

EXHIBIT A

**VULCAN CONSTRUCTION MATERIALS, LLC'S RESPONSIVE SUMMARY
AND STATEMENT OF BASIS AND PURPOSE**

**BEFORE THE ARKANSAS POLLUTION CONTROL
AND ECOLOGY COMMISSION**

**IN RE: REQUEST BY VULCAN CONSTRUCTION)
 MATERIALS, LLC TO INITIATE) DOCKET NO. 19-001-R
 RULEMAKING TO AMEND RULE NO. 2)**

VULCAN CONSTRUCTION MATERIALS, LLC’S RESPONSIVE SUMMARY

Vulcan Construction Materials, LLC provides this Responsive Summary as required under Arkansas Pollution Control and Ecology Commission Rule No. 8.815:

On May 20, 2019, Vulcan filed a Petition to Initiate Third-Party Rulemaking to Amend APCEC Rule No. 2. The Arkansas Pollution Control & Ecology Commission granted Vulcan’s Petition on June 28, 2019. Notice of the proposed rulemaking was published in the Arkansas Democrat-Gazette on July 14 and 21, 2019. A public hearing was held on August 29, 2019, in Walnut Ridge, Arkansas, and the public comment period ended on September 11, 2019. There were no oral comments and no members of the public attended the public hearing.

There was only one written comment filed during the public comment period, a letter from the Arkansas Department of Health (“ADH”) dated September 3, 2019. A copy of the letter is attached to this Responsive Summary as Attachment 1. The issues raised in the letter and Vulcan’s responses to the issues appear below.

1. The Unnamed Tributary and Brushy Creek are tributaries of the Spring River in the watershed of the Northeast Arkansas Public Water Authority. ADH has consistently maintained that the domestic water supply use designation is appropriate and necessary for all streams within public supply watersheds.

Vulcan acknowledges ADH’s policy and does not disagree with the policy as a general proposition. But Vulcan respectfully submits that strict application of the policy to the factual circumstances involved in this rulemaking would be inappropriate because the Unnamed Tributary’s contribution to the flow of the Spring River is so small that it cannot realistically affect water quality at the Northeast Arkansas Public Water Authority intake.

2. Mineral pollution contributed to the Spring River by the Unnamed Tributary will have a direct effect on water quality of the water supply for the Northeast Arkansas Public Water Authority.

First, Vulcan acknowledges that the discharge from the Unnamed Tributary flows directly through Brushy Creek and Stennitt Creek to the Spring River. As a consequence, it is technically accurate to say that water quality in the Unnamed Tributary directly affects water quality in the Spring River. The effect is so small, however, that it is insignificant. The discharge from the Unnamed Tributary is less than 0.1% of the flow of the Spring River at the confluence with Stennitt Creek. Even if concentrations of minerals in the Unnamed Tributary

increased or decreased dramatically, the effect on the Spring River would be undetectable. See Attachment 2 to this Responsive Summary.

Second, the comment's use of the future tense, "will have a direct effect," suggests that a new discharge is proposed. That is not the case. Vulcan's Black Rock Quarry has been discharging essentially the same volumes of stormwater with essentially the same concentrations of minerals through the Unnamed Tributary for decades. No new discharge is proposed; only a continuation of the longstanding quarry stormwater discharge.

3. Dissolved chlorides can have deleterious effects upon plumbing corrosion rates even when concentrations are below secondary drinking water standards. This complicates drinking water systems' efforts to minimize consumer exposure to lead and copper and can also increase drinking water treatment costs.

Vulcan is not proposing any change in water quality criteria for chlorides. Water quality samples collected for the UAA showed chloride concentrations in the Unnamed Tributary and Brushy Creek immediately downstream of the UT well below the ecoregion value of 13 mg/L:

Chloride Values from UAA Samples (2015-2016)

	<u>Maximum</u>	<u>Minimum</u>	<u>Average</u>
Sample Station UT-0A	10 mg/L	<0.1 mg/L	5 mg/L
Sample Station BC-1A	10 mg/L	<0.1 mg/L	3.6 mg/L

4. ADH requests that all documents in the rulemaking be revised to reflect ADH's opposition to the removal of the domestic water supply designated use from the UT and Brushy Creek.

