

**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION COMMISSION**

**APPLICATION OF APACHE CORPORATION  
FOR AN ADJUDICATORY HEARING TO  
CONTEST THE DIVISION'S CONDITIONS OF  
APPROVAL ON APACHE CORPORATION'S  
SCOPE OF WORK FOR ADDITIONAL  
INVESTIGATION, LEA COUNTY, NEW MEXICO**

**CASE NO. 24912**

**APACHE CORPORATION'S CLOSING ARGUMENT**

Apache Corporation ("Apache" or "Applicant"), (OGRID No. 873) hereby submits its Closing Argument for the Oil Conservation Commission's ("Commission") consideration.

**Introduction**

The Oil Conservation Division ("Division") and Apache disagree on the placement and number of groundwater monitoring wells necessary to delineate the extent of elevated chloride concentrations in groundwater. This matter arose out of a release of produced water from a pipeline operated by Apache, which Apache reported in July 2019 (the "Release"). Apache completed remediation in response to the Release and the Division approved Apache's closure report, which required continued groundwater monitoring of four wells. Apache cooperated with the Division's requests for expanded groundwater monitoring between 2022 and 2023, and the results of that monitoring reported in early 2024 identified a likely plume of elevated chlorides in groundwater. The chloride plume appears to be from a different, but yet unidentified source, and not the original Release.

To date, Apache has installed 24 groundwater monitoring wells and has reported the results of groundwater monitoring to the Division. The Division, however, demands that Apache install 19 additional wells, including five proposed by Apache. The Division has provided sparse

explanation for both the numbers and locations of the additional monitoring wells it demands, both in its short justifications provided with its Conditions of Approval (“COAs”) issued in July 2024 and in its hearing testimony. In contrast, Apache’s expert witness, Mr. Grams, testified that the additional wells required by the COAs are unnecessary to fully delineate the boundaries of the chloride groundwater plume. Mr. Grams clearly explained why Apache’s latest proposal to install seven wells and four soil borings is sufficient to complete delineation of the chloride plume and is the appropriate next step to investigate possible sources of the chloride plume, based on currently available information. Importantly, the Division’s witness conceded that the Division has not yet determined whether groundwater remediation is necessary, but nevertheless testified that many of the Division’s proposed additional wells were needed to plan and design future remediation. For the reasons discussed below, the Commission should reject the Division’s Conditions of Approval (“COA”) of Apache’s May 8, 2024 plan for additional investigation and should instead approve Apache’s latest proposal dated September 23, 2024.

### **Procedural History**

Apache applied to the Division for an adjudicatory hearing pursuant to the provisions of 19.15.4.8 and 19.15.29.12.C(5) NMAC to contest the COAs imposed by the Division on Apache’s Scope of Work for Additional Investigation submitted on May 8, 2024. The Division approved Apache’s May 8, 2024 plan with the COAs mandating that Apache drill an additional 14 monitoring wells, for a total of 19 additional wells. Apache objected to the 14 additional wells required by the COAs and conferred with the Division, including through a dispute resolution. Apache then submitted a revised plan to install seven additional monitoring wells on September 23, 2024 and sought to further confer with the Division on that proposal. **Apache Ex. B-3.** Immediately following receipt of Apache’s September 2024 revised plan, the Division cancelled

a meeting to further discuss Apache's concerns and advised that Apache's only options were to fully comply with the COA, apply for a hearing, or face enforcement action. Apache applied for a hearing, and the Director determined that the Commission should hear the matter.

