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

| | | |
|---|---|---|
| **IN RE: REQUEST BY UMETCO MINERALS CORPORATION TO INITIATE RULEMAKING TO AMEND REGULATION NO. 2** | ) ) ) | **DOCKET NO. 10-005-R** |

**RESPONSIVE SUMMARY OF UMETCO MINERALS CORPORATION**

UMETCO Minerals Corporation ("UMETCO"), for its Responsive Summary to the public comments received by the Arkansas Pollution Control and Ecology Commission (APCEC or Commission) with regard to the proposed rulemaking, states:

On June 14, 2010, UMETCO filed its Petition to Initiate Rulemaking to Amend Arkansas Pollution Control and Ecology Commission Regulation No. 2. On June 25, 2010, the Commission entered Minute Order No. 23 initiating the rulemaking and establishing a procedural schedule for the notice of the rulemaking and the public comment period.

Notice of the rulemaking was published in the *Arkansas Democrat-Gazette* on June 30, 2010, and July 1, 2010. On August 16, 2010, the Commission conducted a public meeting for the purpose of receiving comments from the public on the proposed rulemaking. The public comment period was extended by the Commission to conclude at 4:30 p.m. on September 20, 2010.

Pursuant to APCEC Regulation Nos. 8.811 and 8.815, UMETCO submits its Responsive Summary to the written and oral public comments received during the public comment period to the Arkansas Legislative Council as attached hereto as "Attachment A."

Respectfully submitted,

QUATTLEBAUM, GROOMS, TULL &
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By: _____
William A. Eckert, AR Bar No. 78045

*Attorneys for UMETCO Minerals Corporation*

## CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of May, 2011, I served a copy of the foregoing Responsive Summary on the following by electronic mail:

Ms. Jamie Ewing, Esq.
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

William A. Eckert

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# GENERAL RESPONSES

*INTRODUCTION*

UMETCO owns a former mine site (Wilson Mine) near Highway 270, between Hot Springs and Malvern, Arkansas, where mining occurred from the late 1960s to the mid-1980s. UMETCO has conducted major reclamation activities at the site and continues additional reclamation in cooperation with the Arkansas Department of Environmental Quality (ADEQ).

The proposed action that is the subject of this document involves developing site-specific water quality criteria for sulfate, chloride, and total dissolved solids (TDS) in a portion of Wilson Creek, a small creek that flows across the UMETCO site and eventually into Lake Catherine in south-central Arkansas. The rulemaking also includes removal of the designated drinking water use for Wilson Creek. The standard process that is followed for this proposed action is termed a "rulemaking" and can result in a revision to Arkansas Pollution Control & Ecology Commission (APCEC) Regulation No. 2, which establishes water quality standards for surface waters in the state of Arkansas. Unlike some states that set water quality criteria based on protection of the environment, Arkansas set its default water quality criteria for these parameters based on "least-disturbed" stream data. Therefore, this rulemaking process is commonly used to develop site-specific criteria for sulfate, chloride, and TDS relating to commercial, industrial, or mine reclamation discharges. Arkansas has adopted such site-specific criteria for these minerals in approximately 100 stream reaches.

As part of the rulemaking process, APCEC requested comments from the public on the proposal, and both ADEQ and UMETCO were tasked with reviewing the comments received from the public and preparing responses to the comments and questions submitted. This process allows the public to participate in the rulemaking process and allows both ADEQ and UMETCO the opportunity to provide the public with additional information in response to their questions and comments.

UMETCO appreciates the feedback received from members of the public. Our website at www.umetcowilsonmine.com is a resource for information regarding past work at the mine site along with work that is ongoing. This website also provides a listing of publically available information that community residents may find useful as they learn about the site. Going forward, UMETCO is focused on the few remaining areas that require reclamation work as part of our long-term stewardship of this site. UMETCO continues to remain committed to implementing a technically sound, long-term approach that will continue the preservation of human health and the environment at the former Wilson Mine site.

This document contains all public comments received from ADEQ and UMETCO's responses to each. The comments were included in their original form as they were received ADEQ. The comments were from individuals, environmental groups, local governments, federal and state agencies, and others. The comments are numbered sequentially in the order received from ADEQ. The comments reflect the interest of the public and the effort of the

community to understand the details of the proposed rulemaking and the underlying scientific justification (called a Use Attainability Analysis, or UAA).

UMETCO has thoroughly reviewed each comment and has provided responses. Many of the comments/questions were similar and reflected recurring themes or topics. Therefore, in order to address these common issues, we have prepared a General Responses section that follows this introduction. These General Responses discuss and respond to many of the common questions and comments that were received; it is hoped that the General Responses will answer most common questions. In an effort to ensure that every individual comment is addressed, we also provide individual responses to each comment, referring commenters back to the General Responses when addressing a portion of the individual comment that falls under the umbrella of a General Response. When an individual comment raises an issue or question that was not specifically addressed as part of these General Responses, we have included additional, specific responses to that issue or question.

The six General Responses are given below. The rest of this document contains each comment in its original form and the responses to each comment.

## *1. Purpose and Scope of Rulemaking*

A number of comments indicated a misunderstanding regarding what is being requested by this third-party rulemaking. The proposed rulemaking requests the following:

a. Site-specific water quality criteria for sulfate, chloride, and TDS in Wilson Creek; and,

b. Removal of the domestic drinking water supply use designation for Wilson Creek.

The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., historical levels following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River.

It is important to note that the current concentrations of sulfate and TDS in Wilson Creek are occasionally above the US Environmental Protection Agency (EPA) Secondary Drinking Water Standards of 250 mg/L for sulfate and 500 mg/L for TDS. EPA establishes Secondary Drinking Water Standards to address non-health based water quality issues (e.g., color, taste, etc.). Wilson Creek, like most creeks in Arkansas, was assigned the drinking water designated use by default. Wilson Creek is not a source of drinking water. In fact, during times of low rainfall, parts of Wilson Creek go dry. On occasion, the concentrations of sulfate or TDS may be above their Secondary Drinking Water Standards in Wilson Creek, and that is the main reason that the third-party rulemaking includes removal of the designated drinking water use.

The proposed change does not affect UMETCO's obligation to meet other applicable state and federal water quality criteria that apply to its discharge or the ongoing

reclamation. This includes any component of TDS besides chloride and sulfate (e.g., metals).

## 2. *Requirements for Rulemaking*

A number of comments questioned whether UMETCO's submittals meet the requirements of state regulations for this type of rulemaking.

Response:

The rulemaking petition was based on requirements in APCEC Regulation No. 2, as well as the State of Arkansas Continuing Planning Process (CPP). Those requirements included the completion of a comprehensive study to evaluate alternative options and to select a protective solution for addressing existing levels of sulfate, chloride, and TDS in Wilson Creek. In a letter dated March 5, 2010, Mr. Steve Drown (Chief of the Water Division at ADEQ) stated that the UAA report and its addendum satisfied the requirements of Regulation No.2, §2.303 and §2.306, as well as the state's CPP, and that ADEQ had no further questions or concerns.

## 3. *Public Comment Period*

A number of comments have maintained that the public has not had adequate opportunity to comment on the rulemaking.

Response:

ADEQ held a public hearing on this third-party rulemaking in August 2010. Furthermore, APCEC extended its public comment period by an extra 20 days in response to requests for a time extension by the public. UMETCO also conducted its own public meeting near the former mine site, which was well attended, in September 2010 in order to give the public further opportunity to ask questions about the proposed rulemaking. ADEQ was invited to (and attended) this public meeting, and they have received over 100 written comments regarding the proposed rulemaking. This opportunity to comment exceeds requirements for these types of actions and the public has clearly made use of it.

## 4. *Conditions in Lake Catherine and Ouachita River*

a. No increased pollution to Lake Catherine

A number of comments noted the high quality of Lake Catherine as a place to live and recreate. Comments expressed concern that the rulemaking would result increased pollution to the lake and would degrade a resource that has historically been of very high

quality and, in the process, degrade property values and the quality of life for future generations using the lake.

Response:

Monitoring data from ADEQ's Ouachita River monitoring station at Malvern (OUA006) support the observations of Lake Catherine as a high-quality resource. Data from this monitoring station indicate that the Ouachita River, which is virtually all Lake Catherine water at this point, meets and has historically met Arkansas water quality standards (except for temperature).

Major reclamation of the UMETCO mine site was conducted between the mid-1990s and the mid-2000s. Additional reclamation activities are still ongoing in certain specific areas. The reclamation has resulted in substantial improvement in the quality of the water entering the lake from Wilson Creek. The proposed criteria are based on the more recent measurements of sulfate, chloride, and TDS at the outfall and downstream of the outfall. These measurements, and other measurements taken after major reclamation, reflect the results and benefits of the reclamation. Therefore, these proposed criteria do not represent an increase in the amount (i.e., loading or concentrations) of sulfate, chloride, and TDS. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change.

b. Additional comprehensive studies not required for this rulemaking

A number of comments have called for more comprehensive studies on Wilson Creek, particularly on Lake Catherine and the Ouachita River.

Response:

UMETCO conducted two UAA studies, both referenced in the March 2010 approval letter from ADEQ. These studies included extensive sampling (in 2004 and 2009) of water quality and biological communities in Wilson Creek at several locations upstream and downstream of UMETCO's National Pollution Discharge Elimination System (NPDES) outfall. The studies included water quality modeling to understand whether there would be any downstream effects from the Wilson Creek discharge on the sulfate, chloride, and TDS concentrations in the Ouachita River and an analysis of alternatives to developing site-specific criteria, such as treatment. The first study, the UAA Report dated 2004, concluded that developing site-specific criteria for sulfate, chloride, and TDS is protective of existing aquatic life uses in Wilson Creek and is more economically supportable and environmentally sustainable than other options assessed (including treatment). ADEQ concurred with these conclusions. At the time of the first study, UMETCO discharged from its outfall in batches, and the flow down Wilson Creek was intermittent. In 2006, per ADEQ's request, UMETCO changed the discharge to a continuous discharge, and this has enhanced the creek and associated habitat downstream of the outfall. ADEQ then requested a second study (submitted as an addendum to the

2004 UAA) to evaluate whether the criteria changes were still appropriate. This study (the Addendum to the UAA, submitted in 2009) confirmed that conditions in Wilson Creek were appropriate to support the criteria changes, and ADEQ concurred with this conclusion, as indicated in ADEQ's March 2010 letter.

A third study was conducted in the summer of 2010 to evaluate the fish community in the cove of Lake Catherine that receives flow from Wilson Creek (Wilson Cove). UMETCO's NPDES outfall was discharging at the time of the fish sampling. The sampling revealed abundant numbers of fish and a variety of species and sizes. The fish population was consistent with expectations based on the habitat in the cove. The greatest number and variety of fish were found at the upper end of the cove closest to the inflow from Wilson Creek. This study did not indicate the need for additional evaluation of Lake Catherine at locations further from the Wilson Creek inflow, because the existing conditions in Wilson Creek supported aquatic life in Wilson Creek and in the Lake Catherine cove.

c. No increased costs for water treatment for users in the Ouachita River

A number of comments expressed the belief or concern that the proposed criteria changes would lead to increased drinking water costs for users in the Ouachita River downstream of Lake Catherine.

Response:

In addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs. As noted above, these proposed criteria do not represent an increase in the amount (i.e., loading or concentrations) of sulfate, chloride, and TDS. Lake Catherine and the Ouachita River have historically been high-quality resources and are expected to continue to be high-quality resources under the proposed criteria change. Both Lake Catherine and Ouachita River meet the drinking water standards for sulfate, chloride, and TDS, so no additional treatment of drinking water for these constituents is expected as a result of the proposed water criteria change. Therefore, there is no reason to expect an increase in existing treatment costs or a decrease in the quality of downstream drinking water due to this proposal.

Some activities, such as boiler makeup water, may require ultra-pure water. These uses would require treatment with or without any input from Wilson Creek. Calculations in the 2004 UAA Report show that under conservative conditions, the UMETCO discharge contributes to the TDS at the outlet of Remmel Dam by less than 1 part per million (ppm). This result demonstrates that even reducing the TDS concentration of the UMETCO discharge to zero would have no observable effect on the downstream water quality. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs.

## 5. *Human Health and Aquatic Life in Wilson Creek and Lake Catherine*

### a. No change to the suitability of Lake Catherine for swimming, fish consumption, or drinking

A number of comments were received expressing concern that the proposed criteria would render Lake Catherine unsafe for swimming, fish consumption, and drinking. Commenters noted that although the lake is not a drinking water source, swallowing water incidental to recreation is inevitable.

Response:

APCEC Regulation No. 2 designates "uses" of the waterbodies within an ecoregion. The domestic drinking water supply designated use is assigned *by default* to all waterbodies within an ecoregion. However, drinking water is not an existing use of Wilson Creek. Studies show that the proposed sulfate, chloride, and TDS concentrations do not influence the safety of swimming waters. As a point of reference, people who swim in the ocean do so at sulfate, chloride, and TDS concentrations of approximately 2,700 ppm, 1,900 ppm, and 34,000 ppm, respectively. The proposed criteria for Wilson Creek are 260 ppm for sulfate, 56 ppm for chloride, and 543 ppm for TDS.

Lake Catherine currently meets its sulfate, chloride, and TDS water quality criteria of 40 ppm, 50 ppm, and 150 ppm, respectively. These are far below the Arkansas Secondary Drinking Water Standards of 250 ppm, 250 ppm, and 500 ppm values for sulfate, chloride, and TDS, respectively. Therefore, incidental ingestion of Lake Catherine water is not a concern with respect to sulfate, chloride, and TDS. As noted in General Response No. 4.a above, Lake Catherine's current (and historical) attainment of its sulfate, chloride, and TDS criteria includes the existing inputs from Wilson Creek. Therefore, the proposed rulemaking will not provide an increased potential risk to humans due to incidental or intentional ingestion of Lake Catherine water.

The minerals at issue in this rulemaking do not accumulate in fish tissues and do not affect the suitability of fish for eating.

The proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge. This includes any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals).

Finally, in a letter dated May 5, 2010, the Arkansas Department of Health (ADH), which is responsible for protecting the integrity of drinking water sources, indicated that the agency did not have concerns regarding the proposed rulemaking based on the continuous nature of UMETCO's discharge to Wilson Creek.

b. Existing conditions are protective of downstream waterbodies and uses

A number of comments stated that criteria based on existing conditions are unacceptable because existing conditions are already impaired, and changing the criteria would allow UMETCO to continue harming Wilson Creek and Lake Catherine.
Response:

The ecoregion stream criteria for the Ouachita Mountain ecoregion, which includes the former mine site, are 20 ppm, 15 ppm, and 142 ppm for sulfate, chloride, and TDS, respectively (established in APCEC Regulation No. 2). These criteria were derived from data obtained from least-disturbed reference streams in the ecoregion (i.e., streams in areas with little to no development). The ecoregion criteria are not based on protecting health or the environment; rather, they simply represent data obtained from undisturbed reference streams. For this reason, APCEC Regulation No. 2 allows for site-specific criteria to be developed. Site-specific criteria that are higher than the ecoregion standards can still be protective of human health and the environment.

The existing NPDES Outfall 001 discharge currently meets permit limits except for existing limits for sulfate and TDS. Routine monitoring data from the outfall and a downstream station in Wilson Creek indicate compliance with instream criteria for metals, based on hardness in the creek, and pH.

A comprehensive study (General Response No. 4.b) evaluated whether the sulfate, chloride, and TDS concentrations in Wilson Creek below the NPDES outfall were protective of aquatic life (fish and benthic macroinvertebrates) in Wilson Creek. Field surveys were conducted on three different occasions over a 5-year period (see General Response No. 4.b). Results from the comprehensive study (the 2004 UAA and the 2009 Addendum to the UAA) determined that the observed aquatic life was consistent with expectations based on the habitat in Wilson Creek. Therefore, the existing conditions (existing concentrations of sulfate, chloride, and TDS in Wilson Creek) protect the attainable aquatic life community. Accordingly, lowering the sulfate, chloride, and TDS concentrations in Wilson Creek by implementing a treatment process would not be expected to increase the number and variety of aquatic life present in the stream. ADEQ concurred with this conclusion in their March 2010 letter.

An additional study of the fish population in the cove of Lake Catherine that receives inflow from Wilson Creek was also conducted. The purpose of the cove sampling was to evaluate the abundance and distribution of fish in the cove according to expectations based on available habitat. Much of the cove is a shallow flat with a firm coarse bottom that offers little in the way of fish habitat. However, in areas of the cove where cover (in the form of overhanging vegetation) and structure (in the form of woody debris or rocks) were present, abundant numbers of fish in a variety of species and sizes were observed. The area of the cove where the fish numbers were greatest was the extreme upper end closest to the Wilson Creek inflow. This area supported an abundance of cyprinid and centrarchid fish species, including the very sensitive brook silversides. It was the conclusion of the investigators that the numbers and variety of fish present in the cove

were consistent with expectations based on available habitat, and that fish were not avoiding habitats closest to the Wilson Creek inflow.

These studies indicate that the existing conditions of Wilson Creek are protective of aquatic life and that existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on existing conditions can be expected to maintain the already abundant and diverse fish population.