Vulcan acknowledges ADH's opposition. ADH's comment and this response document that fact. But the documents previously filed in the administrative record of the rulemaking cannot be altered.

5. ADH asks that the 2009 ADH letter included as Attachment A in the Final UAA Appendix A be removed because the public water intake described in that letter as planned now exists and is operational.


Vulcan acknowledges that the public water intake mentioned in the 2009 letter is now operational, but it cannot alter documents previously filed in the administrative record. ADH's comment and this response fully document that the public water intake in question is no longer merely proposed.

6. ADH did not oppose the removal of the drinking water designated use from Stennitt Creek in 1999 because there was no downstream drinking water supply in the watershed at that time, and because the revised standard for TDS in the 1999 rulemaking was less than the secondary drinking water standard. ADH now opposes the 1999 removal of the designated drinking water use from Stennitt Creek because there is a downstream public water intake. ADH asks that all documents and exhibits in the rulemaking be revised to reflect ADH's opposition to the

removal of the domestic water supply designated use for the Unnamed Tributary, Brushy Creek, and Stennitt Creek.

ADH's opposition is noted but Vulcan cannot alter documents previously filed in the administrative record of this rulemaking.

MITCHELL, WILLIAMS, SELIG,
GATES & WOODYARD, PLLC
425 W. Capitol Avenue, Suite 1800
Little Rock, Arkansas 72201-3525
Phone: (501) 688-8800
Facsimile: (501) 688-8807
agates@mwlaw.com
jwimpy@mwlaw.com

By: 
Allan Gates, AR Bar No. 72040
Jordan Wimpy, AR Bar No. 2012273

Counsel for Vulcan Construction Materials, LLC

Attachment 1 to Responsive Summary



Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000

Governor Asa Hutchinson

Nathaniel Smith, MD, MPH, Secretary of Health

Via email

September 3, 2019

Mr. Robert E. Blanz, PhD, P.E.
Chief Technical Officer
Office of the Director
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

RE: Objection to Removal of Domestic Supply Designated Use, unnamed tributary, Brushy Creek
Third-Party Rulemaking Vulcan Materials, Inc. Black Rock Quarry (WWTP)

Mr. Blanz:

This letter serves to note Arkansas Department of Health's (ADH) objection to the removal of the domestic supply designated use for the unnamed tributary (UT) and Brushy Creek, as proposed in the referenced rulemaking.

These creeks are tributaries of the Spring River in the watershed of Northeast Arkansas Public Water Authority (NEPWA), a source of drinking water to almost 4000 Arkansans. The Arkansas Department of Health has consistently maintained that the domestic water supply use designation is appropriate and necessary for all streams within public supply watersheds. Mineral pollution that enters the Spring River will likely have a direct effect upon water quality in this drinking water supply. The water supply intake structure for NEPWA is located three miles downstream of the confluence of Stennitt Creek and Spring River and is within the ADH-designated Source Water Assessment Area. NEPWA is vulnerable to mineral pollution that might occur on those reaches.

Originally, the Secondary Drinking Water Standards for chlorides, sulfates, and total dissolved solids were included in the federal Safe Drinking Water Act based solely upon issues relating to palatability. However, dissolved chlorides can have deleterious effects upon plumbing corrosion rates even when concentrations are below the secondary standards. This complicates drinking water systems efforts to minimize consumer exposure to lead and copper and can also increase drinking water treatment costs.

The federal regulations state, with regards to the protection of downstream designated uses, "In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality

standards provide for the attainment and maintenance of the water quality standards for downstream waters" [40 C.F.R. §131.10(b)].

ADH notes the drinking water designated use was removed for Stennitt Creek, in 1999 through a Third-Party Rulemaking on behalf of Meridian Aggregates; however, the revised standard for total dissolved solids of 465 mg/L. does not exceed the secondary maximum contaminant level (SMCL) of 500 mg/L. At that time, ADH did not oppose the increase because it did not exceed the SMCL and no drinking water intake was located downstream on the Spring River.