### **Legal Authority & Argument**

This matter relates to a reported release of produced water from a pipeline operated by Apache. The Division is empowered by the Oil and Gas Act to "collect data," "make investigations and inspections," and regulate the handling, transport, disposal and injection of produced water. NMSA 1978, §§ 70-2-12(A)(1)-(2) and (B)(15). The Commission has adopted rules that govern the response to releases of fluids, including produced water. *See* 19.15.29.3 NMAC. Apache's actions in response to the Release and the subsequent groundwater investigation currently are subject to the "Spill Rule," 19.15.29 NMAC. This rule governs the investigation and remediation of reported releases of contaminants. Under 19.15.29.11.A NMAC, after the initial response to a release, "the responsible party must assess *soils* both vertically and horizontally for potential environmental impacts . . . ." (emphasis added). Subsection A of this section, which directly follows the prefatory statement on assessment of soils, discusses the "characterization" of the release, and requires submission of characterization information within 90 days. As made clear by the history of this matter, subsection A should be interpreted to address characterization with regard to soils, as it is not practicable to conduct full characterization of groundwater conditions within 90 days.

The rule says very little regarding delineation, characterization, and remediation of groundwater contamination. Under subsection C of 19.15.29.11, "If the division determines that more information is needed to understand the character of the release and its potential impact on fresh water, public health and the environment, the division may request the responsible party

submit additional information.” The Division must request the information within 30 days of receipt of the characterization report or remediation plan, and the responsible party has 14 days to respond. Of course, it is not practicable to install or monitor wells within fourteen days, suggesting that a request for monitoring wells was not contemplated within this procedure. In sum, while the Division’s COA’s requiring additional wells and information for this matter is well outside of the timeframe for the division to request information, which is its only remaining authority under the Spill Rule, Apache continued to cooperate with the Division’s requests for additional information until it objected to the COAs.

Importantly, the Spill Rule does not provide guidance on the need for monitoring wells. With regard to groundwater, under 19.15.19.12 NMAC, if the director determines that a release has caused water pollution, the director may notify the responsible party that an abatement plan is required under 19.15.30 NMAC. According to the Division’s testimony, it has not determined that groundwater remediation is required and has not required Apache to submit an abatement plan.

Here, the Division has exceeded the scope of its authority to request Apache submit additional information under the Spill Rule and has failed to comply with the time limits of 19.15.29.11.C NMAC. Instead, the Division is asserting that the wells mandated in its COA are necessary to plan and design groundwater remediation, even though the Division testified that it does not yet have sufficient information to determine whether groundwater remediation will be required.

#### **Background: Release, Remediation & Groundwater Investigation**

Apache investigated and characterized the Release, submitted a remediation plan, obtained the Division’s approval, and implemented the remediation plan. The Division then approved Apache’s closure report regarding that remediation plan. **Apache Ex. A-5** (Approved without

Conditions by OCD on August 27, 2021 at 330, Soil Closure Report, Dec. 31, 2020). Ms. Romero's testimony at the hearing confirmed that the Division does not question its approval of the closure report and that the Division believes that Apache's remediation of the Release satisfied all applicable requirements of the Spill Rule.

As part of its Remediation Plan, Apache installed four monitoring wells, TMW-1 through TMW-4. Apache collected quarterly water quality samples from the four wells and a windmill well and reported the results to the Division. **Apache Ex. C-1** (Annual Groundwater Monitoring Report, December 23, 2020). Under the approved closure report, Apache was required to continue quarterly monitoring through the end of 2021.

In 2022, the Division conducted a site inspection regarding the Release. Per Ms. Romero's testimony, the site inspection did not identify any conditions at the site prompting concerns with the remediation of the Release or indicating another release at the site. The Division, however, requested that Apache install and sample two additional monitoring wells, and Apache complied with that request by installing wells TMW-5 and TMW-6 in November 2022 and reported the results to the Division.

Because the initial results of groundwater sampling from TMW-5 and TMW-6 indicated elevated chloride levels in groundwater, Apache and the Division agreed that four additional monitoring wells would be installed. Apache installed these four monitoring wells, TMW-7 through TMW-10 in June 2023 and reported the results to the Division.