Historical records indicate that water at locations on this former mine site exceeded current ecoregion-based criteria for sulfate, chloride, and TDS even before mining activity began. Historical data for "Potash Sulphur Springs," which was located on the site at one time, showed sulfate values in the range of 250 ppm[1]. Accordingly, these data suggest that natural waters in this heavily mineralized area would not likely meet "least-disturbed" ecoregion criteria even before mining activity began, and therefore could have required site-specific criteria. Historical data are provided in Exhibit "A".

### 6. *Cost of Additional Treatment of Wilson Creek Water*

A number of comments expressed the belief that UMETCO simply wishes to avoid spending money to fix an environmental problem.

Response:

To date, UMETCO has spent over $40,000,000 to reclaim the site. This expenditure has resulted in substantial benefits by improving the water quality of Wilson Creek (thus improving the water quality of the Wilson Creek inflow to Lake Catherine), improving the appearance and productivity of the reclaimed mine site property, and virtually eliminating erosion on the site. The UAA study showed that existing conditions in Wilson Creek are protective of the aquatic life use and that further reducing the sulfate, chloride, and TDS concentrations in Wilson Creek would not improve the abundance and diversity of aquatic life present. Water quality in Lake Catherine meets sulfate, chloride, and TDS criteria, and the area of Lake Catherine nearest to the Wilson Creek inflow supports an abundant and diverse fish community.

It is technologically feasible, at considerable financial and ecological expense, to treat the UMETCO discharge to meet existing ecoregion-based water quality criteria in Wilson Creek. However, such costly treatment would provide little, if any, benefit to aquatic life or human health. Based on technical evaluation of the system, the power requirements alone for available treatment could exceed a carbon footprint of 750 metric tons of carbon dioxide per year indefinitely, and the treatment would create a waste stream of concentrated minerals that would have to be disposed of by deep well injection – a controversial technology in Arkansas – or by dessication and landfilling. If the waste stream was dried and landfilled, an additional carbon footprint of 12,600 metric tons per

[1] Historical data for "Potash Sulfur Springs" includes data collected in 1886-1887, published in the Geological Survey of Arkansas Annual Report (1890), and data collected in 1940 by the Arkansas State Board of Health.

years would be expected. Therefore, in contrast to the money spent on reclaiming the site (which has resulted in substantial benefits to Wilson Creek), the considerable amount of money that would be spent treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine, and would have adverse effects on the environment in the form of excessive greenhouse gas emissions and waste generation.

Sulfate, chloride, and TDS concentrations, even if reduced to zero in UMETCO's discharge, would not significantly reduce treatment costs to downstream drinking water users. Lake Catherine and the Ouachita River meet sulfate, chloride, and TDS criteria, and do not require treatment for these chemicals for drinking water purposes. Other water uses requiring ultra-pure water, such as for use in boilers, would require treatment for Lake Catherine and the Ouachita River even if sulfate, chloride, and TDS concentrations were reduced to zero in UMETCO's discharge.

Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2.

# Analysis of Potasul

| Analysis of Potasul | Chemical Formula | Molecular Weight (g/mol) | Concentration: Compound: Grains per U.S. Gallon | Compound: mg/L | Chloride: mg/L | Sulfate: mg/L |
|---|---|---|---|---|---|---|
| potassium chloride | KCl | 74.551 | 0.678 | 11.61 | 5.52 | |
| sodium chloride | NaCl | 58.443 | 4.599 | 78.73 | 47.76 | |
| sodium sulfate | $Na_2SO_4$ | 142.041 | 18.316 | 313.53 | | 212.04 |
| sodium carbonate | | | 11.902 | 203.74 | | |
| sodium bi-carbonate | | | 8.596 | 147.15 | | |
| calcium bi-carbonate | | | 0.533 | 9.12 | | |
| magnesium carbonate | | | 0.319 | 5.46 | | |
| iron and aluminum oxides | | | 0.128 | 2.19 | | |
| silica | | | 2.29 | 39.20 | | |
| volatile matter | | | trace | trace | | |
| total solids | | | 46.342 | 793.29 | | |
| Total concentrations | | | | | 53.28 | 212.04 |

## Analysis of Potasul

(Expressed in Grains per U. S. Gal.)

| | |
|---|---|
| Potassium Chloride | 0.678 |
| Sodium Chloride | 4.599 |
| Sodium Sulphate | 18.316 |
| Sodium Carbonate | 11.902 |
| Sodium Bi-Carbonate | 8.596 |
| Calcium Bi-Carbonate | .533 |
| Magnesium Carbonate | .319 |
| Iron and Aluminum Oxides | .128 |
| Silica | 2.291 |
| Volatile Matter | trace |
| Less Water | 47.362 |
| Combination | 1.020 |
| Total Solids | 46.342 |

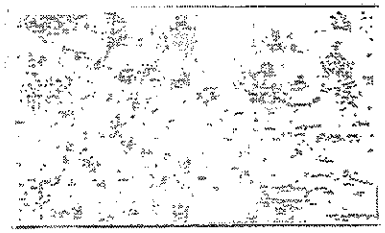
REMARKS: This is an Alkaline Sodic Sulphated, Carbonated, and Bi-Carbonated Water.

Signed: DR. A. L. METZ.

Source: The Road to Health - Flyer advertising the natural springs in Potash Sulphur Valley, date unknown

EXHIBIT A

tabbies



Isaac Walt

Potash Sulphur Springs invites you to c r hre or hip y ur flies on the surface of its private lake, or Lake Catherine. Lake Catherine is 12 miles in length, and one-half mile away. The private lake is only a stone's throw from your cottage. Bot are well stocked with game fish. We enjoy wonderful fishing all the winter months as well as summer.

Remember, then, that while you are on the road back to health, or for a needed rest or recreation, that your sojourn is immeasurably enhanced by being able to fish the year 'round.

Cottages are very comfortable n he coldest days. Although in an environment of wooded, rural calm, you are but ten minutes ride from the world's greatest health and pleasure resort—

HOT SPRINGS, ARK.

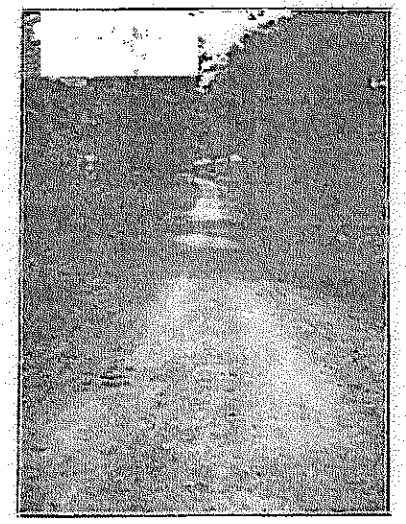
and its metropolitan life and activities.

*For Further Information, Write*

**Potash Sulphur Springs**
**COMPANY**
*Hot Springs, Arkansas*

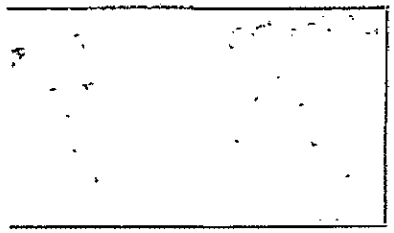


# *The Road to* HEALTH!



Entering Potash Sulphur Valley

**Potash Sulphur Springs**
**COMPANY**
*Hot Springs, Arkansas*



## The Natural Springs in Potash Sulphur Valley

From Potash Sulphur Springs, nestled in this wooded valley, flows Potasul (Potash Sulphur Spring Water). This water, famous throughout the United States, is among the best known of all the cold medicinal spring waters. (See Analysis and next page)

This beautiful Potash Sulphur Springs estate of 165 acres is the mecca for hundreds who make the pilgrimage to Hot Springs in search of health, peace, quiet and recreation. Their stay here is made enjoyable by the many attractions offered.

Located in the Ouachita mountains, this valley is truly beautiful and restful. The improvements have enhanced, rather than harmed the naturalness of beauty in this valley of mother nature's.

Potash Sulphur Valley—the home of Potasul—may be reached over paved highway 70 east, 6½ miles from Hot Springs. A ten minute drive brings one to the road which leads through the shade of virgin trees to this retreat of health.

**WHAT YOU SEE—IN THE PICTURES**

At the top of this page, you may see the road that invites you to come to Potash Sulphur Valley. On the next page, a view of the well-kept grounds and roads, and several of the cottages gives an idea of what you may expect here.

The Potash Sulphur Springs pavilion is shown on page four. Shade of many kinds of trees makes driving in the valley pleasant and inviting as the picture on page five shows. Bird hunting is popular in season. An unusual picture of two bird dogs on point is on page six. Quail, turkey and squirrel abound in this vicinity. Two of the modern cottages are shown on page seven. Our private lake, shown on page eight, is well stocked with fish.



## FORTY YEARS AGO

physicians in the United S
pressed [illegible]

Potash Sulphur Springs

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KE. M. D.

## THIRTY YEARS LATER

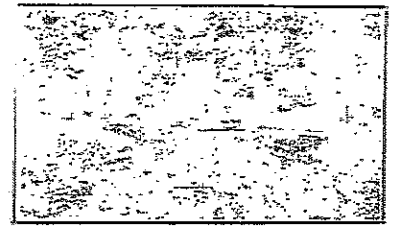
[illegible] years ago [illegible]
[illegible] below

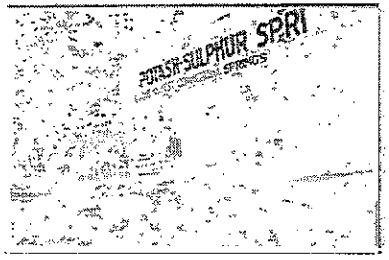
December 7, 1928.

Potash Sulphur Springs,
Lawrence Station, Garland County, Ark.

Dear Sirs:—I have just re-read a short statement made by me April, 1897, regarding the Potash Sulphur Water, and it is my desire to reinforce my letter of 1897, and to say that during the years of 1883 to date I have continuously prescribed and drunk Potash Sulphur Water, and I am more firmly convinced, as time goes by that there is no spring water in the world superior to the Potash Sulphur Water.

Sincerely, CHAS. DAKE, M. D.






## Potash Sulphur Spring Water Benefits —

### ★ STOMACH

Ma[illegible] stomach di[illegible] are due to improper [illegible]

[illegible]

[illegible]

### ★ KIDNEYS

Kidney troubles are due usually to insufficience of water which causes red or highly concentrated acid to pass through this important sewer. Potasul taken in abundant quantities helps eliminate irritating urine in the kidneys, ureter, bladder and urethra.

Members of the medical profession tell us that no medicines give the best results unless the organs of the body are flushed thoroughly with an abundance of water.

### BLOOD

An excess of wastes in the body causes an acid condition of the blood that should have been eliminated by the skin, bowels and kidneys. By flushing the



organs of the body with Potasul, this condition has an inclination to be remedied.

### ★ CONSTIPATION

Bile is the natural cathartic. Potasul stimulates the liver thereby making the flow of bile more normal.

### JAUNDICE

A condition caused by the inactivity of the liver. The action of the liver is excited by Potasul

[illegible] organs of the body [illegible] the [illegible] that remain in the liver and cause [illegible]

### ★ SICK or CHRONIC HEADACHE

You need [illegible] of corr[illegible] cause [illegible] Pot[illegible] help to restore order in the stomach, liver and bowels

### ★ BILLIOUSNESS

Caused by a sluggish liver. Potasul activates the liver

### ★ GALL and KIDNEY STONES

Insufficiency of water is the cause. Flush the kidneys, tubes and cells with a natural mineral water containing solvent properties. Potasul has them

## Genuine Uric Acid Solvent

Potasul contains 18.316 grams of sodium sulphate every gallon therefore it is an aid in obesity, liver trouble and Bright's Disease.

Being exceedingly rich in carbonate and bicarbonate of sodium, Potasul is invaluable in cases of acid dyspepsia, rheumatism and diabetes. (See page 28 of J. K. Haywood's Report issued by the U. S. government).

Potasul also contains magnesium carbonate a natural laxative, which in the words of J. K. Haywood is "perhaps the best of all the carbonates in correcting an acid condition of the stomach and urine sick headache caused by constipation."

## Delivery In Hot Springs

**Rates for ½ Gallon Delivered Daily**

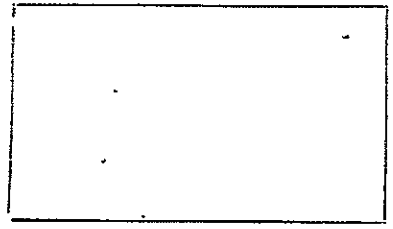
| | | | |
|---|---|---|---|
| One week | $2.00 | Three weeks | $5.50 |
| Two weeks | 3.75 | One month | 7.50 |

| | |
|---|---|
| One Gallon Daily | $2.50 |
| Five Gallon Bottle, one delivery | 1.00 |
| Deposit on 5-Gallon Bottle | 1.00 |

P[illegible] 606 to place orders for water delivery in Hot Springs

## Potasul Shipped Everywhere

If [illegible] be [illegible] resque home or [illegible] will be sent to you [illegible]



the following shipping prices F.O.B. Hot Springs

| | |
|---|---|
| 5 Gallon Bottle Crated | $2.50 |
| Rebate for 5 Gallon Bottle Crated | 1.50 |
| 10 Gallon Wood Keg | 3.25 |
| 10 Gallon Refill | 2.00 |
| 30 Gallon Wood Keg | 8.00 |
| 30 Gallon Refill | 5.00 |
| 50 Gallon Wood Keg | 11.0[illegible] |
| 50 Gallon Refill | [illegible] |

(Kegs returnable for refill only)

Freight and Express charges must be prepaid o bottles and kegs returned



## Analysis of Potasul

(Expressed in Grains per U. S. Gal.)

| | |
|---|---|
| Potassium Chloride | 0.678 |
| Sodium Chloride | [illegible].590 |
| Sodium Sulphate | 316 |
| Sodium Carbonate | 902 |
| Sodium Bi-Carbonate | 596 |
| Calcium Bi-Carbonate | 535 |
| Magnesium Carbonate | 316 |
| Iron and Aluminum Oxides | 128 |
| Silica | 39 |
| Volatile [illegible] | [illegible]ce |
| Less V[illegible] | 36 |
| Combination | 1.030 |
| Total Solids | 46.342 |

**REMARKS: This is an Alkaline Sodic Sulphated, Carbonated, and Bi-Carbonated Water.**

**Signed: DR. A. L. METZ.**

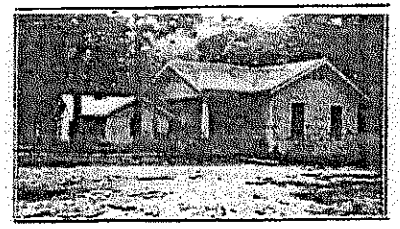
## Just Like Home

Visitors and guests at Potash Sulphur Springs are agreeably surprised to find [illegible] facilities and conveniences that [illegible] their own homes.

Each cottage has [illegible] is equipped with [illegible] electricity, electrical refrigeration and every up-to-date facility. What you appreciate in your home you will find in these cottages. Each one has a sleeping porch. No more ideal spot could be desired. On the hottest summer nights it is necessary to have the protection of a light blanket, so cool and invigorating is the temperature, assuring sound and restful slumber.

Cottages may be rented as follows:

| | |
|---|---|
| Two Persons, per week | $15.00 |
| Three Persons, per week | 17.50 |
| Four Persons, per week | 20.00 |
| Five Persons, per week | 22.00 |
| Six Persons, per week | 25.00 |



Analysis of Water from Potash Sulphur Springs Collected in 1887 - West Spring

| Constituent | Found Concentrations | |
|---|---|---|
| | Grains per U.S. Gallon | mg/L |
| $SiO_2$ | 1.9069 | 32.64 |
| Na | 17.1688 | 293.90 |
| K | 0.3979 | 6.81 |
| Mg | trace | trace |
| Ca | 0.1958 | 3.35 |
| Fe | 0.1541 | 2.64 |
| Al | trace | trace |
| Mn | trace | trace |
| $SO_4$ | 22.6506 | 387.73 |
| $CO_3$ | 6.3700 | 109.04 |
| Cl | 3.0635 | 52.44 |
| $H_2S$ | trace | trace |
| Total Solids | 51.8921 | 888.29 |

Source:
Annual Report of the Geological Survey of Arkansas for 1890, Volume II, p.362.

Analysis of Water from Potash Sulphur Springs Collected in 1886/1887 - East Spring

| Constituent | Found Concentrations | |
|---|---|---|
| | Grains per U.S. Gallon | mg/L |
| $SiO_2$ | 1.6035 | 27.45 |
| Na | 12.9214 | 221.19 |
| K | 1.3586 | 23.26 |
| Mg | None | None |
| Ca | 0.1865 | 3.19 |
| Fe | -- | -- |
| Al | 0.1166 | 2.00 |
| Mn | -- | -- |
| $SO_4$ | 11.8194 | 202.33 |
| $CO_3$ | 8.5015 | 145.53 |
| Cl | 2.3615 | 40.42 |
| $H_2S$ | None | None |
| Total Solids | 38.8340 | 664.76 |

Source:
Annual Report of the Geological Survey of Arkansas for 1890, Volume II, p.362.

# ANNUAL REPORT

OF THE

# GEOLOGICAL SURVEY

OF

# ARKANSAS

FOR 1890

---

VOLUME II

THE IGNEOUS ROCKS OF ARKANSAS

By J. Francis Williams, Ph. D., C. E.