ADH requests the following revisions to the proposed rulemaking:

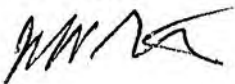
Revise all documents to reflect ADH's opposition to the removal of the domestic supply designated use for UT and Brushy Creek and remove the 2009 ADH letter included in the "Final UAA Appendix A" since the previously planned drinking water intake is now existing.

Revise Exhibit E, Economic Impact/Environmental Benefit Analysis: 2B. ENVIRONMENTAL BENEFIT, to reflect that Stennitt, Brushy Creek and the unnamed tributary are located 3 miles upstream of NEPWA's intake structure and within the ADH-designated Source Water Assessment Area serving a community of about 4000 Arkansans, and that costs associated with any future degradation of the watershed could result in increased treatment costs for this community public water system.

Additionally, ADH requests that all Exhibits and documents within the current proposed rulemaking reflect our opposition to the proposed rulemaking and the removal of the domestic supply designation for the UT, Brushy Creek, and Stennitt Creek.

If public water supply sources—including the Spring River—are to remain high quality drinking water sources, it will require all relevant governmental bodies to include an awareness of and concern for drinking water protection as part of their decision-making processes. The Arkansas Department of Health will continue to be a voice for drinking water source protection and to encourage all stakeholders to adopt regulations protective of drinking water sources in their policy decisions.

Sincerely,



Jeff Stone, P.E.
Director, Engineering Section
Arkansas Department of Health

Cc: Northeast Public Water Authority, Gerald Lawrence, 66 COX DRIVE, Mountain Home AR 72633
Richard McMullen, Ph.D.

Attachment 2 to Responsive Summary

Unnamed Tributary's Contribution to Flow in Downstream Waterbodies

<u>Name of Waterbody</u>	<u>Flow*</u>	<u>UT's % of Flow</u>
Unnamed Tributary at Outfall	0.59 cfs	100%
Brushy Creek below confluence with Unnamed Tributary	1.26 cfs	47%
Brushy Creek above confluence with Stennitt Creek	2.11 cfs	28%
Stennitt Creek below confluence with Brushy Creek	3.98 cfs	15%
Spring River below confluence with Stennitt Creek	721.98 cfs	0.08%

	<u>Sulfate</u>	<u>TDS</u>
If UT increases 3 x the Max: Impact on Spring River:	260 mg/L→780 mg/L 4.02 mg/L→4.45 mg/L	725 mg/L→2,175 mg/L 220.3 mg/L→221.5 mg/L
If UT decreases to ecoregion values: Impact on Spring River:	260 mg/L→22.7 mg/L 4.02 mg/L→3.82 mg/L	725 mg/L→240 mg/L 220.3 mg/L→219.9 mg/L

*Flow data based on harmonic mean flows as calculated in Mass Budget in Vulcan Revised UAA, Figure 10.3 at p. 10-20

**BEFORE THE ARKANSAS POLLUTION CONTROL
AND ECOLOGY COMMISSION**

**IN RE: REQUEST BY VULCAN CONSTRUCTION)
 MATERIALS, LLC TO INITIATE) DOCKET NO. 19-001-R
 RULEMAKING TO AMEND RULE NO. 2)**

**VULCAN CONSTRUCTION MATERIALS, LLC'S
STATEMENT OF BASIS AND PURPOSE**

Vulcan Construction Materials, LLC (“Vulcan”) submits the following Statement of Basis and Purpose:

1. The Arkansas Pollution Control and Ecology Commission (“APCEC” or “the Commission”) is authorized to promulgate rules implementing the powers and duties of the Division of Environmental Quality (“DEQ”) and APCEC, including rules prescribing water quality standards. Ark. Code Ann. § 8-4-202(a) and (b).