The monitoring results from the four wells installed in June 2023 further indicated elevated chloride levels. The Division directed Apache to conduct further investigation to delineate the extent of elevated chloride levels in groundwater, and Apache and the Division agreed to a plan to install additional monitoring wells in November 2023, which called for a minimum of six

additional monitoring wells. Apache however, installed an additional fourteen (14) monitoring wells, TMW-11 through TMW-24, in November and December 2023. Per the testimony of Messrs. Bole and Grams, the additional eight monitoring wells that Apache installed beyond the minimum six wells were installed based upon field sampling and analysis. There are some limitations of information collected by analysis in the field, including the accuracy of the information. Consequently, Apache decided to pause after completing the fourteen (14) additional wells so that it could obtain samples for laboratory analysis following completion of the monitoring wells.

Apache presented a comprehensive report on the initial laboratory analysis of all the monitoring wells and the windmill in March 2024. **Apache Ex. B-2.** In that monitoring report, Apache proposed to conduct quarterly monitoring of all monitoring wells during 2024 so that it could analyze the results to identify trends that might be useful for further delineation and assessment of the groundwater conditions.

The Division was not satisfied with Apache's proposal to monitor the existing wells for four quarters to further assess groundwater contaminant trends and groundwater flow and directed Apache to immediately propose a plan for drilling additional monitoring wells. Based upon discussions with the Division in April and May 2024, Apache submitted its proposed plan to install five additional monitoring wells on May 8, 2024. **Apache Ex. B-3.**

In late July 2024, the Division filed its COA of the May 8, 2024 plan. **Apache Ex. B-3** at 398. The COAs include requirements for Apache to install an additional fourteen (14) monitoring wells, for a total of nineteen (19) new wells. Apache objected to the COAs and requested informal discussions, followed by formal dispute resolution. Apache presented a revised proposal dated September 23, 2024 (**Apache Ex. B-4**) to install seven additional monitoring wells and to

undertake four soil borings. The Division immediately cancelled a meeting set to discuss that plan, rejected the plan, and issued an ultimatum to Apache that it must either comply with all of the Division's COA, request a hearing, or face enforcement action. Apache then filed its application for a hearing.

Despite its appeal of the Division's COA, Apache continued voluntarily collecting samples from all 24 monitoring wells and the windmill in October 2024. Apache's consultant received the results of that monitoring round in November and December 2024 and reported the results to the Division in early January 2025. The results of that monitoring varied, with contaminant levels in many wells remaining stable, but with chloride levels increasing in several monitoring wells.

Apache and the Division appear to agree that the original Release identified in July 2019 is not the likely source of the elevated chlorides in groundwater to the east of the Release site. As noted above, the Division's witnesses testified that the soil remediation work performed by Apache and approved by the Division is working as expected to prevent chlorides in soil from leaching in the area impacted by the Release. Apache's witnesses testified that there may have been a small leak at a pipeline joint that did not present on the surface and went undetected. Mr. Powell testified that he doubts such a leak could have explained the volume of saltwater it would take to raise chloride levels in groundwater nor would it explain the recent increase in chloride levels indicated by the most recent sampling. In sum, neither Apache nor the Division have identified the source of the elevated chloride levels. Mr. Powell testified that in this instance, rather than working from a known release to delineate the extent of contamination, the parties are "working backward" to try to identify the source of elevated chlorides in groundwater.

### **Technical Testimony on the Need for Additional Wells**

As discussed above, the Division's legal authority at this point under the Spill Rule is to request that Apache provide additional information on the character of a release and its potential impact. As to potential impact, as Mr. Grams testified, the only receptor involved is a windmill, and there already is monitoring of both the windmill and groundwater in its vicinity to assess that potential impact. Regarding the "character" of the release, this case presents a difficult issue since there is no identified release that is the source of elevated chlorides. As Mr. Grams testified, at this point in time, the primary objective for additional groundwater monitoring is to delineate the extent of the chloride plume. There are other means to investigate potential sources, and as discussed toward the end of the hearing, the Division withdrew supplemental conditions requiring additional investigation following discussions with Apache on voluntary cooperation for additional investigations not involving monitoring wells.