JOHN C. BRANNER, PH. D.
State Geologist

LITTLE ROCK
WOODRUFF PRINTING CO
1891

The orthoclase is rich in soda and may be considered as made up of one molecule of sodium aluminium silicate combined with one molecule of potassium aluminium silicate for the $Na_2O$ is to the $K_2O$ in the exact proportion of 1 to 1.

The occurrence of this potash soda aluminium silicate in the limestone shows that alkalies are present in that rock and it may be that it is this and not the eleolite syenite that furnishes the alkalies which are contained in the potash sulphur water.

## IV. POTASH SULPHUR WATER.

The water which has given the reputation to the Potash Sulphur Springs exudes from the calcitic rock in the bed of the creek and is collected in large drain-pipes imbedded vertically in the rock. The water rises in these pipes and is dipped out from the top as it is required. The strength of the water is said to vary with the quantity that flows from the spring. If the pipe be emptied and allowed to fill again the water is much more highly charged with sulphuretted hydrogen than it is if it remains some time in the pipe.

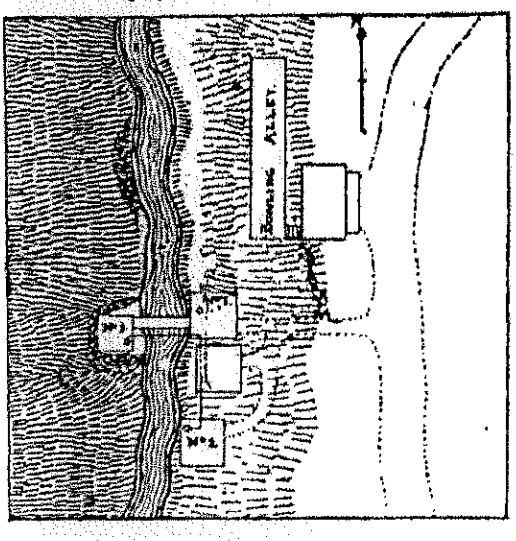



Fig. 42. *Sketch map showing location of the springs at Potash Sulphur Springs, Arkansas.*
Scale: 75 feet—1 inch.

Two complete analyses have been made of the water, but as they were not taken from the same spring but little agreement can be expected in the analyses. (See fig. 42.)

The analyses are as follows:—

*Analyses of water from Potash Sulphur Springs.*

| CONSTITUENTS | GANNAWAY | | | CLARKE | | |
|---|---|---|---|---|---|---|
| | FOUND | | | FOUND | | |
| | Grams to the Liter | Grains to the U. S. Gallon | Per cent of total Solids | Grams to the Liter | Grains to the U. S. Gallon | Percent of total Solids |
| $SiO_2$ | 0.03270 | 1.9069 | 3.67 | 0.0275 | 1.6035 | 4.13 |
| $SO_4$ | 0.38858 | 22.6506 | 43.65 | 0.2027 | 11.8194 | 30.43 |
| $CO_3$ | 0.10926 | 6.3700 | 12.28 | 0.1458 (†) | 8.5015 | 21.39 |
| Cl | 0.05238 | 3.0535 | 5.88 | 0.0405 | 2.3615 | 6.08 |
| $H_2S$ | Trace | Trace | Trace | None | None | None |
| Fe | 0.00264 | 0.1541 | 0.30 | ..... | ..... | ..... |
| Al | Trace | Trace | Trace | 0.0020 (°) | 0.1166(°) | 0.30(°) |
| Mn | Trace | Trace | Trace | ..... | ..... | ..... |
| Ca | 0.00336 | 0.1958 | 0.38 | 0.0032 | 0.1865 | 0.48 |
| Mg | Trace | Trace | Trace | None | None | None |
| K | 0.00683 | 0.3979 | 0.77 | 0.0227 | 1.3536 | 3.41 |
| Na | 0.29440 | 17.1633 | 33.07 | 0.2216 | 12.9214 | 33.28 |
| Total solids | 0.89011 | 51.8921 | 100.00 | 0.6660 | 38.8340 | 100.00 |
| $CO_2$ (free) | 0.04401 | 2.5660 | ..... | ..... | ..... | ..... |
| | HYPOTHETICAL COMBINATION | | | HYPOTHETICAL COMBINATION | | |
| KCl | ..... | ..... | ..... | 0.0433 | 2.5248 | 6.47 |
| NaCl | 0.08643 | 5.0386 | 9.72 | 0.0328 | 1.9125 | 4.89 |
| $Na_2S$ | Trace | Trace | Trace | ..... | ..... | ..... |
| $K_2SO_4$ | 0.01520 | 0.8863 | 1.71 | ..... | ..... | ..... |
| $Na_2SO_4$ | 0.56258 | 32.7979 | 63.20 | 0.2988 | 17.4230 | 44.62 |
| $Na_2CO_3$ | 0.17931 | 10.4535 | 20.14 | 0.2572 | 14.9973 | 38.42 |
| $MgCO_3$ | Trace | Trace | Trace | ..... | ..... | ..... |
| $CaCO_3$ | 0.00840 | 0.4896 | 0.94 | 0.0080 | 0.4664 | 1.19 |
| $FeCO_3$ | 0.00547 | 0.3193 | 0.62 | ..... | ..... | ..... |
| $MnCO_3$ | Trace | Trace | Trace | ..... | ..... | ..... |
| $Al_2O_3$ | Trace | Trace | Trace | 0.0020 | 0.1166 | 0.29 |
| $SiO_2$ | 0.03271 | 1.9069 | 3.67 | 0.0275 | 1.6035 | 4.12 |
| Total Solids | 0.89010 | 51.8921 | 100.00 | 0.6706 | 39.0441 | 100.00 |
| $CO_2$ (free) | 0.04401 | 2.5660 | ..... | ..... | ..... | ..... |

(°) Al is here calculated as $Al_2O_3$ (†) $CO_2$ by difference.

The first analysis was made for the Geological Survey of Arkansas in 1887 by C. B. Gannaway who collected the water in October of that year.

The second analysis was made for the U. S. Geological Survey during the fiscal year 1886 to 1887 by F. W. Clarke, chief chemist.

Gannaway obtained the water for his analyses from the spring (No. 3, fig. 42) on the west side of the creek while the water which Clarke analyzed was taken from the "original Potash Sulphur Spring" (No. 1, fig. 42) on the east side of the creek about 25 feet (7.6m) east of the former.

The constituents given as carbonates in the analysis made by Gannaway were calculated by him as bicarbonates, but they have been recalculated as carbonates in order to make the analysis comparable with that of Clarke.

The temperature of the water in the spring, as determined by Gannaway, was 64° F. (17.7°C.) A faint odor of sulphuretted hydrogen has observed.

The analysis made by F. W. Clarke, U. S. Geol. Survey, was first published in a bulletin * of the U. S. Geological Survey. In this analysis no attempt was made to determine the $H_2S$, for such determinations must be made at the spring. Clarke states that the amount of water which he had at his disposal was too small for a complete analysis.

R. N. Brackett, chemist of the Geological Survey of Arkansas, determined the amount of sulphuretted hydrogen ($H_2S$) in the water from the original Potash Sulphur Spring (No. 1), as follows:—

Amount of $H_2S$ in Potash Sulphur Springs (No. 1) water, Nov. 13, 1890.

| | |
|---|---|
| Grams in a liter | 0.00157 |
| Grains in a U. S. gallon | 0.0890 |
| Cubic centimeters in a liter | 1.2 |
| Cubic inches in a U. S. gallon | 0.3 |

The temperature of the water was 16° C (61° F).

On account of the variation in the amounts of potassium

* Bulletin of the Geological Survey, No. 55. Report of work done in the division of Chemistry and Physics mainly during the fiscal year 1886-'87, Washington, 1889, p. 91.

and sodium found by Gannaway and Clarke, which is probably due to the fact that the water came from the different springs, Brackett redetermined them in water from the "original spring" (No.1) with the following results:—

*Potassium and sodium in Potash Sulphur Water.*

| CONSTITUENTS | Grams in a liter | Grains in a U. S. gallon |
|---|---|---|
| K ..... | 0.06024 | 3.5122 |
| Na ..... | 0.23432 | 13.6608 |
| Total ..... | 0.29456 | 17.1730 |

These determinations were made with 250cc (2.1136 gills) of water.

These values agree much better with those of Clarke than with those of Gannaway, a result to be expected since Clarke and Brackett both analyzed water from the "original spring."

On account of the want of similarity in the amount of "total solids" found by Clark and Gannaway in the springs analyzed by them these were redetermined at two different times by R. N. Brackett and the amount of solid material in still a third spring (No. 2, fig. 42) south of the "original spring" was also determined twice. The result of all of these determinations are as follows:—

*Solid matter in Potash Sulphur Springs.*

| ANALYST. | Date. | Spring No. 1. | | Spring No. 2. | | Spring No. 3. | |
|---|---|---|---|---|---|---|---|
| | | Grams to Liter. | Grains to U. S. Gal. | Grams to Liter. | Grains to U. S. Gal. | Grams to Liter. | Grains to U. S. Gal. |
| F. W. Clarke..... | 1887 | 0.6706 | 39.0441 | ..... | ..... | ..... | ..... |
| C. B. Gannaway... | Oct., 1887 | ..... | ..... | ..... | ..... | 0.89011 | 51.8921 |
| R. N. Brackett(*) | July 11,1891 | 1.1322 | 66.0069 | 0.8522 | 49.6801 | 0.5353 | 31,0209 |
| R. N. Brackett (†) | Aug. 3, 1891 | 0.8185 | 47.4160 | 0.8582 | 50.0299 | 0.4231 | 24.6651 |

(*) Water collected by J. H. Means, July 11, 1891.

(†) Water collected by C. E. Siebenthal at 3 p. m., Aug. 3, 1891, after a week of heavy rain. Spring No. 3 had been cleaned out during the morning of the same day on which the sample was taken.

It is evident from these few determinations that these springs vary extremely in strength from time to time and it would require a large number of observations under all conditions of weather and temperature to determine exactly what the causes of the variation are. The heavy rains before Aug. 3, 1891 appear to have perceptibly weakened springs Nos. 1 and 3, but do not seem to have affected No. 2 at all.

The most that can be said for the analyses given above is, therefore, that they represent the amount and composition of the solid matter in the particular springs from which the water was taken and at the time that it was collected.

## V. RELATION OF THE IGNEOUS ROCKS TO EACH OTHER AND TO THE SEDIMENTARY ROCKS.

The relation of the igneous rock of the Potash Sulphur Springs region to each other are comparatively simple. The oldest rocks are the coarse-grained, granitic eleolite syenites. These occur in the form of large, intrusive masses and also as comparatively narrow dikes.

Both the larger masses and the dikes of eleolite sodalite syenite are bordered by tinguáitic bands of greenish or brownish rock which are distinctly porphyritic in appearance. It would be natural to expect an eleolite porphyry as the border type of this basic eleolite sodalite syenite, but instead of it an eleolite tinguáite, very poor in eleolite appears as a border rock. Dikes of a similar eleolite tinguáite occur in the sedimentary rocks and are probably contemporaneous with the larger syenite masses.

It is probable that after the intrusion of the eleolite rocks hot springs formed and deposited the calcite which often appears in cracks and fissures in the igneous rock itself. The apparent fluidal structure in the calcite in many of the cracks which are filled with it and its arrangement in bands parallel to the sides of other cracks indicate that the calcite was deposited after the intrusion of the syenite.

Both the igneous rock and the altered sedimentary rocks are cut by dikes of monchiquite and it is therefore evident that the latter were forced into cracks in the older rocks. It may be that the metamorphism which has converted the calcite into a

Pre-Mining Water Quality Data – Potash Sulphur Springs (later called Wilson Springs)

# ARKANSAS STATE BOARD OF HEALTH
## HYGIENIC LABORATORY
## CHEMICAL RECORD OF WATER ANALYSIS

No. 627 Date Collected 1/12/40 Date Received 1/15/40

Town Hot Springs County Garland

Source Potash Sulphur Springs Well

Point of Collection Potash Sulphur Springs

Collected by E. E. Gladson Address Hot Springs

Report to Address

| | P. P. M. | | P. P. M. |
|---|---|---|---|
| Color | None | Chlorides | 56.0 |
| Taste | None | Sodium Chloride | 93.0 |
| Odor | None | Sulphates | 255 |
| Turbidity | None | Calcium | Trace |
| Sediment | Slight | Magnesium | Trace |
| Reaction—pH | 9.9 | Iron—Total | 0.15 |
| Alkalinity—Phenolphthalein | 70 | In Suspension | 0.15 |
| Methyl Orange | 240 | In Solution | 0 |
| Total Solids | 625 | Manganese | |
| Loss on Ignition | 50 | Fluoride | 1.8 |
| Hardness—Total | 0 | | |
| Carbonate | 0 | | |
| Non-Carbonate | 0 | | |

Signed

Chemist

Form 511-26—3M—3-37—45286—C.-McB.

RESPONSES TO PUBLIC HEARING COMMENTS

1. Melinda Allen:

From: Melinda Allen
4489 Malvern Road
Hot Springs, AR 71901

Date: September 16, 2010

Re: Petition to Initiate Third Party Rulemaking to Amend Regulation 2 submitted by UMETCO Minerals Corp.

I would like the above mentioned petition to be denied. I believe and a comprehensive environmental impact study should be conducted so a true and complete picture can be shown, as to what the effects of UMETCO water going into Lake Catherine (not only from Wilson Spring, but from all the places that UMETCO water runs), the local water table and wells, the soil, the wildlife and the general health and well being to this community.

I share a property line with UMETCO, and my family has lived on this property for the last 65 years. If I can be of assistance, please contact me. Thank you.

RESPONSE TO MELINDA ALLEN:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated

that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

2. Darrell Allison:

IF this is permitted it would be disasterous to our Clean Lake Catherine. Please deny this request.

Darrell Allison

RESPONSE TO DARRELL ALLISON:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

3. Arkadelphia Water & Sewer:

I attended and gave comments at the Public Hearing held by ADEQ on August 16, 2010 in Hot Springs regarding UMETCO's permit request. Since that time I have been able to further research the issue. On behalf of the City of Arkadelphia and the water customers that I serve, I strongly oppose a permit modification which would continue to allow UMETCO or any other industry to contribute any additional waste load and contaminate our drinking water supply before a comprehensive study is performed to determine the impact. I am especially concerned with nickel and other heavy metals (TDS). Other points that I would like for you to consider are as follows:

- The Commission is reviewing a permit request for an old and enduring hazardous waste site.
- ADPC&E, now ADEQ, has been battling with this site to comply with permit limits for more than thirty years.
- UMETCO says that they cannot currently meet proposed permit limits but has been allowed to continue to pollute.
- I believe that sulfides, chlorides, heavy metals and other acid waste materials have escaped containment time and again and have been allowed to run off site.
- There should be a supervised Stream Assimilation Capacity Study of Wilson Creek, Lake Catherine and the Ouachita River ending below Arkadelphia's drinking water intake structure before UMETCO's request is considered.
- I believe the State has been lenient with enforcement of this industry, leading me to believe that the reasons for such should be explored.
- There have been Federal Court Orders, Consent Administrative Orders and extensions of deadlines to accommodate this industry. The Commission should find out why.
- The Commission has the ultimate responsibility of protecting Arkansas' people and their drinking water.

Further, common sense does not allow me to conceive of a business asking for permit limits to be expanded simply because they can't meet them without spending money. In good faith I cannot imagine a business asking the Commission to lower Stream Standards so that they can pollute!

RESPONSE TO ARKADELPHIA WATER & SEWER (3A):

We appreciate your comments and we understand and share your desire to protect the water quality of Lake Catherine and the Ouachita River. Regarding the comprehensive study you request, UMETCO has performed the studies required by APCEC

Regulation No. 2 and ADEQ, and the studies show that the proposed criteria change is protective of aquatic life in Wilson Creek and Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and

documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

With respect to the commenter's bulleted comments and the comments following the bulleted list, many are not directly related to either the UAA or the rulemaking request for site-specific criteria. Furthermore, the bulleted comments contain inaccurate and unsupported assertions. The former UMETCO mine site was not at any time, nor is it currently, a hazardous waste site. Current levels of sulfate and TDS are above APCEC Regulation No. 2 water quality criteria in Wilson Creek leaving the former mine site; in fact, that is the basis for the rulemaking. UMETCO is seeking site-specific criteria for sulfate, chloride, and TDS because the existing levels are protective of aquatic life. There is no need for a stream assimilative capacity study nor is there a requirement for such a study as part of this rulemaking petition. Arkansas water quality criteria for sulfate, chloride, and TDS are met in waterbodies downstream of the UMETCO former mine site and no increased discharges are proposed.

3(b). Arkadelphia Water & Sewer:

This industry should be held responsible to meet current permit limits or be required to stop discharging until they can. They must be held responsible for cleaning and restoring the aquifers, lands, and Lake Catherine before any further harm comes to the public's drinking water supply.

UMETCO's consultant told me that it would cost too much money to buy desalination equipment. Is there any of UMETCO's executives receiving a bonus or any shareholder receiving a dividend? If so, then I do believe those funds could be used to buy the desalination equipment, just like Halliburton, discharging at Cove Creek has done.

