unnecessary.

ERM's MFP includes the application of appropriate and recognized exceptions allowed under Section 319 of the 29-B regulations and the 2011 MOU to support the application of RECAP. ERM requests that the RECAP-based plan be adopted as the most feasible plan for this Property. The use of RECAP to determine whether and to what extent soil and groundwater should be remediated has consistently been recognized by LDNR as an appropriate exception to 29-B. Therefore, the application of RECAP to the soil and groundwater in this case is appropriate for the following reasons:

- The 2003 RECAP document provides the comprehensive risk-based program necessary for fully evaluating this multi-media site. The USEPA, Louisiana, and other state risk-based standards have been developed and refined after Order 29-B; therefore, they provide standards that appropriately supplement 29-B standards;
- The February 2011 Memorandum of Understanding (MOU) between the LDNR and the LDEQ recognizes the application of RECAP, a risk-based approach to assessing the need for remediation as compared to the 1986 Statewide Order 29-B pit closure standards, which are not risk-based and do not include numeric groundwater standards; and
- The site-specific Human Health Risk Assessment performed by Neumin's experts in this case demonstrate that the site poses no unacceptable risk to human health and the environment. As outlined in the LDEQ RECAP preamble, risk to human health and the environment is the primary consideration when remedial decisions are made. The full RECAP Risk Assessment fully supports an MFP with exceptions to Statewide Order 29-B (i.e., use of the more rigorous and widely-accepted RECAP standards).

For these reasons, ERM does not support the implementation of this Hypothetical 29-B Plan. ERM recommends the adoption of its proposed remediation plan that applies RECAP (as provided for in the 2011 Memorandum of Understanding between LDNR and LDEQ).

The Hypothetical 29-B Plan is based on the following scope and general assumptions.

- Evaluation to determine whether LAC 43:XIX.311.C parameters in groundwater are consistent with background. This is based on the assumption that Statewide Order 29-B requires that groundwater be evaluated/remediated to background conditions, regardless of risk or lack of risk posed by the conditions, which is contrary to modern EPA and state risk-based regulations and guidance and recent LDNR findings.

The following steps would be implemented as part of this Hypothetical 29-B Plan:

- Install and develop two monitor wells in the approximate locations of former temporary wells TW-3 and TW-5;
- Develop and sample the wells and analyze the samples for Statewide Order 29-B metals (total and dissolved) to demonstrate that LAC 43:XIX.311.C parameters (i.e. metals) are consistent with background identified in wells outside of former operational areas;
- In addition, the samples from the two wells will be analyzed for chlorides to support comparison of the chlorides concentrations in properly installed, developed and sampled wells to those reported previously in temporary wells;
- Submit a groundwater sampling and analysis report; and
- Plug and abandon the monitoring wells

The details of this hypothetical plan and estimated implementation cost are included in Table N-1.

The hypothetical schedule for implementing this Hypothetical 29-B Plan would be generally as follows:

- Implement groundwater assessment activities within 60 days of LDNR approval of the plan. Implementation would require approximately 1 month to complete;
- Submit Groundwater Sampling Report, within 45 days of receipt of analytical data; and
- Plug and abandon two wells, within 60 days of LDNR approval of Groundwater Sampling Report.

Table N-1

**Table N-1
Hypothetical Groundwater Assessment Cost Estimate**

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

	<u>Unit Cost</u>	<u>Units</u>	<u>Quantity</u>	<u>Cost</u>	<u>Cost Basis</u>
<u>Groundwater Assessment and Well P&A</u>					
Mobe/Demobe	\$3,500	lump	1	\$3,850	Walker Hill 11/09/21 Quote
Direct Push Drill Rig to install 2 shallow wells	\$2,000	day	1	\$2,200	Walker Hill 11/09/21 Quote
1" well materials (to 15') with surface completions	\$775	well	2	\$1,705	Walker Hill 11/09/21 Quote
Direct Push Drill Rig for well P&A	\$2,000	day	1	\$2,200	Walker Hill 11/09/21 Quote
IDW Drums	\$70	each	2	\$154	Walker Hill 11/09/21 Quote
IDW Disposal	\$2,000	lump	1	\$2,200	ERM Estimate
Per-Diem	\$450	day	2	\$990	Walker Hill 11/09/21 Quote
Sample Analysis	\$250	each	3	\$825	ERM Estimate
ERM Contractor Oversight (Labor and Expenses)	\$1,500	day	2	\$3,000	ERM Estimate
<i>Groundwater Assessment and Well P&A Subtotal</i>				<u>\$13,274</u>	
<u>Data Evaluation, Reporting and Project Management</u>					
Data Evaluation	\$1,500	lump	1	\$1,500	ERM Estimate
Project Management and Reporting	\$3,500	lump	1	\$3,500	ERM Estimate
<i>Data Evaluation, Reporting and Project Management Subtotal</i>				<u>\$5,000</u>	
			Total	\$18,274	