Apache and the Division disagree regarding the numbers and locations of additional monitoring wells to be installed and monitored for the next phase of the delineation of the chloride plume. Mr. Grams' expert testimony addressed the differences in monitoring wells in four areas: the Southeast, Southwest, Central, and Northern portions of the area of interest. Mr. Powell, who testified on behalf of the Division, was not qualified as an expert in this hearing. Further, Mr. Powell largely relied upon the Division's statements in its COAs to justify the additional wells and their locations and provided little additional testimony to support the need for additional wells.

In assessing the reasonableness of the COAs, the Commission should consider the purpose and need for additional wells in the four areas discussed by Mr. Grams, as they each have different relationships to the chloride plume and there are different purposes for additional wells in each of these areas. Mr. Grams used **Apache Exhibit C-4.1** as a basis to illustrate the number and



locations of proposed monitoring wells in each of these four areas, and the references below to particular wells are based on the locations in that exhibit.

**Southeast Area:** The Southeast portion of the area of interest is generally side or cross-gradient from the direction of movement of the chloride plume. Within this area, the parties generally agree regarding the number and locations of additional monitoring wells. Both parties agree on new monitoring wells in the “blue” locations shown as TMW-30(39) and TMW-31(42).<sup>1</sup> Apache proposed a well at the location indicated as TWM-26 to delineate the outer edge of the plume in this area. The Division had proposed a well at the green location identified as TMW-38, but Mr. Powell testified that Apache’s proposed TMW-26 was acceptable to the Division and withdrew COA 1(i) requiring a well at the location of TMW-38. The additional wells proposed by Apache in its September 23, 2024 proposal should fully address this area.

**Southwest Area:** This area is downgradient of the portion of the chloride plume with the highest chloride concentrations. Apache proposes one additional monitoring well in this area, TMW-25 to delineate the outer bound of the chloride plume. Mr. Grams testified that well TMW-25 (blue) was a preferred location compared to the Division’s well TMW-41 (green)(COA 1(l)) because a well at that location is more likely to be within, rather than at or beyond the boundary of, the chloride plume and therefore is more likely to define the downgradient boundary of the plume. The Division’s justification for COA 1(l) is vague: “[a]ddresses lack of characterization and assessment between TMW-24 and TMW-23.” Mr. Grams’ expert opinion is that there is no need for additional characterization or assessment in the area of TMW-41(green). The Division’s Condition 1(k) requires an additional well in this area, TMW-40. Mr. Grams testified that a well

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<sup>1</sup> The well identified in Apache’s September 2024 proposal as TWM-30 was identified in the Division’s conditions of approval as TMW-39. The well identified in Apache’s September 2024 proposal as TMW-31 was identified in the Division’s conditions of approval as TWM-42.

at this location is likely within the chloride groundwater plume, so well TMW-40 would not help delineate the boundaries of the plume. Furthermore, Mr. Grams testified that there is no present need to further characterize chloride levels within the plume. To the extent that the Division asserts that a well at the location of TMW-40 (green) is necessary for groundwater remediation design, it is premature, as discussed below.

In sum, in the southwest area, the Commission should approve Apache's proposed TWM-25 (blue), as proposed in Apache's September 2024 proposal. The Commission should reject the Division's condition 1(k) requiring a monitoring well at the location of TMW-40 (green) and condition 1(l) requiring monitoring well TMW-41 (green) based on Mr. Grams' testimony and because the Division has not adequately explained the reasons for COAs 1(k) and 1(l).

**Central Area:** This is the area of the highest chloride concentrations. Within this area, Apache proposes one additional well, TMW-27(blue). Mr. Grams testified that a well in this area would provide additional water level data to assess reasons for the "mounding" of groundwater in the area of TMW-4 and is useful to assess potential migration of chlorides toward the west from impacted areas. The Division did not object to a well in this location.