Another solution to this issue:

There have been comprehensive studies performed in the past by distinguished professionals and I believe the results of the studies can be shared. By performing a new, independent study of the areas mentioned, a determination of impact can be made, thus allowing for science based decisions to be made before a new permit is issued.

The decision before the Commission is huge, but it can be a simple process. Judge this request as if you lived next door to this waste site. Judge this request as if your drinking water comes from Wilson Creek, Lake Catherine or the Ouachita River. We have only one Earth and we have only the water that is in the Earth's atmosphere. Once contaminated, some water and soils will never be made safe again.

I expect everyone concerned and in any position of authority to protect the Ouachita River and Arkadelphia's drinking water supply. This issue is not about money, it is about the future of safe drinking water.

RESPONSE TO ARKADELPHIA WATER & SEWER (3B):

We understand and share your concern regarding protection of drinking water resources. Our studies show that the proposed criteria change is protective of downstream drinking water resources, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based

on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

Comments not related to the proposed rulemaking are outside of the scope of UMETCO's responses. The first two comments above are acknowledged but are not related to the proposed action.

4. City of Arkadelphia:

**From:** dorinda [mailto:dsultor@cityofarkadelphia.com]
**Sent:** Monday, August 30, 2010 4:02 PM
**To:** Marks, Teresa
**Cc:** 'Roebuck, Johnnie J.'
**Subject:** UMETCO

Hello Ms. Marks: I have been asked by Representative Johnnie Roebuck to contact you. I have great concern with UMETCO in Hot Springs discharging wastewater that does not meet their current permit limits. I have attended the public hearing on UMETCO's request to have their permit limits relaxed. I oppose 100%. It is my understanding that UMETCO and previous owners have contaminated land, creeks and wells and Lake Catherine.

Arkadelphia's drinking water intake is downstream of this facility. Matters can only get worse if permit limits are relaxed. I have sent photographs to Representative Roebuck of UMETCO's storage basins running over during recent rains. Bottom line....UMETCO needs to meet current permits like anyone else and they need to be held responsible for the damage to the land, creeks, wells and Lake Catherine.

I have much information available on this subject and I am more than willing to share it with you. Please help.

Best regards,

Dorinda Sultor
Water Utilities Manager
City of Arkadelphia

RESPONSE TO CITY OF ARKADELPHIA:

Thank you for taking the opportunity to provide comments on this rulemaking.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

Regarding the comment about storage basins, it is possible the commenter is referring to an interim stormwater detention basin near Indian Springs Creek that collects stormwater runoff and shallow groundwater from reclaimed areas of the site. This basin is not related to the proposed rulemaking.

5. Arkansas Department of Environmental Quality (ADEQ):

The following represents the comments of the Arkansas Department of Environmental Quality ("ADEQ") on the third-party proposal by UMETCO Minerals Corporation ("UMETCO") to amend Arkansas Pollution Control and Ecology Commission Regulation No. 2, Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas.

On June 14, 2010, UMETCO filed a Petition to Initiate Third-Party Rulemaking to Amend Regulation No. 2. On June 25, 2010, through Minute Order No. 10-23, the Arkansas Pollution Control and Ecology Commission ("Commission") granted the petition to initiate rulemaking. UMETCO proposes to change certain water quality standards for Wilson Creek in Garland County.

Pursuant to Reg.8.811(D), the Department is required to file a written comment, for the record, on the proposed third-party rulemaking. At this time, the Department has received numerous written comments on the proposed rulemaking. The Department respectfully submits to the Commission that until all the public comments have been received and reviewed the Department cannot take a position on the proposed rulemaking. The Department will address all comments submitted during the public comment period and prepare a Responsive Summary, as required by Regulation No. 8 and Minute Order No. 10-23.

RESPONSE TO ADEQ:

Thank you for taking the opportunity to provide comments on this rulemaking.

6. Jeannette Badgwell:

-----Original Message-----
From: j badgwell [mailto:jsbadgwell@yahoo.com]
Sent: Tuesday, September 14, 2010 9:43 PM
To: Reg-Comment
Cc: Commissioners
Subject: RE: UTMETCO Permit Request
To Whom It May Concern, ie Chairman of Commissioners - Darwin Hendrix, Joseph Bates - Health Department and Mr. Doug Szenher - Public Outreach

I have recently attended meetings on THE PERMIT REQUEST OF UTMETCO, researched the history of UTMECO, read and studied the chemicals that are being released and studied the explanation of why they want to lower the standard of what can be released in the Wilson Creek, Lake Catherine, Ouachita River and all waters affected as well as towns.
In light of this information I have obtained and listened to people who have been and are currently affected. I feel that a Comprehensive Study/Analysis of all chemicals that are being released how this is not going to negatively impact one of our important resources in this state.
I feel that the burden of proof is on ADEQ to require this and not mine to research. You have the manpower, materials and expertise to determine and require this of UTMECO.
Thank you for attention to this matter. We certainly depend on you to take care of our water.

Jeannette Badgwell
Resident on the Ouachita River
Malvern, AR

RESPONSE TO JEANNETTE BADGWELL (6A):

Thank you for taking the opportunity to provide comments on this rulemaking. We appreciate your comment and understand your general concerns regarding water quality. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River. Our studies show that the proposed criteria change will protect these resources.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life

present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

6(b). Jeannette Badgwell:

Against
I am against this permit.
We need for ADEQ to represent +
Protect us.

RESPONSE TO JEANNETTE BADGWELL (6B):

Thank you for taking the opportunity to provide comments on this rulemaking.

7. Mark Badgwell:

-----Original Message-----
**From:** mark badgwell [mailto:markbadgwell@yahoo.com]
**Sent:** Tuesday, September 14, 2010 10:07 PM
**To:** Reg-Comment; Chairman Darwin Hendrix
**Subject:** RE: UTMETCO Permit Request

To whom it may concern:

I have spent most of my life as a conservationist and at this time reside on the banks of the Ouachita River below Malvern. I currently own a business on the river and am concerned about the economic impact to my business. The information that I have recently received in regards to the UMETCO Permit Request is extremely troubling. I feel it is a responsibility of the PC&E and AEDQ to protect the water quality in the state of Arkansas. I urge the Commission to request a Comprehensive Environmental Impact Study and Analysis on UTMECO's water permit. It is also my understanding that data used in these requests can be no older than five years whereas some of this data is more than six years old.

Thank you for your consideration,
Mark S Badgwell

RESPONSE TO MARK BADGWELL:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for chloride, sulfate, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

Regarding your comment about "old data:" Updated data were provided in the 2009 UAA Addendum. Historical as well as recent data are considered relevant to development of site-specific criteria.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

8. James and June Bailey:

-----Original Message-----
From: james bailey [mailto:june-n-james@sbcglobal.net]
Sent: Friday, September 03, 2010 2:38 PM
To: Reg-Comment
Subject: UMETCO

We must strongly register our opposition to the petition by UMETCO to increase their waste water discharge into Wilson Creek. The threat to Lake Catherine and Malvern water supply is clear. Please don't approve it.

James A, Bailey
June V. Bailey
2751 Country Club Rd.
Malvern AR 72104

RESPONSE TO JAMES AND JUNE BAILEY:

Thank you for taking the opportunity to provide comments on this rulemaking. Our studies show that there will be no threat to Lake Catherine or the Malvern water supply. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine, nor will they affect downstream water supplies. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

9. William and Eileen Becker:

Dear Mr. Szenher,
As an Arkansas resident with a home on the shore of Lake Catherine, downstream from Wilson Creek, I am writing to register my objection to Umetco's proposal.
I understand that Umetco successfully generated revenue for their parent company, Union Carbide Corporation, from the mining of vanadium at the Wilson mine site from 1960 to 1986. I appreciate that Umetco has spent over $40 million on mine reclamation activities at their mining site since 1986. I also understand that Umetco has been aware of their failure to adhere to the chloride, sulfate, and total dissolved solids (TDS) standards specified in the Arkansas Water Quality Standards, Regulation 2, since 2004.
It is time for Umetco, Union Carbide and their new parent company, Dow Chemical Company, to live up to their corporate responsibility for environmental safety and devote their vast resources to the implementation of those additional treatment approaches necessary to further reduce the chloride, sulfate and TDS concentrations to the levels specified in the Arkansas Water Quality Standards, Regulation 2. I do not want to see Arkansas taxpayers forced to spend our own money and resources on clean up and remediation of the negative effects of these substances downstream, or on "Colorado-style" litigation with Union Carbide to recover damages from contamination.

Thank you for the opportunity to provide public comment and register my objective to the above criteria change.
Sincerely,

William Becker / Eileen Becker 9/18/2010

RESPONSE TO WILLIAM AND EILEEN BECKER:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO appreciates your comments and your concerns regarding water quality in Lake Catherine and regarding public expenditures for reclamation.

It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

UMETCO disputes the assertion that it has been out of compliance since 2004. UMETCO has been working diligently to remain in compliance with applicable laws and regulations, including development of this proposed rulemaking to address such issues. This process of developing site-specific criteria is allowed for by APCEC Regulation No. 2.

10. Joanne Blos:

To: APC&EC

From: Joanne Blos

123 Merlin Point, Hot Springs 71901

RE: Proposal by Umetco to make changes to AR Water Quality Standards

To Whom It May Concern:

I am a property owner on Lake Catherine at the address above. I believe the proposal by Umetco will adversely affect the water quality on Lake Catherine and I oppose the changes in Regulation 2, as requested by Umetco.

An increase in Sulfate and Chloride will be detrimental to plant life and harmful to the food chain and soil and rocks for animals and people alike. I am aware of the harmful effects these mineral produce in large quantities. Can the EPA encourage the release of dangerous amounts of chemicals in our water?

I am asking for a hold on any regulation change for Lake Catherine, increase community meetings to advise us on the impact to our environment and lives and a study to determine the long range impact to our wildlife, aquatic life and human life and property.

Please advise me personally of any proposals in the future.

RESPONSE TO JOANNE BLOS (10A):

Thank you for taking the opportunity to provide comments on this rulemaking. We appreciate your concern that high concentrations of minerals may affect plant life and the food chain. UMETCO's studies show that the levels of minerals in the current proposal are protective of aquatic plant and animal life.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and

documentation submitted as part of this rulemaking request (see General Response No. 5.b).

10(b). Joanne Blos:

8/16/10

ADEQ:

My request is for a public hearing so all questions can be answered.

I request this session be conducted before the Sept 20 public comment ends.

Thank you.

Joanne Blos

1123 Merlin Point HS 71901

RESPONSE TO JOANNE BLOS (10B):

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

11(a). CA Bodoin:

-----Original Message-----
From: c strom [mailto:magda1785@hotmail.com]
Sent: Sunday, September 19, 2010 5:23 PM
To: Reg-Comment
Subject: IN RE: Requesst by UMETCO Minerals Corporation to Initiate Rulemaking to Amend Regulation No. 2
Arkansas Department of Environmental Quality

Re: UMETCO Minerals Corp. Application to change Regulation No. 2, Section Reg. 2.306 for Wilson Creek (Permit # AR 0048950)

UMETCO d/b/a Wilson Mine, is a vanadium mine site. It is listed by Arkansas ADEQ as Primary SIC: 2813 - Industrial Gasses and Primary NAICS: 35212 - Industrial Gas Manufacturer.

Wilson Mine is a Vanadium Mine. It also received vanadium from Stratcor Mine which has a Primary SIC: 1094 and ore from the Christy Mine which is listed a vanadium mine.

It is incorrect to identify the UMETCO Vanadium mine as an Industrial Gas Manufacturer during a reclamation period.

OSHA Industry Group: 109 Misc. Metal Ores - Establishments primarily engaged in mining, milling, or otherwise preparing...URANIUM - RADIUM - VANADIUM Ores. SIC Code: 1094

That is exactly on the UMETCO site in Hot Springs AR.

CDC has also incorrectly listed sites in Arkansas as Hot Springs Arizona: http://www.atsdr.cdc.gov/toxprofiles/tp58.pdf , table 5-3, page 112. Department of Health and Human Services has also incorrectly listed vanadium sites in Hot Springs, Arkansas and the sections of the EPA does not list Arkansas at all. http://www.osha.gov/SLTC/healthguidelines/vanadiumpentoxidedust/recognition.html

I see no where that the EPA has done any kind of radiation survey as they have done in other areas of the United States in cases of Vanadium Mines and reclamation such as the former Newmire Vanadium Mill Site Remediation Project that has an SIC Code: 1094.

This correction in SIC Code for Umetco, at the Wilson Mine Site in Hot Springs, Arkansas will require Arkansas ADEQ to review all prior and pending permits for Permit ID AR0048950.

1999 Water Quality Data from Lake Catherine (below UMETCO/Wilson Mine) indicate vanadium level near shore at 16.75 u g/L and hypolimnion leves at 33.3 u

g/L. Levels in Lake Ouachita and Lake Hamilton (above UMETCO) are <1.00 u g/L.

There should be additional point sources due to the nature and geographic location (altitude - runoff goes into major fishing areas and swimming areas).

I am requesting a formal hearing on this issue.

Thank you,
C. A. Bodoin
748 Quapaw Ave
Hot Springs AR 71901
501-623-7375

RESPONSE TO CA BODOIN (11A):

Thank you for taking the opportunity to provide comments on this rulemaking. Please note that this rulemaking addresses only chloride, sulfate, and total dissolved solids (TDS) and is unrelated to vanadium. Metals are not involved in the proposed rulemaking and are regulated individually by ADEQ through its NPDES permitting program as well as by APCEC's Regulation No. 2. In response to the comment regarding the incorrect SIC code, UMETCO has appropriately listed the SIC code for this site as 1094 in its documents submitted to ADEQ. If a different listing is being indicated elsewhere, this may be an error.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

11(b). CA Bodoin:

From: c strom [mailto:magda1785@hotmail.com]
Sent: Sunday, September 19, 2010 5:46 PM
To: Drown, Steve
Cc: mcalister.gary@epa.gov; toney.mike@epa.gov; sorrell.candace@epa.gov
Subject: Re: UMETCO Minerals Corp. Application to change Regulation No. 2

Arkansas Department of Environmental Quality

Re: UMETCO Minerals Corp. Application to change Regulation No. 2, Section Reg. 2.306 for Wilson Creek (Permit # AR 0048950)

UMETCO d/b/a Wilson Mine, is a vanadium mine site. It is listed by Arkansas ADEQ as Primary SIC: 2813 - Industrial Gasses and Primary NAICS: 35212 - Industrial Gas Manufacturer.

Wilson Mine is a Vanadium Mine. It also received vanadium from Stratcor Mine which has a Primary SIC: 1094 and ore from the Christy Mine which is listed a vanadium mine.

It is incorrect to identify the UMETCO Vanadium mine as an Industrial Gas Manufacturer during a reclamation period.
OSHA Industry Group: 109
Misc. Metal Ores - Establishments primarily engaged in mining, milling, or otherwise preparing...
URANIUM - RADIUM - VANADIUM Ores. SIC Code: 1094

That is exactly on the UMETCO site in Hot Springs AR.

CDC has also incorrectly listed sites in Arkansas as Hot Springs Arizona: http://www.atsdr.cdc.gov/toxprofiles/tp58.pdf , table 5-3, page 112. Department of Health and Human Services has also incorrectly listed vanadium sites in Hot Springs, Arkansas and the sections of the EPA does not list Arkansas at all. http://www.osha.gov/SLTC/healthguidelines/vanadiumpentoxidedust/recognition.html

I see no where that the EPA has done any kind of radiation survey as they have done in other areas of the United States in cases of Vanadium Mines and reclamation such as the former Newmire Vanadium Mill Site Remediation Project that has an SIC Code: 1094.

This correction in SIC Code for Umetco, at the Wilson Mine Site in Hot Springs, Arkansas will require Arkansas ADEQ to review all prior and pending permits for Permit ID AR0048950.

1999 Water Quality Data from Lake Catherine (below UMETCO/Wilson Mine) indicate vanadium level near shore at 16.75 u g/L and hypolimnion leves at 33.3 u g/L. Levels in Lake Ouachita and Lake Hamilton (above UMETCO) are <1.00 u g/L.

There should be additional point sources due to the nature and geographic location (altitude - runoff goes into major fishing areas and swimming areas).

I am requesting a formal hearing on this issue.

Thank you,
C. A. Bodoin
748 Quapaw Ave
Hot Springs AR 71901
501-623-7375

RESPONSE TO CA BODOIN (11B):

Thank you for taking the opportunity to provide comments on this rulemaking. Please note that this rulemaking addresses only chloride, sulfate, and TDS, and is unrelated to vanadium. Metals are not involved in the proposed rulemaking and are regulated individually by ADEQ through its NPDES permitting program as well as by APCEC's Regulation No. 2. In response to the comment regarding the incorrect SIC code, UMETCO has appropriately listed the SIC code for this site as 1094 in its documents submitted to ADEQ. If a different listing is being indicated elsewhere, this may be an error.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

12. Glenda Breshears:

Do not permit these standards to be lowered.
Please extend 20 days.
Who on ADEQ live in the area
Would they like to raise their children
there.
Working for the fire dept for 8 yrs.
seen lots of pollution from this plant.