 2. The relevant Arkansas statutes provide that any person has the right to petition the APCEC for any amendment to any rule. On May 20, 2019, Vulcan filed its Petition to Initiate Third-Party Rulemaking to Amend APCEC Rule No. 2. The petition was submitted pursuant to and in compliance with APCEC Rule No. 2, §§ 2.303 and 2.308, APCEC Rule No. 8, § 8.809, and DEQ’s Continuing Planning Process. On June 28, 2019, the APCEC entered Minute Order No. 19-08 granting Vulcan’s Petition.

 3. Through its Petition, Vulcan sought to establish site-specific water quality criteria for dissolved minerals, as follows:
 - Establish site-specific TDS and sulfate water quality criteria for the UT from Vulcan’s Outfall 001 to the confluence with Brushy Creek, as follows:
 - TDS - 725 mg/L
 - Sulfate - 260 mg/L
-

- Establish site-specific TDS and sulfate water quality criteria for Brushy Creek from the confluence with the UT to the confluence with Stennitt Creek, as follows:
 - TDS - 549 mg/L
 - Sulfate - 126 mg/L
 - Establish a site-specific sulfate water quality criterion for Stennitt Creek from the confluence with Brushy Creek to the confluence with the Spring River, as follows:
 - Sulfate - 43.3 mg/L
 - Remove the designated, but not existing, domestic drinking water use for the UT from Vulcan’s Outfall 001 to its confluence with Brushy Creek, and for a segment of Brushy Creek from its confluence with the UT to its confluence with Stennitt Creek.
4. Vulcan’s Petition is supported by the following information:
- The site-specific TDS and sulfate criteria requested by Vulcan reflect current conditions and allow Vulcan’s Black Rock Quarry facility to operate as designed while protecting the aquatic life use, primary and secondary contact recreation use, and industrial and agriculture water designated uses for the UT, Brushy Creek, and Stennitt Creek.
 - Sulfate concentrations measured instream indicate that sulfate concentrations exceed 22.7 mg/L in the UT and Brushy Creek, which represents a “significant modification” of the water quality as compared to the Ozark Highlands ecoregion value for sulfate (17 mg/L).
 - Mass balance calculations carried out for 7Q10 flow conditions, using TDS concentrations at Outfall 001 (95th percentile) and upstream concentrations from recent monitoring, indicate potential exceedance of the DWS criteria for TDS (500 mg/L) in the UT and Brushy Creek.
 - The DWS use for the UT and Brushy Creek is not an existing or attainable use, and the Arkansas Department of Health has no current or future plans for using them as public water supplies.
 - Water quality in the UT, Brushy Creek, and Stennitt Creek supports aquatic life uses based on ADEQ’s assessment methodology.
 - Vulcan’s existing discharge supports the aquatic life uses, industrial and agricultural water supply uses, as well as primary and secondary contact recreation uses.

- Evaluation of TDS and sulfate in the Vulcan discharge indicates that the dissolved minerals will not reach concentrations that will cause acute or chronic toxicity.
- The proposed criteria are based on the preferred methodology, *i.e.* based on the reference macroinvertebrate community tolerance values from published field studies using EPA methodology and using a conservative assumption regarding the relationship between conductivity and dissolved minerals in the receiving streams.
- The recommended criteria are consistent with existing effluent and instream concentrations which support fish and benthic macroinvertebrate communities.
- There is no current economically feasible treatment technology for the removal of minerals to meet the current criteria.
- 40 C.F.R. 131.11(b)(1)(ii) authorizes states to adopt water quality standards that are “modified to reflect site-specific conditions.”
- The basis for removal of the designated use and the establishment of site specific criteria is set forth in 40 C.F.R. 131.10(g).

MITCHELL, WILLIAMS, SELIG,
 GATES & WOODYARD, PLLC
 425 W. Capitol Avenue, Suite 1800
 Little Rock, Arkansas 72201-3525
 Phone: (501) 688-8800
 Facsimile: (501) 688-8807
agates@mwlaw.com
jwimpy@mwlaw.com

By: 
 Allan Gates, AR Bar No. 72040
 Jordan Wimpy, AR Bar No. 2012273

Counsel for Vulcan Construction Materials, LLC