Mr. Powell testified that the Division's COAs require wells at the locations of TMW-35 (Condition 1(f)), TMW-36 (Condition 1(g)) and TMW-37 (Condition 1(h)). The reasons for these wells as stated in the written conditions for each of these three wells is, once again, vague. The conditions state only: "Addresses more necessary characterization near TMW-17" without explaining why such characterization is necessary. **Apache Ex. B-3** at 398. During the hearing, Mr. Powell stated that wells at these locations would primarily assist in designing a groundwater recovery, or remediation system. Mr. Powell, however, also testified that the Division had not yet determined that groundwater remediation is required.

It is premature, and arbitrary, to require groundwater monitoring wells for the purpose of designing groundwater remediation when the Division has made no determination that remediation is required. Indeed, without such a determination, requiring monitoring wells for remediation design is obviously unnecessary at this time. Consequently, the Commission should reject the Department's conditions 1(f) requiring a well at the location of TMW-35 (green), 1(g) requiring a well identified as TMW-36 (green), and 1(h) requiring a well identified as TMW-37 (green). The Commission should approve Apache's proposal for a well at the location of TMW-27(blue), which is identified in Apache's September 2024 proposal.

**Northern Area:** The parties agree that the northern area is generally upgradient of the chloride plume. Any chlorides detected in groundwater in this area are most likely due to "background" conditions due to naturally occurring chlorides or chlorides from anthropogenic sources unrelated to the Release. Within this area, Apache proposes two additional wells, TMW-28(blue) and TMW-29(blue). According to Mr. Grams, wells at these locations would help further identify background conditions.

The Division's conditions would require five additional wells in this area, TMW-30(green), per condition 1(a), TMW-31(green) per condition 1(b), TMW-32(green) per condition 1(c), TMW-33(green) per condition 1(d), and TMW-43(green) per condition 1(n) (identified as a duplicate TMW-42 in condition 1(n)). At the hearing, Mr. Powell testified that the Division would withdraw its request for well TMW-31(green), as its function would be served by a well at the location of TMW-29(blue). The stated reasons for the Division's conditions requiring the remaining wells are vague and insufficient for the Commission to assess the need for the wells.

Mr. Grams' expert opinion is that background conditions are adequately characterized by the existing monitoring wells and the two additional wells proposed by Apache, and that wells at

the locations proposed by the Division as TWM-30(green), TMW-32(green), TMW-33(green), and TMW-43(green) are unnecessary for further characterization of groundwater conditions in this area. The Division did not present testimony objecting to wells at the locations proposed by Apache. Consequently, the Commission should approve Apache's proposed wells TMW-28(blue) and TMW-29(blue) and should reject the Division's conditions 1(a), 1(c), 1(d) and 1(n) requiring wells at the locations of TMW-30, -32, -33 and -43 (all green) respectively, as well as condition 1(b) regarding well TMW-31(green), which was withdrawn based on Mr. Powell's testimony.

### **Conclusion**

For the foregoing reasons, Apache respectfully requests that the Commission grant Apache the relief identified in Apache's Proposed Order filed concurrently herewith.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I certify that on January 31, 2025, the foregoing pleading was filed with the Oil Conservation Division via the OCD Permitting website and served via electronic mail on:

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**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
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**APPLICATION OF APACHE CORPORATION  
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**Case No. 24912**

**APACHE CORPORATION'S PROPOSED ORDER FOR CONSIDERATION  
BY THE OIL CONSERVATION COMMISSION**

This matter comes before the Oil Conservation Commission (the "Commission") pursuant to 19.15.4 NMAC and by referral of the Oil Conservation Division (the "Division"). Following a Hearing before the Commission on January 16 and 17, 2025, where Apache and the Division (the "Parties") appeared and presented evidence, the Commission finds and orders that:

1. Pursuant to the Oil and gas Act, NMSA 1978, Section 70-2-11, the Commission has jurisdiction and authority over all matters relating to oil and gas conservation, the prevention of waste, and the protection of correlative rights and the disposition of waste. 19.15.4.3 NMAC.
2. Apache Corporation ("Apache" or "Applicant") (OGRID No. 873) filed its Application with the Division on October 1, 2024 to contest some of the Division's Conditions of Approval on Apache's Scope of Work for Additional Investigation in Lea County, New Mexico, related to a release near EBDU No. 37 in July 2019, designated as Incident No. NDHR1922141227 and remediation permit number 1RP-5636 by the Division ("the Release").