RESPONSE TO GLENDA BRESHEARS:

Thank you for taking the opportunity to provide comments on this rulemaking. We appreciate your concern and feedback. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

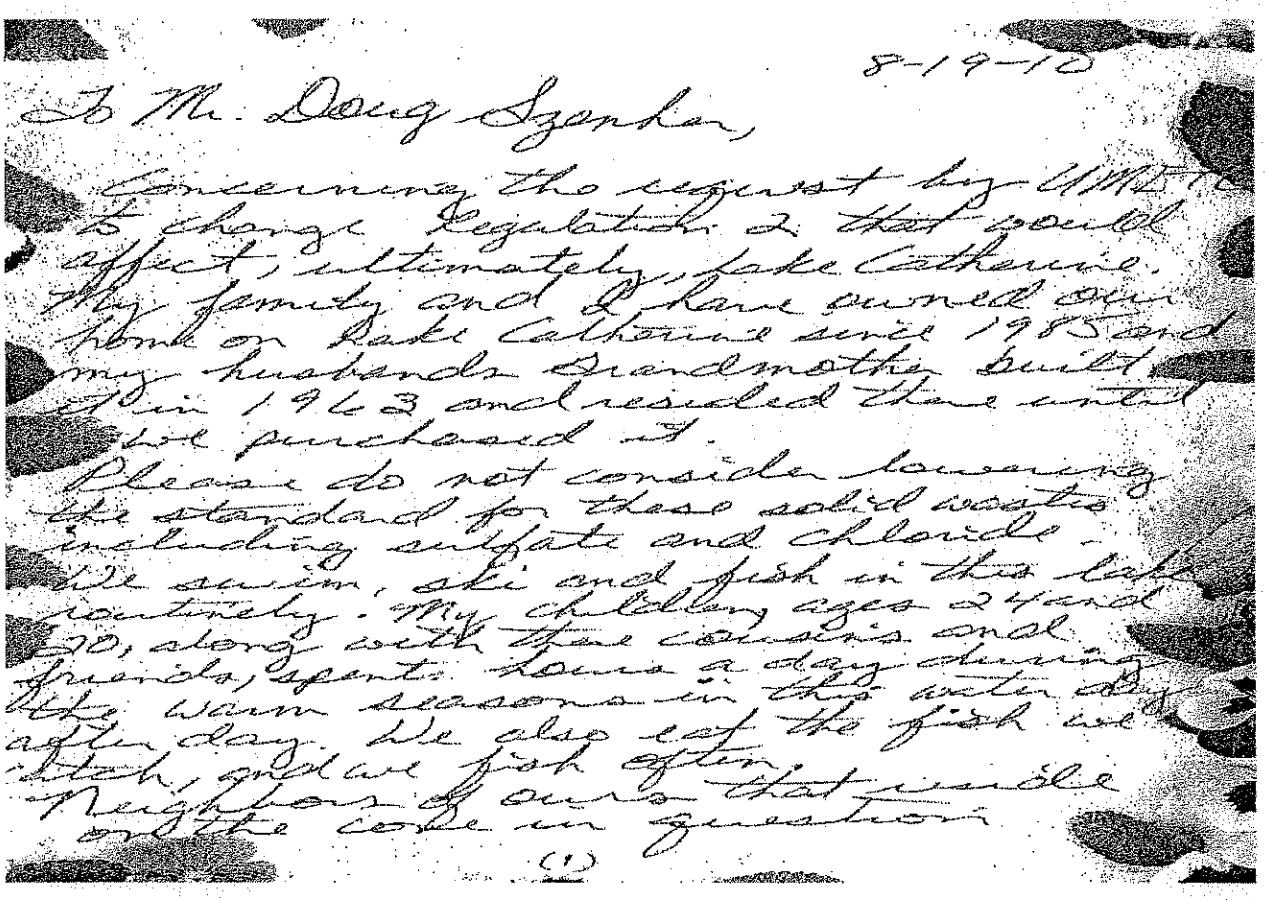
The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state

and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

13. Suzy and Jamie Bridges:



8-19-10

To Mr. Doug Szenher,

Concerning the request by UMT to change Regulation 2 that would affect, ultimately, Lake Catherine. My family and I have owned our home on Lake Catherine since 1985 and my husbands Grandmother built it in 1963 and resided there until we purchased it.

Please do not consider lowering the standard for these solid waste including sulfate and chloride. We swim, ski and fish in this lake routinely. My children ages 24 and 20, along with their cousins and friends, spend hours a day during the warm seasons in the water day after day. We also eat the fish we catch, and we fish often. Neighbors of ours that reside on the lake are in question.

(1)

report that they have found "deformed" fish in that area that the question having occurred the release of this chemical in PB as it is.
Please consider the families at risk by any changes to this water quality. We must continue to enjoy the lake without any fear of harm to our children, grandchildren & ourselves from being in this water for extended periods much less consuming the fish from it.

Suzy & Jamie Bridges

Bridges
310 Wilman St
Hot Springs, AR
71901

RESPONSE TO SUZY AND JAMIE BRIDGES:

Thank you for taking the opportunity to provide comments on this rulemaking. We understand your concern regarding the water quality in Lake Catherine. As a point of clarification, this rulemaking addresses chloride, sulfate, and total dissolved solids (TDS) in Wilson Creek. It is not related to solid waste. These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of

swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

14. Sherry Burks

-----Original Message-----
From: Sherry Burks [mailto:sherry@callmpg.com]
Sent: Saturday, September 18, 2010 11:03 AM
To: Szenher, Doug
Subject: Proposed dumping by Umetco in Garland County

To Whom It May Concern:

This is to register a complaint for the proposed dumping of chemicals/solids into Wilson Creek in Garland County by Umetco Corporation. This water will eventually become drinking water in Hot Spring County where I live. I already have to drive to Hot Springs, AR to get drinking water because our supply tastes so bad and now they want to add more chemicals. I fear for the safety of all Garland & Hot Spring County residents.

A public meeting was held on Thursday, 9/16 and there was MUCH opposition to the proposal. However, the company apparenty is trying to push this through anyway.

I filled out a complaint for on your website, but I'm not at all sure I chose the right form (hazardous waste vs. others). They plan to dump chloride, sulfate & total dissolved solids.

Thank you,
Sherry Burks
1417 Reed Street
Malvern, AR 72104
501.844.5602

RESPONSE TO SHERRY BURKS (14A):

Thank you for taking the opportunity to provide comments on this rulemaking. As described during the public meeting in September 2010, UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

14(b). Sherry Burks:

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-----Original Message-----
From: web.site@adeqinternal.state.ar.us
[mailto:web.site@adeqinternal.state.ar.us]
Sent: Saturday, September 18, 2010 10:16 AM
To: Complaint-HW
Subject: Hazardous Waste Online Concern/Complaint Form Submission

*****************************************************************
County: Garland
Name: Sherry Burks
Address: 1417 Reed Street
City_State_Zip: Malvern, AR 72104
Phone: 501-844-5602
E_mail: sburks5555@hotmail.com
H_Division: HazWaste
Date: 9/18/2010
Time: 10:12:16
Description:

I wish to file a complaint to stop the proposed dumping of toxic
chemicals into Wilson Creek by Umetco Corporation. There was a
public meeting held concerning this on 9/16/10 in Garland County.
The water will come into our drinking water in Hot Spring County.
They are proposing to dump several chemicals.


Directions:

Behind STRATCOR on Highway 270 between Malvern & Hot Springs.