3. Apache has been conducting groundwater sampling and analysis since 2019 in the vicinity of the Release and has thus far installed a network of 24 wells, TMW-1 through TMW-24 at or near the location of the Release.

4. The Division's Conditions of Approval to Apache's May 8, 2024 plan for additional groundwater delineation require Apache to install an additional nineteen (19) monitoring wells, in addition to the 24 monitoring wells currently in place near the Release site and the five additional wells proposed by Apache in the May 8, 2024 plan.

5. Apache conferred with the Division and invoked dispute resolution concerning the additional monitoring wells required by the Division's Conditions of Approval. Following those discussions, Apache proposed a total of seven additional monitoring wells and four soil borings in its proposal dated September 23, 2024. The Division immediately rejected that proposal.

6. At the Hearing, the Parties presented evidence through expert and non-expert witness testimony on the issue of the number and location of additional monitoring wells proposed by the Division and Apache, respectively. The location of the existing and proposed monitoring wells, by both Parties, are located in **Apache Ex. C-4.1**.

7. Apache's expert witness, geologist and hydrologist John Grams testified at the Hearing to the sufficiency of the existing monitoring well network and the necessity of Apache's proposed additional wells, TMW-25, -26, -27, -28, -29, -30, and -31, for proper delineation of the groundwater plume prior to a determination on whether groundwater remediation is required and, if so, the design of a remediation system to address groundwater contamination. Mr. Grams further testified that the additional wells proposed by the Division are superfluous to the wells proposed by Apache and in some cases, not well positioned to delineate the extent of the plume.

8. Mr. Powell testified for the Division as to its concern that the plume has not been fully delineated but did not provide further evidence supporting the Division's request that Apache install 14 additional wells beyond the vague assertions made in the Division's Conditions of Approval. *See Apache Ex. B-3* at 398.

9. Both Parties testified that the wells proposed by Apache as TMW-30 and TMW-31 and the Division as TMW-39 and TMW-42 are located in the same geographic area and should not be duplicated.

10. Mr. Powell further testified that the Division agrees to remove from its Conditions of Approval condition 1(b) and 1(i), proposing monitoring wells TMW-31 and TMW-38, respectively.

11. For these reasons and for those described in Apache's Closing Argument, the Commission hereby approves Apache's September 23, 2024 Additional Groundwater Delineation Work Plan. **Apache Ex. B-4.**

12. Further, the Commission rejects the Division's Conditions of Approval, conditions 1(a) through 1(n), inclusive, to Apache's May 8, 2024 Scope of Work. **Apache Ex. B-3** at 398. The Commission is persuaded that the additional monitoring wells required by the Conditions of Approval, conditions 1(a) through 1(n), are not necessary to delineate the chloride plume in groundwater and that it is premature for the Division to require monitoring wells for the purpose of designing groundwater remediation because the Division has not yet determined that groundwater remediation will be required.

**IT IS THEREFORE ORDERED THAT:**

A. Apache's September 23, 2024 Additional Groundwater Delineation Work Plan (**Apache Ex. B-4**) is hereby approved by the Commission; and



B. The Division's Conditions of Approval 1(a) to 1(n) to Apache's May 8, 2024 Scope of Work (**Apache Ex. B-3** at 398) are hereby rejected by the Commission.

Dated: \_\_\_\_\_

By:

\_\_\_\_\_  
**Gerasimos Razatos, OCD Acting Director**  
**Chair of the Oil Conservation Commission**