Owner:
```

RESPONSE TO SHERRY BURKS (14B):

Thank you for taking the opportunity to provide comments on this rulemaking. As described during the public meeting in September 2010, UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

14(c). Sherry Burks:

-----Original Message-----
From: web.site@adeqinternal.state.ar.us
[mailto:web.site@adeqinternal.state.ar.us]
Sent: Monday, August 30, 2010 9:32 AM
To: Complaint-Water
Subject: Water Division Online Concern/Complaint Form Submission

**********
County: Hot Spring
Name: Sherry Burks
Address: 1417 Reed Street
City_State_Zip: Malvern, AR 72104
Phone: 501.844.5602
E_mail: sburks5555@hotmail.com
H_Division: Water
Date: 8/30/2010
Time: 09:27:19

Description:

I would like to STRONGLY OPPOSE the proposed dumping of chemicals by UMETCO into a creek which ultimately flows into our drinking water source. Our drinking water already tastes bad. If the company is allowed to dump into the water, I believe it will pose a very serious health problem for us and our children/grandchildren. Who in this day and age, knowing all we do about pollution, would allow such a thing to happen? Please put yourself in our shoes and STOP THIS FROM HAPPENING. Thank you, Sherry Burks

Directions:
The company is UMETCO, a mineral business just north of Lake Catherine in Hot Spring County, Arkansas.
Owner:
UMETCO

RESPONSE TO SHERRY BURKS (14C):

Thank you for taking the opportunity to provide comments on this rulemaking. As described during the public meeting in September 2010, UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

15. Mike Burris:

Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8-16-10 Verbal Comment ☐ Speaker # Written Comment ☐ (Attached or back of card)

Hearing Location Lakeside Jr High

Name Mike Burris

Address 2911 Dyer

City Malvern State Ark Zip Code 72104

RESPONSE TO MIKE BURRIS:

Thank you for taking the opportunity to provide comments on this rulemaking.

16. Allen Carter and Billy Wilson:

The "Mr. Szenher" letter, included, is a "public response" if received from you by ADEQ before August 30. Your personal response would really help.

It appears that it is cheaper to lower the standards of the creek than meet the permit by treating the water. Help save our rivers and our health.

Allen Carter
501-317-2018
fisheriesanswers@sbcglobal.net

Billy Wilson
501-622-8003
billy@landdevelopmentinc.net

RESPONSE TO ALLEN CARTER AND BILLY WILSON:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake

Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

17. Max and Pam Carter:

I hope this letter gets to you by 4:30 pm Monday. As today is Saturday and the announcement in today's Sentinel-Record issue only gives us a very short time to submit comments, this will be brief.

My husband, Max Carter and myself Pam Carter have lived on Lake Catherine for 10 yrs now. We have watched as well as taken an active interest in the efforts to keep our lake clean. We use the lake for swimming & boating purposes only. We regularly clean up trash, debris and do whatever we can to keep this water source as clean as possible. We nurture the various flora & fauna that the lake provides and follow all regulations to the letter.

We wish to file our concerns on the matter of UMETCO attempting to convince the various parties involved in, that our lake(s) will not be damaged by allowing regulations to be altered. That is a "no-brainer" in view of what is going on world-wide with our precious environment!! Those legislators who both are concerned citizens & participants for "Hot Springs" also oppose UMETCO and the very deadly and most probably destructive & irreversible "plan" they wish to put in motion.

Thank you!

Sincerely,

Pamela J Carter

Phone # (501) 262-5169

MAX CARTER
PAM CARTER
1397 AKERS RD
HOT SPRINGS, AR 71909

RESPONSE TO MAX CARTER AND PAM CARTER:

Thank you for taking the opportunity to provide comments on this rulemaking. We understand your concern regarding the water quality in Lake Catherine. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with

its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

18. Brady and Nancy Chambers:

-----Original Message-----
From: NancyandBrady [mailto:nancyandbrady@gmail.com]
Sent: Friday, September 17, 2010 10:02 AM
To: Reg-Comment
Subject: Comment on Proposed Changes to Regulation 2 APC&E Commission Docket #10-005-R
September 17th, 2010

Arkansas Department of Environmental Quality
Public Outreach and Assistance Division
5301 Northshore Drive
North Little Rock, AR 72118
reg-comment@adeq.state.ar.us

To whom it may concern:

We purchased water front property on Lake Catherine (110 Falcon Lane Malvern, AR 72104) on September 3, 2010. We attended the UMETCO meeting on September 16 at Lakeside Baptist Church. While the meeting was informative and the basics of the request were discussed, there was no clear or definitive information provided on how these changes will impact the quality of our environment. Given the lack of information, we are unwilling to provide any support for changing the current quality standards as outlined in this proposal.

We support providing UMETCO an extension for the purpose of continuing efforts to reach safe drinking water standards. We appreciate the work that has already been done, but do not support allowing the standard to be changed for the purpose of making it easier to meet regulatory standards. If the standard of drinking water was set and agreed to initially, and thought to be attainable , then that standard should still be the goal. We do support allowing UMETCO the ability to be successful in reclamation efforts, even if it takes significantly more time to reach the goal. We are in hopes that this situation will be monitored on a continual and regular basis and that the water quality will continue to improve and if there is any decrease in quality that immediate response will be implemented.

We would like to see ADEQ provide clear and concise information regarding the historical and current water quality standards as it relates to this proposal and not just for the immediate area but for downstream areas that may be affected. There were a number of concerns raised by various community members during the meeting on the 16th. The most concerning of which was a claim that there is a pipe that runs down the middle of Wilson Creek out into the middle of the lake where toxic levels of various substances are at significantly higher levels than on the edges of the lake up stream. While this was hearsay and unsubstantiated, it

certainly seems like this is something that ADEQ should follow up on and report back to the community on the validity of such claims.

As new properties owners on Lake Catherine, we are very concerned that the substantial improvements in the environmental quality that have occurred over the past decades continue to accelerate so that we have a pristine environment not only for us but for all of Arkansas. The state park on the edge of Lake Catherine won the 2009 AR park of the year, and we would like to see continued progress towards environmental improvement so that we can continue to provide safe, natural, environments for the enjoyment of our community. We hope that restoration and monitoring of the Ouachita River watershed will continue so as to ensure that the people who use this resource enjoy a clean and safe environment and that environment remains protected for future generations.

Brady and Nancy Chambers
72 Vigne Blvd
Little Rock, AR 72223
501-255-0862

RESPONSE TO BRAD AND NANCY CHAMBERS:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO appreciates your comments relating to the reclamation of the site. UMETCO is proud of the reclamation efforts at this site. As described during the public meeting in September 2010, UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

Regarding the comment pertaining to "a pipe that runs down the middle of Wilson Creek…": UMETCO does not discharge through a pipeline and no pipeline is located in Wilson Creek that we are aware of.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

19. T. Chaney:

E_mail: tchaney@iocc.com
H_Division: Water
Date: 9/20/2010
Time: 16:25:52

Description:

September 20, 2010 Mr. Doug Szenher Public Outreach and Assistance Division Arkansas Department of Environmental Quality 5301 Northshore Drive North Little Rock, AR 72118\

RE: UMETCO Permit Request

Dear Mr. Szenher: I am a concerned citizen and resident of Arkadelphia, AR regarding UMETCOs permit requests to increase their discharge limits into Wilson Creek, Lake Catherine, and ultimately the Ouachita River. I consider our states natural resources our greatest asset, and firmly believe that they should be protected from contaminants, especially when drinking water is implicated. UMETCOs attempt to increase its total dissolved solids (TDS), sulfate, and chloride discharge levels should be alarming to any concerned citizen of our state, and especially the Department of Environmental Quality (ADEQ) and the Pollution Control & Ecology Commission (APC&EC). In their Questionnaire for Filing Proposed Rules and Regulations with the Arkansas Legislative Council and Joint Interim Committee, UMETCO concludes that: This proposed rule change does not represent a change for current conditions or current water quality in Lake Catherine, which meets state water quality standards. The rulemaking will not increase the loading of Wilson Creek but will establish water quality criteria for Wilson Creek at a level consistent with the current conditions. The proposed rule change will not impact any agricultural or business usage of the affected water courses. There is no economically feasible treatment technology for the removal of minerals. It is disingenuous at best that increasing the TDS discharge from 142 mg/L to 543 mg/L (more than three times its current level), the sulfate level from 20 mg/L to 260 mg/L (thirteen times the current level), and the chloride level from 15 mg/L to 56 mg/L (more than three times the current level) would not have an effect on water quality in Wilson Creek, Lake Catherine, and beyond. It is also disingenuous to say that the rule change will not have effect on agricultural or business usage of the affected water courses in addition to there being no economically feasible treatment for the removal of minerals. To put it another way, UMETCO would rather push the costs of water treatment onto the citizens affected by their polluting our lakes, rivers, and streams. Isnt the purpose the ADEQ and APC&EC designed to prevent these types of actions? Furthermore, if the proposed rule change will bring UMETCOs current discharge rates to a level consistent with the current conditions, havent they been violating their current discharge permit? An investigation into this matter is easily warranted. If that is the case, then the criminal and civil penalties proscribed by the Arkansas legislature under Ark. Code Ann. 8-4-103 are in order. Under subsection (a)(1)(A) of that statute, any person that violates any provision of this chapter, commits any unlawful act under it, or that violates any rule, regulation, or order of [either APC&EC or ADEQ] shall be guilty of a misdemeanor. The maximum penalty per offense is $25,000.00. Id. at (a)(B)(i)(b). Each day of noncompliance during which a violation is continued or repeated constitutes a separate offense. Id. at (a)(B)(ii). Additionally, subsection (a)(2)(A)(ii) holds that it is a felony to purposely, knowingly, or recklessly cause pollution of the waters of the state in a manner not otherwise permitted by law and thereby creat[ing] a substantial likelihood of adversely affecting human health, animal or plant life, or property. Id. The maximum penalty per offense is $50,000.00. Id. at (a)(2)(B)(ii)(a)(2). Each day of noncompliance during which a violation is continued or repeated constitutes a separate offense. Id. at (a)(2)(B)(ii)(b). Further, subsection (a)(3)(A) holds that any person that purposely, knowingly, or recklessly cause pollution of

the waters of the state in a manner not otherwise permitted by law and thereby places another person in imminent danger of death or serious bodily injury shall be guilty of a felony. The maximum penalty per offense is $250,000.00. Id. at (a)(3)(B)(i)(b). Each day of noncompliance during which a violation is continued or repeated constitutes a separate offense. Id. at (a)(3)(B)(ii). Accordingly, more information is needed to determine if, and how long, UMETCO has violated its current discharge permit. Under subsection (a)(1)(A) and (B), one years worth of noncompliance equates to $9,125,000.00 in fines and penalties. Ironically, that is relatively close to the amount UMETCO estimates ($8,400.000.00) for an appropriate water treatment facility to treat the waters it has and continues to pollute. Under subsection (a)(2)(A) and (B), one years worth of noncompliance equates to $18,250,000.00. Finally, under subsection (a)(3)(A) and (B), one years worth of noncompliance equates to $91, 250,000.00. Compared to the statutory penalties under Ark. Code Ann. 8-4-103, the estimated $8,400,000.00 of building a water treatment facility to treat waters that UMETCO has and continues to pollute seems quite economically feasible. UMETCOs contention that no businesses will be affected in the subject water courses is patently false. Arkansas waterways provide the state, among other things, with its reputation of being the Natural State. Citizens from other states cross their borders into Arkansas, and have to pay to enjoy our natural resources. Although no dollar amount is quantifiable, the Pollution Control & Ecology Commission should consider the economic impact to the states 2nd largest industry (tourism) in considering whether to grant UMETCOs request. Should the Commission choose to grant UMETCO a higher discharge permit, they should do so with the knowledge of the adverse impacts that such a discharge permit could have over the course of many years to the affected waterways. Without such knowledge, the decision to grant such a discharge permit is arbitrary and capricious at the least. ADEQ and APC&EC should conduct independent studies to determine what effects UMETCOs pollution is having on the affected waterways. Only then can an informed decision be made with respect to raising UMETCOs discharge limits.

Directions:

6 Miles east of Hot Springs on off Hwy 270.

RESPONSE TO T. CHANEY:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

UMETCO respectfully disagrees with statements about adverse impacts on business and tourism. Studies show that the proposed changes will have no adverse impact on Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and

documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

20. Bob Chastant:

> I am Bob Chastant. My wife and I reside at 491 Wilsons Lake Road in a home on the shores of Lake Catherine. It isn't too far from Wilson Creek Cove and UMETCO's discharge in Wilson's Creek which flows into the lake. We oppose the petition and ask the following questions. The nature of the issues and industry challenges surrounding the regulatory change requested by UMETCO are familiar to the Commission. However, I do not believe the record to this point gives us confidence that any opposing view to the removal of use and easing of criteria/standards has been presented to the Commission (outside of numerous comments at the public hearing). If the petition/third-party process for rule making presented more information, it might diminish the tedious questions.

RESPONSE TO BOB CHASTANT:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine. A significant portion of your comments are addressed by the General Responses to Comments found at the beginning of this document. References to the applicable general responses are found immediately below. Individual responses to comments requiring a more specific answer are included below the references to the applicable general responses.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

1. The UMETCO petition lists several Arkansas state agencies involved in some aspect of a change in regulations. The petition represents that these agencies are in favor or neutral to the petition. These agency positions should be clarified and, in some cases, their positions should be submitted for the record. Specifically:

a. Only some agency positions are reflected in the record. If no public statements are available from the agency listed by petitioner, should the positions of each agency be submitted for the records?

Regarding comments pertaining to agency involvement, specific agencies are required to provide input to the proposed rulemaking, including ADEQ, ADH, and the Arkansas Natural Resources Commission (ANRC). Reviews and comments on the rulemaking from these agencies were obtained and are included in the UMETCO third-party rulemaking proposal submitted to APCEC, as reflected in the public records of their June 2010 meeting. Other agencies that were not directly involved with the rulemaking procedures were contacted and/or received the opportunity to provide public comments through the required public notice procedures followed by APCEC as well as ADEQ. Any additional agency comments, if submitted to ADEQ within in the public comment period for this proposed rulemaking, would be included within this listing of comments that is part of the public record.

b. By letter dated May 5, 2010 Arkansas Department of Health (ADH) withdrew its concern about the proposed change in water quality and "use" changes. The decision was based upon the understanding that the discharge from the UMETCO site will remain a "continuous" discharge and will not change to a "batch" process. If ADH views this as significant, does the Commission agree? In the event the changes in classification and use is approved, should the Commission adopt some conditional permit concerning petitioner stormwater and discharge management? ADH stated, "This understanding is based upon letter [of May 5, 2010] indicating that no changes to operational procedures nor change in treatment processes (pH adjustment) will occur."

These comments are specifically addressed to APCEC and thus are better addressed by the Commission. However, it should be noted that any modification to the UMETCO treatment process must be reviewed and approved by ADEQ. Furthermore, UMETCO has no proposed changes to the current operations or treatment process at UMETCO's treatment plant.

c. By letter, the Water Division had no additional questions about the UAA (i.e., the Standards Evaluation and Use Attainability study) at that time. The Division said it was appropriate to move forward with the third party petition process. ADEQ has not otherwise endorsed the petition, is that correct?

This comment is specifically addressed to ADEQ and is better addressed by the agency. It should be noted that ADEQ approved the UAA Report in March 2010.

I take exception with their statement that the UAA satisfies Reg. 2.303, Reg. 2.306, and the 2000 State of Arkansas Continuing Planning Process Chapter IX. UMETCO may have met ADEQ's minimums for petitioner to proceed with a third party petition, but has petitioner met the standards required to adopt a change in regulations?

To date, UMETCO has met the requirements in Regulation No. 2 relating to the proposed changes; however, the process is still ongoing.

i. First, ADEQ should outline how Reg. 2.303 relates to the petition (presumably Reg. 2.303 must be met to show that the discharge will not impact the fishable/swimmable classification for the creek or lake). Is the Use Attainability report used for other decisions of the Commission? I am trying to understand what requirements are being met with the report. That is, do the findings and conclusion weigh in other aspects of the regulatory change requested?

ii. Second, Petitioner and ADEQ should provide the public and the Commission with information documenting how UMETCO met the public participation in the Continuous Planning Process cited in Reg. 2.306.

iii. Third, ADEQ should provide the public and the Commission with information documenting how UMETCO met the minimum requirements to provide the Director with (a) technological or economic limits of treatability and (b) economic analysis of the impact on the local area which are required in 2.306.

iv. I question if petitioner satisfactorily documented that the use being removed is not an existing use and that all other designated uses will be protected. The Commission should begin its review not from the level of contaminants today (discharge or stormwater run-off) but from where the regulations currently stand. It should look to what should be, and not what is.

This information, previously approved by ADEQ in March 2010, was provided to APCEC as part of the proposed rulemaking presented in their June 2010 meeting.

v. Finally, UMETCO has dismissed, rather than examined and reported, the technological or economic limits it faces, the alternatives, and the economic impact of the regulatory changes on the local area. That is, they failed to provide sufficient evidence for their position. This is discussed below.

d. The Arkansas Economic Development Commission (AEDC), Small and Minority Business Division, determined that, "in drafting the proposed changes . . . you have taken sufficient steps to protect the interests of the impacted small businesses."

One should understand the context and limits of the AEDC finding. These businesses are on the Hot Springs water supply which enjoys an upstream Ouachita River source, and the businesses usually do not see much of the creek that is hidden by highway culverts and the like. While the letter is important for what it says, the Commission cannot accept the letter as responsive to impacts on many other businesses and citizens; it is not responsive to the entities who actually use the water sources impacted by the discharge and who avail themselves of Lake Catherine and the Ouachita River (the area below the discharge). UMETCO determined – by their own on-site inspection – that the regulation does not affect small businesses in the immediate area of Wilson Creek.

2. The petitioner asks to remove current Domestic Water Supply designation in its petition. What is the petitioner's burden of proof here? What is the ADEQ and Commission's regulatory authority and reasoning to remove such a critical classification of a tributary to Lake Catherine/Ouachita River?

UMETCO disagrees that the domestic drinking water designation for Wilson Creek is "critical" to either Lake Catherine or the Ouachita River, as the removal of this designation will not affect water quality in either waterbody. The basis of the request relates to regulatory requirements of ADEQ as well as the fact that the drinking water designated use for Wilson Creek is not an existing use.

Further:

a. Is it sufficient that the petitioner states that no one is drinking from the tiny stream (but with a significant watershed laden with mine tailings) or drawing water from an adjacent well?

b. Is it sufficient that petitioner presents one or two studies showing that the few fish that are there are alive?

The information presented to support the rulemaking, and approved by ADEQ, is sufficient to justify the proposed criteria changes.

c. Is it sufficient that only a few chemicals are measured, along with some overall measure of Total Dissolved Solids, even though this may conceivably be only a few of the overall chemicals discharged to the cove?

Water quality data from Outfall 001 (after water treatment) are provided to ADEQ every month in accordance with UMETCO's current NPDES permit. In addition, as a normal part of their permit renewal request, UMETCO analyzed for an extensive list of chemicals that includes heavy metals, called a Priority Pollutant Scan, and these data were included in the permit renewal request to ADEQ for their consideration on which parameters need to be included in the permit. UMETCO also collects monthly data in Wilson Creek near their southern property line to evaluate water quality in the creek at a location that would include all inputs from the site (including the NDPES outfall). These data cover a wide range of seasonal conditions and are submitted to ADEQ monthly, thus making them public record. The proposal only seeks to change the criteria for chloride, sulfate, and total dissolved solids.

d. The starting point for a change in standards is a definitive study. Will the study find that the petitioner's discharges/stormwater that reach Lake Catherine, and other cumulative discharges that make it to the lake, allow the Commission to ease the Domestic Water Supply designation for permittees? Should ADEQ and the Commission first determine how the discharge to this Cove and the cumulative discharges of similar tributaries from the various mining industries along the Lake impact the overall standard and overall performance of the Lake and Ouachita River?

e. Among the chemicals to be examined is, of course, vanadium. Some health studies indicate that elevated levels of vanadium may pose increased health risk. Among the 2011 Department of Defense Authorization Requests (for earmarks, I believe) is a $4,000,000 "Vanadium Safety Readiness Report." One defense department summary says of the study, "this is a cooperative relationship between the vanadium microalloyed steel industry, academia and the U.S. Army."

3. My family has a well for water as do others on Wilson Lake Road. Our well is roughly situated about one mile from the reclamation area and the retaining pond of the former UMETCO mine. We are not happy with the deterioration of quality of our well water. Can we be confident that the deterioration in the quality is unrelated to the UMETCO treatment and discharge? A picture of that mine, which I understand is part of the retaining pond today, is available in "Encyclopedia of Arkansas" available on the Internet. (See picture captioned "Arial view of the East Wilson vanadium mine pit in Garland County; circa 1970s" which shows the significant nature of the former mine.) The point is that the regulatory change requested is also directly related to the management of the retaining pond and stormwater management. Approving a higher level of permitted discharge via the regulation for Wilson Creek is not merited in and of itself; and approval will reduce the urgency of a more comprehensive solution.

The proposed rulemaking relates to surface water in Wilson Creek and sulfate, chloride, and TDS concentrations in a portion of the creek. The proposed rulemaking does not request a change in the existing water quality in Wilson Creek. Reclamation of the mine site has resulted in improved water quality conditions in Wilson Creek.

Also, as a point of clarification, the proposed rulemaking addresses sulfate, chloride, and TDS; it is unrelated to vanadium.

> 4. A significant concern of many residents, including one or more community water treatment managers based on remarks at the hearing, relates to loading into Lake Catherine. The change in permitted levels for Wilson Creek may be deemed tolerable when examined in isolation (i.e., on this piece mill basis of the petitioner), but these discharges and run-offs might be reaching significant levels that will not be efficiently handled by the Ouachita River or the communities that use the water below Remmel dam.
>
> Wilson Creek, or the portion of the Creek at issue, is considerably less than a mile long and it runs into Lake Catherine. There is no dilution occurring in Wilson Creek. Wilson Creek is like an open septic line from UMETCO's retaining pond to the Lake. So, Lake Catherine is their ultimate solution to dilution.
>
> a. Is this the largest variances permitted to date for any comparable environmental and business situation for discharges and/or stormwater runoff into the Ouachita River and its lakes? If approved, does this petition become the new "bar" for permits and changes to use and classification?

UMETCO strongly disagrees with the comment that Wilson Creek is 'like an open septic line from UMETCO's retaining pond to the Lake." The UAA Report documents that Wilson Creek meets its expected aquatic life use designation.

No variance is being requested as part of the proposed rulemaking. Please see General Response No. 1 for additional information pertaining to the proposed rulemaking. Site-specific criteria for sulfate, chloride, and TDS that are significantly higher than those proposed by UMETCO and that have also been shown to be protective have been previously approved by APCEC. Please see APCEC Regulation No. 2, §2.511 for examples.

> b. Is there evidence of loading on Lake Catherine that affects the Domestic Water Supply designation, for example, for ammonias and other products and/or by-products that are used to reduce acid toxicity of mining and mineral processing?
>
> What studies are available for the Commission?

Low-pH water is collected and treated at the site prior to discharge. Acidity that may exist in drainage from the site is addressed (neutralized) with the use of hydrated lime (i.e., calcium oxide); this water is then discharged through the NPDES outfall, which is

monitored under the NPDES permit. No ammonia or ammonia compounds are used to neutralize acidity at the site. This discharge does not affect the designated drinking water use for Lake Catherine.

All supporting studies for the proposed rulemaking were provided to APCEC during their June 2010 meeting and are available through the APCEC website.

c. Again are we testing for the right discharges related to the change in classification? What other chemicals are included in the broader category of "Total Dissolved Solids".

"TDS" are those solids, including minerals and metals, that are small enough to be called "dissolved" in a water sample. TDS values are determined by analyzing water that has been passed through a filter. The principal components of TDS at the UMETCO site are calcium and sulfate.

d. Is the Commission aware of any other permits that will be expanded on Lake Catherine or the Ouachita River in a similar manner as this one?

5. More questions concerning economic impacts:

UMETCO may have met the requirements for an "economic impact and benefits analysis" for purposes of initiating rulemaking. The rule simply provides "the economic impact and environmental benefit analysis "shall be presumed to be adequate for purposes of initiating a rulemaking before the Commission if the analysis is prepared by completing the Economic Impact/Environmental Benefit Analysis form . . . ." Now that the rulemaking is initiated, a higher standard of evidence is required.

a. Petitioner responds that "No other entities will be economically affected by this rule." As stated above, I take exception based on statements at the hearing from at least one community representatives concerning the cost of treatment by downstream water treatment facilities. And, the economic impact on the fishing and recreational economy has not been satisfactorily quantified based on statements at the hearing from at least one fishery expert who examined the finding on fisheries.

b. Petitioner says: "There are no net economic effects of the proposed rule from current conditions because the rule simply adjusts dissolved mineral criteria to reflect current conditions." However, these are the levels that were deemed advisable at that time, whether done so by "default" as represented by petitioner or not. In response to the questions 1 and 2 in Petitioner's "Economic Impact/Environmental Benefits Analysis" the petitioner cites the Water Quality Standards Evaluations as the Sources and Assumptions. These documents have insufficient information on economic impacts. In that the information is insufficient, should it result in a deferral of a decision on the petition?

c. It can be argued that if petitioner was meeting current classification and uses of the Regulation, there would be an improvement in water quality, stream stabilization, and aesthetics. This could increase recreational values and business and residential property values in the Creek watershed and in the Lake Catherine area. An independent study to determine the possible range in economic benefits (or protection from loss) by keeping and enforcing the current regulations is recommended. The economic study, if endorsed by petitioner, could examine the cost and benefits of the alternatives. Petitioner mentioned but did not discuss that the only alternative was "economically prohibitive." The Lake Catherine community and ADEQ and ADH want UMETCO to be a good neighbor and remain viable so as to achieve the best environmental result. This complicated issue should be examined to present the best alternatives.

d. I thought it was well established that determining the cost associated with closure and accruing these costs during the life of the mining operation was a fundamental part of closure planning. Doing so helps ensure sufficient funds to close and that closure costs do not become a burden at later parts of mine life. Is this information available in an economic study or the CPP for the UMETCO mine?

e. The UMETCO's reclamation is clearly not a profit maker, but it is part of the overall mining cycle. The owners must have calculated that vanadium sales would amply pay for the entire life cycle of the mine. All of us appreciate that UMETCO has not structured its operations so as to set up the mine site as some separately owned toxic liability. But, allowing a change in regulations doesn't address the need for UMETCO and its owners to more fully meet the law and its responsibility.

f. In the Fiscal Impact Statement, and to the question, "Does this proposed, amended or repealed rule or regulation have a financial impact?" the Petitioner responds, "No." I do not wish to sound strident or flippant, but at a minimum the response should be: "yes, it saves the petitioner a considerable sum, perhaps millions, in cost avoidance to comply with current law." Or, "there are costs, perhaps amounting to millions of dollars, in so-called "externalities" due to loss of habitat and degradation to recreational area and fishery, and increased cost of water treatment by utilities located downstream the Ouachita, and the suppression of the value of business and residential properties."

The proposed rulemaking to develop site-specific criteria for sulfate, chloride, and TDS complies with applicable laws. UMETCO strongly disagrees that the proposed rulemaking somehow results in loss of habitat, degradation of recreational areas, fisheries, increased cost of water treatment or suppresses the value of businesses or residential properties. The approved UAA Report and the related evaluations and studies submitted to APCEC provide the required analyses and justification necessary to support the proposed rulemaking.

g. ADEQ or the Commission must file with the Bureau of Legislative Research a statement of financial impact for the rule. Will the financial impact statement provided by the Arkansas DEQ be one that it authors recommend, or will it be a copy of the statement prepared by the Petitioner? Will the Commission issue a concise statement available for legislative review of the principal reasons for overruling the considerations urged against its adoption? Arkansas law states that the scope of the financial impact statement shall be determined by the agency. Can we expect the financial impact statement to include more than the cost and benefits to UMETCO, as is presented in their submission?

6. I question if the federal and State antidegradation laws and requirements are being met. In the rules, the term "degradation" is defined as, "The act or process of causing any decrease in quality." I believe we can find statements and analyses that show some decrease in quality. Is the Commission decision bound by the anti-degradation laws for a decision that adopts the petition changes? Even if a decision of the Commission only relates (on paper) to the Wilson Creek itself, can this effectively bypass anti degradation requirements.

UMETCO refers the commenter to APCEC's Regulation No. 2, Chapter 2, which contains the State Antidegradation Policy. UMETCO does not agree that state antidegradation requirements are being "bypassed" by this proposed action. The information presented as part of the proposed rulemaking also meets the intent of antidegradation review requirements.

7. Are the requirements of Regulation 2.304, 2.306, 2.409, and 2.508 met by the Petitioner?

8. Will the "Biological Integrity" (aquatic biota) of Lake Catherine and Ouachita remain un-impacted? Has the petitioner met the requirements of Reg. 2.405 for all waters with specific fisheries use designation? Reg. 2.405 appears to me to go beyond a study of the fish population, and if that is the case, the study has not been presented to the Commission. UMETCO is looking for a Rule change that is related to its permit. But, nonetheless, this is a Rule change and the study should be conducted.

**Summary and Closing**

Reg. 2.102 provides a helpful statement of purpose and provides the Commission guidance in the review of the petition. The purpose of the regulations are "to preserve and protect the quality of this water so that it shall be reasonably available for all beneficial uses and thus promote the social welfare and economic well-being of the people of the State. It is further the purpose of these regulations to designate the uses for which the various waters of the state shall be maintained and protected; to prescribe the water quality standards required to sustain the designated uses; and to prescribe regulations necessary for implementing, achieving and maintaining the

prescribed water quality." (emphasis added) What is to be done with the Umetco petition? First, determine if the various reports meet the rigors of environmental and economic analysis. You are trained to test the assumptions inherent with such reports. Second, please see that the net result is good public policy. I believe that means the question is more than, "What can the lake withstand right now?" Is it too extreme to ask, "If UMETCO petition is adopted, are we stretching Lake Catherine's water classification, or at least opening up more petitions like this?" The solution is not to increase thresholds but work with everyone for better alternatives. Since Garland County is well known for its beautiful spring waters, I can't imagine the price we would pay to stain that reputation even in a small way. I admit that this is unlikely but it is credible, and that impact would be economically prohibitive. Are we concerned that the thresholds for the new rule are as miscalculated as those established in the current rule? The Magnet Cove rich geology raises a peril when it is disturbed. What other discharges should be measured and tracked?

For additional information, please refer to the general responses provided above.

21(a). Becky Chote:

BECKY CHOTE
275 ROCKY MTN WAY
HOT SPRINGS, AR 71913
PHONE: 501/762-2435
Email: yabba650@aol.com
September 17, 2010

I am writing in reference to Umetco Minerals Corporation to initiate Rulemaking to Amend Regulation No. 2. To remove the Domestic Water Supply use designation for Wilson Creek, let us examin item 4c that in this letter.

> 4. Through this Petition, UMETCO is requesting the following amendments to Commission Regulation No. 2:
>
> (a) Modify the dissolved minerals criteria for the reach of Wilson Creek from a point approximately 0.85 mile upstream of Outfall 001, downstream to Outfall 001:
>
> TDS from 142 mg/L to 543 mg/L
> Sulfate from 20 mg/L to 260 mg/L
> Chloride from 15 mg/L to 56 mg/L
>
> (b) Downstream of Outfall 001 on Wilson Creek to Lake Catherine:
>
> TDS from 142 mg/L to 543 mg/L
> Sulfate from 20 mg/L to 260 mg/L
> Chloride from 15 mg/L to 56 mg/L
>
> (c) Remove the Domestic Water Supply use designation for Wilson Creek. A black-lined version of the specific changes which are requested in Regulation No. 2 is attached hereto as Exhibit "A" and is incorporated herein.

The EPA in the **Regulation No.2 As Amended Regulation Establishing WaterQualty Standards for Surface Waters of the State of Arkansas** defines the designation for Domestic Water Supply as follows:

> (G) Domestic Water Supply - This beneficial use designates water which will be protected for use in public and private water supplies. Conditioning or treatment may be necessary prior to use.

So to remove the Domestic Water Supply would leave this creek and all of its tributaries unprotected for private and public use. Allowing toxins to be dumped into a small (private) creek without the ability to assimilate the waste of 30 years of overflow from a vanadium mine

Complicating it further is Umetco's rating in the EPA's ECHO CWA/NPDES Compliance Status graph is *an E=SNC/***Category I (Serious Non Compliance violation)**. The Category I gives EPA and the ADEQ the legal ability to ignore Umetco as a repeat Serious Non Compliance offender. This is discussed in a paragraph below from the current EPA's ECHO publication:

*Note: The national program database calculates the severity of violations according to the Clean Water Act regulations, which have specific criteria specifying the duration, severity, and type of violations that rise to the level of Significant Noncompliance (SNC). The calculation of Category I Violations is equivalent to the SNC calculations, but because the violations occur at smaller dischargers (non-major), EPA does not classify the violations as "SNC". ECHO distinguishes between "SNC" and Category I because this has a bearing on the government response used to address the violation(s). Repeat SNC occurrences normally are addressed through formal enforcement actions, while Category I Violations are often addressed via informal processes.*

The informal process as described in the last line above is the last right a person has to protect their property from pollution. Removing the protective status of Wilson Creek will lower Arkansas Clean Water standards allowing Umetco to comply. Further complicating any rights a person living along Wilson Creek, Lake Catherine or the Ouachita River has to protect their property or their health.

To bring both points together with reference to EPA's refusal to address Umetco through the formal enforcement actions combined with the removal of the Domestic Water Supply designation would successfully allow Umetco to come into compliance and limit the rights of property owners to take action through the legal system to protect their property and health.

Doug, I must ask you again why would the ADEQ consider such a petition.

Sincerely,
Becky Chote

RESPONSE TO BECKY CHOTE:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine. Due to the lengthy nature of these comments, one response will follow at the end.

21(b). Becky Chote:

I am writing in reference to Umetco Minerals Corporation to initiate Rulemaking to Amend Regulation No. 2. Listed below are item 4a and 4c of the above referenced petition:

4. Through this Petition, UMETCO is requesting the following amendments to Commission Regulation No. 2:

(a) Modify the dissolved minerals criteria for the reach of Wilson Creek from a point approximately 0.85 mile upstream of Outfall 001, downstream to Outfall 001:

TDS from 142 mg/L to 543 mg/L
Sulfate from 20 mg/L to 260 mg/L
Chloride from 15 mg/L to 56 mg/L

(b) Downstream of Outfall 001 on Wilson Creek to Lake Catherine:

TDS from 142 mg/L to 543 mg/L
Sulfate from 20 mg/L to 260 mg/L
Chloride from 15 mg/L to 56 mg/L

I am of the understanding Umetco to change the levels as follows:

TDS from 142mg/L to 543 mg/L an increase of 382%mg/L
Sulfate from 20mg/L to 260mg/L an increase of 1,300%mg/L
Chlorides from 15mg/L to 56mg/L an increase of 375%mg/L

This change would be effective for the upstream discharge and downstream discharge into Wilson creek that flows into Lake Catherine and beyond. I do not believe we should make these changes. I do not find any information to convience me to the ability of Wilson Creek, Lake Catherine and the Ouachita River can assimulate all of the added TDS, Sulfates and Chlorides (toxins) .

Furthermore Umetco in the petition states:

10. UMETCO has reviewed Executive Order 05-04 and has determined that the request does not affect small businesses for the following reasons:

(a) The rulemaking does not represent a change from current conditions or current water quality in Lake Catherine, which meet state water quality standards;

The reason it will not change the current conditions is shown in a chart from the current EPA ECHO report:

**CWA/NPDES Compliance Status**

| Statute:Source ID CWA:AR0048950 | | QTR1 Apr-Jun07 | QTR2 Jul-Sep07 | QTR3 Oct-Dec07 | QTR4 Jan-Mar08 | QTR5 Apr-Jun08 | QTR6 Jul-Sep08 | QTR7 Oct-Dec08 | QTR8 Jan-Mar09 | QTR9 Apr-Jun09 | QTR10 Jul-Sep09 | QTR11 Oct-Dec09 | QTR12 Jan-Mar10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Non-compliance in Quarter | | No | No | N/A | N/A | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes |
| Facility Status | | | | N/A | N/A | N/A | N/A | N/A | N/A | E(EffViol) | E(EffViol) | E(EffViol) | E(EffViol) |

Effluent Violations by NPDES Parameter

View effluent charts for all parameters: Only Charts with Violations | All Charts | Custom Output (or click on parameter names below for individual parameter charts)

**Discharge point:001**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | Neither | | | | | | | | | Lim Viol | | | |
| Solids, total dissolved | MMly | | | | | | | | 112% | 91% | 130% | 100% | 112% |
| | NMth | | | | | | | | 46% | 39% | 68% | 58% | 46% |
| Sulfate, total (as SO4) | MMly | | | | | | | | 558% | 806% | 1000% | 842% | 1016% |
| | NMth | | | | | | | | 587% | 602% | 707% | 707% | 777% |
| Zinc, total recoverable | EMly | | | | | | | | | | | | 8% |

Effluent violations are displayed as highest percentage by which the permit limit was exceeded for the quarter. **Bold, large**print indicates Significant Non-compliance (SNC) effluent violations. Shaded boxes indicate unresolved SNC violations.

- **E** = SNC/Category I - effluent violations of monthly average limits (Technical Review Criteria and chronic)

In review of this chart, Umetco is in violation of the current Clean Water Standards. These toxins are already being dumped at these elevated levels. These violations are listed as Serious Non Compliance issues.

Doug, in closing please advise me why the ADEQ or the EPA would entertain such a petition to lower our water standards for Umetco, a company with a history of non compliance to Clean Water Act.

Sincerely,
Becky Chote

21(c). Becky Chote:

Re: Request by Umetco Minerals
Corporation to initiate Rulemaking to
Amend Regulation No. 2

Dear Doug,

I am writing in reference to Umetco Minerals Corporation to initiate Rulemaking to Amend Regulation No. 2. Listed below are item 4a and 4c of the above referenced petition:

4. Through this Petition, UMETCO is requesting the following amendments to Commission Regulation No. 2:

(a) Modify the dissolved minerals criteria for the reach of Wilson Creek from a point approximately 0.85 mile upstream of Outfall 001, downstream to Outfall 001:

TDS from 142 mg/L to 543 mg/L
Sulfate from 20 mg/L to 260 mg/L
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(b) Downstream of Outfall 001 on Wilson Creek to Lake Catherine:

TDS from 142 mg/L to 543 mg/L
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Chloride from 15 mg/L to 56 mg/L

I am of the understanding Umetco to change the levels as follows:

| | |
|---|---|
| TDS from 142mg/L to 543 mg/L | an increase of 382%mg/L |
| Sulfate from 20mg/L to 260mg/L | an increase of 1,300%mg/L |
| Chlorides from 15mg/L to 56mg/L | an increase of 375%mg/L |

This change would be effective for the upstream discharge and downstream discharge into Wilson creek that flows into Lake Catherine and beyond. I do not believe we should make these changes. I do not find any information to convience me to the ability of Wilson Creek, Lake Catherine and the Ouachita River can assimulate all of the added TDS, Sulfates and Chlorides (toxins) .

Furthermore Umetco in the petition states:

10. UMETCO has reviewed Executive Order 05-04 and has determined that the request does not affect small businesses for the following reasons:

(a) The rulemaking does not represent a change from current conditions or current water quality in Lake Catherine, which meet state water quality standards;

The reason it will not change the current conditions is shown in a chart from the current EPA ECHO report:

| CWA/NPDES Compliance Status | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statute Source ID<br>CWA-AR0048950 | | QTR1<br>Apr-Jun07 | QTR2<br>Jul-Sep07 | QTR3<br>Oct-Dec07 | QTR4<br>Jan-Mar08 | QTR5<br>Apr-Jun08 | QTR6<br>Jul-Sep08 | QTR7<br>Oct-Dec08 | QTR8<br>Jan-Mar09 | QTR9<br>Apr-Jun09 | QTR10<br>Jul-Sep09 | QTR11<br>Oct-Dec09 | QTR12<br>Jan-Mar10 |
| Non-compliance in Quarter | | No | No | N/A | N/A | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes |
| Facility Status | | | | N/A | N/A | N/A | N/A | N/A | N/A | E(EffVio) | E(EffVio) | E(EffVio) | E(EffVio) |

Effluent Violations by NPDES Parameter.

View effluent charts for all parameters: Only Charts with Violations | All Charts | Custom Output (or click on parameter names below for individual parameter charts)

| Discharge point:001 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | Neither | | | | | | | | | Lim Vio | | | |
| Solids, total dissolved | Mthly | | | | | | | | 112% | 91% | 130% | 100% | 112% |
| | Wkly | | | | | | | | 40% | 39% | 65% | 58% | 46% |
| Sulfate, total (as SO4) | Mthly | | | | | | | | 859% | 805% | 1600% | 842% | 1018% |
| | Wkly | | | | | | | | 587% | 502% | 707% | 707% | 777% |
| Zinc, total recoverable | Mthly | | | | | | | | | | | | 9% |

Effluent violations are displayed as highest percentage by which the permit limit was exceeded for the quarter. **Bold, largeprint** indicates Significant Non-compliance (SNC) effluent violations. Shaded boxes indicate unresolved SNC violations.

- **E** = SNC/Category I - effluent violations of monthly average limits (Technical Review Criteria and chronic)

In review of this chart, Umetco is in violation of the current Clean Water Standards. These toxins are already being dumped at these elevated levels. These violations are listed as Serious Non Compliance issues.

Doug, in closing please advise me why the ADEQ or the EPA would entertain such a petition to lower our water standards for Umetco, a company with a history of non compliance to Clean Water Act.

Sincerely,
Becky Chote

21(d). Becky Chote:

Dear Doug,
I am writing in reference to Umetco Minerals Corporation to initiate Rulemaking to Amend Regulation No. 2. To remove the Domestic Water Supply use designation for Wilson Creek, let us examin item 4c that in this letter.

4. Through this Petition, UMETCO is requesting the following amendments to Commission Regulation No. 2:

(a) Modify the dissolved minerals criteria for the reach of Wilson Creek from a point approximately 0.85 mile upstream of Outfall 001, downstream to Outfall 001:

TDS from 142 mg/L to 543 mg/L
Sulfate from 20 mg/L to 260 mg/L
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(b) Downstream of Outfall 001 on Wilson Creek to Lake Catherine:

TDS from 142 mg/L to 543 mg/L
Sulfate from 20 mg/L to 260 mg/L
Chloride from 15 mg/L to 56 mg/L

(c) Remove the Domestic Water Supply use designation for Wilson Creek. A black-lined version of the specific changes which are requested in Regulation No. 2 is attached hereto as Exhibit "A" and is incorporated herein.

The EPA in the **Regulation No.2 As Amended Regulation Establishing WaterQualty Standards for Surface Waters of the State of Arkansas** defines the designation for Domestic Water Supply as follows:

(G) Domestic Water Supply - This beneficial use designates water which will be protected for use in public and private water supplies. Conditioning or treatment may be necessary prior to use.

So to remove the Domestic Water Supply would leave this creek and all of its tributaries unprotected for private and public use. Allowing toxins to be dumped into a small (private) creek without the ability to assimilate the waste of 30 years of overflow from a vanadium mine

21(e). Becky Chote:

BECKY CHOTE
275 ROCKY MTN WAY
HOT SPRINGS, AR 71913
PHONE: 501/762-2435
Email: yabba650@aol.com
September 17, 2010

Complicating it further is Umetco's rating in the EPA's ECHO CWA/NPDES Compliance Status graph is *an* ***E=SNC/*****Category I (Serious Non Compliance violation)**. The Category I gives EPA and the ADEQ the legal ability to ignore Umetco as a repeat Serious Non Compliance offender. This is discussed in a paragraph below from the current EPA's ECHO publication:

*Note: The national program database calculates the severity of violations according to the Clean Water Act regulations, which have specific criteria specifying the duration, severity, and type of violations that rise to the level of Significant Noncompliance (SNC). The calculation of Category I Violations is equivalent to the SNC calculations, but because the violations occur at smaller dischargers (non-major), EPA does not classify the violations as "SNC". ECHO distinguishes between "SNC" and Category I because this has a bearing on the government response used to address the violation(s). Repeat SNC occurrences normally are addressed through formal enforcement actions, while Category I Violations are often addressed via informal processes.*

The informal process as described in the last line above is the last right a person has to protect their property from pollution. Removing the protective status of Wilson Creek will lower Arkansas Clean Water standards allowing Umetco to comply. Further complicating any rights a person living along Wilson Creek, Lake Catherine or the Ouachita River has to protect their property or their health.

To bring both points together with reference to EPA's refusal to address Umetco through the formal enforcement actions combined with the removal of the Domestic Water Supply designation would successfully allow Umetco to come into compliance and limit the rights of property owners to take action through the legal system to protect their property and health.

Doug, I must ask you again why would the ADEQ consider such a petition.

21(f). Becky Chote:

**From:** Yabba650 [mailto:yabba650@aol.com]
**Sent:** Tuesday, September 14, 2010 6:33 AM
**To:** undisclosed-recipients
**Subject:** Make Umetco come into compliance without lowereing Arkasas Water Standards

Please make Umetco come into compliance with the Arkansas Department of Enverionmental Quality and the EPA regulations.
Thanks for listening.
Becky Chote
Hot springs, AR

21(g). Becky Chote:

I am writing in reference to Umetco Minerals Corporation's request to initiate rulemaking to amend regulation no. 2.

I am in disbelief that a the EPA and the Arkansas Department of Environmental Quality would even entertain the idea of lowering the water

standards to enable Umetco Minerals in Hot Springs, Arkansas to comply.

ADEQ should not allow Umetco to pollute Arkansas. I cannot believe the EQP and ADEQ would sit by and allow Umetco to dump toxins into Arkansas water ways. It is Arkansas's water that attract the fishermen and tourist. What will we Arkansans do if we don't have clean water or tourist and fishermen to play in it?

Sad day if ADEQ, EPA and Umetco accomplish the raising of the level of toxins sent into our water ways.

Be sure and tell the people below this site don't bother worrying about the national debt because they won't live long enough for it to be a problem.

Please help.

Sincerely,

Becky Chote

21(h). Becky Chote:

**From:** Yabba650 [mailto:yabba650@aol.com]
**Sent:** Monday, September 13, 2010 9:51 PM
**To:** undisclosed-recipients
**Subject:** Umetco is a polluter

Please do not let Umetco self regulate the amount of pollution they dump in to our rivers, streams and lakes. Arkansas should not have to lower their water standards to accommodate Umetco's lack of concern for our water. Please help.
Thank you for listening.
Becky Chote
Hot Springs, AR
Email: yabba650@aol.com

21(i). Becky Chote:

**From:** Yabba650 [mailto:yabba650@aol.com]
**Sent:** Monday, September 13, 2010 10:31 PM
**To:** undisclosed-recipients
**Subject:** Umetco should not be allowed to self govern the pollutants and how much

Please take a moment to think about what Arkansas would be like with no clean water. Umetco must not turn that moment in to reality. Please Keep Arkansas the natural state. Arkansas Department of Quality Control and the EPA need to stand up for Arkansas and its fishermen. Stop Umetco from dumpping TDS and sulfates in to our water ways.

Please help.

Becky Chote
Email: yabba650@aol.com
Hot Springs, AR 71913

## 21(j). Becky Chote:

I am writing in reference to Umetco Minerals Corporation's request to initiate rulemaking to amend regulation no. 2.
I am in disbelief that a the EPA and the Arkansas Department of Environmental Quality would even entertain the idea of lowering the water standards to enable Umetco Minerals in Hot Springs, Arkansas to comply.

ADEQ should not allow Umetco to pollute Arkansas. I cannot believe the EQP and ADEQ would sit by and allow Umetco to dump toxins into Arkansas water ways. It is Arkansas's water that attract the fishermen and tourist. What will we Arkansans do if we don't have clean water or tourist and fishermen to play in it?

Sad day if ADEQ, EPA and Umetco accomplish the raising of the level of toxins sent into our water ways.

Be sure and tell the people below this site don't bother worrying about the national debt because they won't live long enough for it to be a problem.

Please help.

Sincerely,

Becky Chote

## 21(k). Becky Chote:

I am writing in reference to Umetco Minerals Corporation's request to initiate rulemaking to amend regulation no. 2.
I am in disbelief that a the EPA and the Arkansas Department of Environmental Quality would even entertain the idea of lowering the water standards to enable Umetco Minerals in Hot Springs, Arkansas to comply. The EPA ECHO graft below shows no data during the period of Dec 2007 through December 2008.

### Three Year Compliance Status by Quarter

[redacted]

Violations shown in a given quarter do not necessarily span the entire 3 months. Information on the nature of alleged violations is available on the FAQ page, and information on the duration of non-compliance is available at the end of this report.

| CWA/NPDES Compliance Status | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statute:Source ID CWA:AR0048950 | | QTR1 Apr-Jun07 | QTR2 Jul-Sep07 | QTR3 Oct-Dec07 | QTR4 Jan-Mar08 | QTR5 Apr-Jun08 | QTR6 Jul-Sep08 | QTR7 Oct-Dec08 | QTR8 Jan-Mar09 | QTR9 Apr-Jun09 | QTR10 Jul-Sep09 | QTR11 Oct-Dec09 | QTR12 Jan-Mar10 |
| Non-compliance in Quarter | | No | No | N/A | N/A | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes |
| Facility Status | | | | N/A | N/A | N/A | N/A | N/A | N/A | E (EffViol) | E (EffViol) | E (EffViol) | E (EffViol) |
| Effluent Violations by NPDES Parameter: | | | | | | | | | | | | | |
| View effluent charts for all parameters: [redacted] | | | | | | | | | | | | | |
| (or click on parameter names below for individual parameter charts) | | | | | | | | | | | | | |

Where is the lost data and why is it not applicable?

Other states have faced the polution problem why don't we? ADEQ has let Umetco deside what is acceptable and what is not.

I want Arkansas waters clean.

Sincerely,

Becky Chote

21(l): Becky Chote:

I am writing in reference to Umetco Minerals Corporation's request to initiate rulemaking to amend regulation no. 2.
I am in disbelief that a the EPA and the Arkansas Department of Environmental Quality would even entertain the idea of lowering the water standards to enable Umetco Minerals in Hot Springs, Arkansas to comply.
Umetco has been in violation for years. The EPA = ECHO report *is as* follows:

| CWA/NPDES Compliance Status | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Status:Source ID CWA AR0048950 | | QTR1 Apr-Jun07 | QTR2 Jul-Sep07 | QTR3 Oct-Dec07 | QTR4 Jan-Mar08 | QTR5 Apr-Jun08 | QTR6 Jul-Sep08 | QTR7 Oct-Dec08 | QTR8 Jan-Mar09 | QTR9 Apr-Jun09 | QTR10 Jul-Sep09 | QTR11 Oct-Dec09 | QTR12 Jan-Mar10 | |
| Non-compliance in Quarter | | No | No | N/A | N/A | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes | |
| Facility Status | | | | N/A | N/A | N/A | N/A | N/A | N/A | E(EffViol) | E(EffViol) | E(EffViol) | E(EffViol) | |
| Effluent Violations by ADEQ Parameter: | | | | | | | | | | | | | | |
| View effluent charts for all parameters: [illegible] (or click on parameter names below for individual parameter charts) | | | | | | | | | | | | | | |
| Discharge point 001 | | | | | | | | | | | | | | |
| pH | Monitor | | | | | | | | | Lim Viol | | | | |
| Solids, total dissolved | MRy | | | | | | | | 112% | 91% | 130% | 100% | 112% | |
| | NMR | | | | | | | | 46% | 39% | 60% | 58% | 43% | |
| Sulfate, total (as SO4) | MRy | | | | | | | | 1038% | 905% | 1000% | 942% | 1016% | |
| | NMR | | | | | | | | 667% | 802% | 767% | 707% | 777% | |
| Zinc, total recoverable | MRy | | | | | | | | | | | | 8% | |

Effluent violations are displayed as highest percentage by which the permit limit was exceeded for the quarter. **Bold**, largeprint indicates Significant Non-compliance (SNC) effluent violations. Shaded boxes indicate unresolved SNC violations.

- **E = SNC/Category I - effluent violations of monthly average limits (Technical Review Criteria and chronic)**

*Note: The national program database calculates the severity of violations according to the Clean Water Act regulations, which have specific criteria specifying the duration, severity, and type of violations that rise to the level of Significant Noncompliance (SNC). The calculation of Category I Violations is equivalent to the SNC calculations, but because the violations occur at smaller dischargers (non-major), EPA does not classify the violations as "SNC". ECHO distinguishes between "SNC" and Category I because this has a bearing on the government response used to address the violation(s). Repeat SNC occurrences normally are addressed through formal enforcement actions, while Category I Violations are often addressed via informal processes.*

The note says it all and that is why the good people must ban together to fight our own battle against Umetco (via the informal process.) The source is there the toxins are dumped and we are left to fight this battle because of a category distinction.

Because the mining activities have stop the pollution it left behind has not stopped. The pollution is real

We have band together. EPA and Arkansas Department of Environmental Quality stand with us to help keep our waters clean.

Sincerely,
Becky Chote

RESPONSE TO BECKY CHOTE:

UMETCO is not involved with the operation of EPA's ECHO database and therefore cannot provide a direct response to the comment as to what data are or are not included in their database.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified

criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and

documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

22. Laurice Clark:

As a resident at 1327 Akers Rd, on Lake Catherine, I respectfully request that you stand up for the rights of people here on the lake & not the interest of Umetco.
This is our home & we are striving to make Lake Catherine a clean & beautiful place.
Please Deny Umetco's Request!!

RESPONSE TO LAURICE CLARK:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

23. Lois Cooks:

**My name is Lois Cooks and I am a homeowner at 181 Scroggins St. here in Hot Springs, AR. As a resident of the Lake Catherine/Wilson Creek area, I hereby register my opposition to the proposal by UMETCO to relax water quality standards as they reclaim the former mining site of Union Carbide.**

**Raising total dissolved solids from 142mg/L to 543mg/L, chlorides from 15mg/L to 56mg/L and sulfates from 20mg/L to 260mg/L are all such leaps, it seems like UMETCO would just like to forget any standards at all!**

**Please accept this letter as my comment on this issue. I believe the current standards should remain in effect for the sake of pollution control and environmental cleanliness. Please ask the Arkansas Pollution Control and Ecology Commission to disapprove the proposed standards.**

**Respectfully yours,**

**Lois Cooks**
**181 Scroggins St.**
**Hot Springs, Arkansas 71901**

RESPONSE TO LOIS COOKS:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of

swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

24. Asa and Wanda Cottrell:

From: ASA COTTRELL [mailto:asanbethcottrell@sbcglobal.net]
Sent: Friday, September 17, 2010 9:06 PM
To: Reg-Comment
Cc: asanbethcottrell@sbcglobal.net
Subject: UMETCO MINERALS
Wanda J Cottrell
Lake Catherin Property Owner
WJC TRUST

I wish to go on record saying please do not allow/accept UMETCOs proposed modifications of criteria for chlorides/sulfates/TDS by the Ar Water Quality standards for Wilson Creek.

Sincerely

Asa Cottrell TTEE Wanda Cottrell

RESPONSE TO ASA AND WANDA COTTRELL:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

25(a). Howard Counts:

From: Howard Counts
120 Janes Lane
Hot Springs, Ar, 71901

To: APC&EC
Re: Proposal by Umetco to make changes to Ar. Water Quality Standards

To whom it may concern:

The proposal by Umetco will adversely affect the water quality on Lake Catherine and in Wilson Bay in Garland County, Ar.

I am a property owner on Lake Catherine. I own property at 120 Janes Lane and 125 Willman Cove. The latter property is located on Wilson Bay and at the end of Wilson Creek.

I oppose the changes in Regulation 2 as requested by Umetco.

A increase in Sulfate and Chloride will be detrimental to plant life and the food chain will be damaged. I am aware of the harmful effects of these minerals in large quantities. They release other poisonous minerals present in the soil and rocks. A danger to human life as well as animal, aquatic and plant.

I am asking that there be no change to the regulation and that further monitoring be done on the present discharges into Wilson Creek, Wilson Bay and Lake Catherine.

Thank you for your consideration of this request.

Sincerely;
Howard Counts

RESPONSE TO HOWARD COUNTS (25A):

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality

resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

25(b). Howard Counts:

From Howard Counts
120 Janes Lane
Hot Springs, Ar. 71901

To: Doug Szenher
Ar. Department of Evironmental Quality
Public Outreach and Assistance Division
5301 Northshore Drive
North Little Rock, Ar. 72118

Re: Umetco request to change Ar. Water Quality Standard, Reg. 2, in reference to Wilson Creek, Lake Catherine and Ouachita River.

I am opposed to the request by Umetco to change Reg. 2 in regards to Wilson Creek Bay, Lake Catherine and the Ouachita River.

I own two properties on Lake Catherine. 120 Janes Lane and 125 Willman Cove. The Willman Cove property is on Wilson Creek Bay.

The operations of mining by Union Carbide, Stratcor and Umetco have adversely effected the use of Wilson Creek Bay. At one time the bay was suitable for fishing, swimming, boating and skiing. Property values have been adversely effected by damages to the bay.

It is time for Umetco to take the responsibility of restoring Wilson Creek Bay to its premineing condition. If they have done a reclamation project on their land then they should do reclamation of Wilson Creek Bay.

I do not want to see any more damages to the quality of water in Wilson Creek Bay, Lake Catherine and the Ouachita River.

Respectfully yours;
Howard Counts
Howard Counts

RESPONSE TO HOWARD COUNTS (25B):

Thank you for taking the opportunity to provide comments on this rulemaking. Please see the response to Comment No. 25(a).

26. Barbara Cummings:

From: Bobbi Cummings [mailto:bcumming@malvernleopards.org]
Sent: Tuesday, September 14, 2010 3:12 PM
To: Reg-Comment
Subject: UMETCO and water quality
To whom it may concern:

I am against the petition by UMETCO which will allow that company to increase its water discharge into Wilson Creek. Wilson Creek empties into Lake Catherine. I own property on the lake and do not want to see the our water polluted. This lake is a beautiful recreational area in our state. Many tourists from other states use Lake Catherine State Park.

The Ouachita River will be effected by the chemical increase of the water discharged by UMETCO. Malvern gets its water supply from this river. It is my understanding that there will be more testing or need for equipment to clean the water for Malvern's users. I'm sure my water bill will increase to pay for any extra testing that will have to be performed. Since the Ouachita river flows into Louisiana, thousands of people along the river will be affected.

Please consider the citizens of southern Arkansas before you allow UMETCO to pollute our waters.

Thank you,
Barbara Cummings
1512 Pinehurst Dr.
Malvern, AR 72104

RESPONSE TO BARBARA CUMMINGS:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the

amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and

documentation submitted as part of this rulemaking request (see General Response No. 5.b).

27(a). Cindy Draper:

> From: asured1185 [mailto:asured1185@yahoo.com]
> Sent: Monday, September 13, 2010 9:35 PM
> To: Szenher, Doug
> Cc: mikeross@mikeross.com; Harry Elliott; Steve Davison
> Subject: Re: UMETCO Proposal of waste increase
> See the attached letter....
>
> Once again the ADEQ is trying to railroad something through without giving ample notice to the public about renewal permits. Yes I would definitely like to notified about permit renewals in my area. I do believe this will be the only way that I will be informed on the issues at hand. Because the ADEQ is definitely not truly being a advocate of the public but of the commerical sector ... Which is very sad to me. The current renewal I would like to have a public hearing also in fact anything dealing with UMETCO should have a public hearing. Oh yes and I know that the ADEQ does everything by the book when it come to reporting things to the public but if you were truly for the public you would go above a beyond the minimum requirements.

RESPONSE TO CINDY DRAPER (27A):

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

27(b). Cindy Draper:

From: "Szenher, Doug" <DOUG@adeq.state.ar.us>
To: asured1185 <asured1185@yahoo.com>
Sent: Tue, August 17, 2010 9:25:51 AM
Subject: RE: UMETCO Proposal of waste increase
Thank you for your comments. They will be included in the official record for this rulemaking procedure and forwarded to appropriate Department staff for their review and response.
---

With regard to your suggestion involving hearing notifications, the department complies with state law in such matters, which requires publication of a legal notice announcing any proposed Arkansas Pollution Control and Ecology Commission regulation changes in a newspaper with general statewide circulation, and provides first-class mail notification to all persons who have requested to be notified of proposals to change Commission regulations. If you would like to be added to that mailing list, I will be glad to take care of that.

Although not required by law, other attempts to publicize such hearings are done, including posting the hearing announcement on the ADEQ Internet web site and distributing a news release to newspapers and radio and television stations throughout Arkansas.

--Doug Szenher
Public Outreach and Assistance Division, ADEQ
501-682-0915
doug@adeq.state.ar.us

-----Original Message-----
From: asured1185 [mailto:asured1185@yahoo.com]
Sent: Monday, August 16, 2010 10:05 PM
To: Reg-Comment
Subject: UMETCO Proposal of waste increase

My husband and I have just recently built a new house on Lake Catherine because this lake has really made improvements, I would like for my family and families to come to be able to enjoy this lake for years to come.

According to the numbers that I have seen on current waste to what they are wanting to increase to.... this will be a 70+% increase in waste that is entirely to much increase to be sent downstream to the lake and then in turn down the Ouachita River where I grew up going to and learned to swim at...This is unacceptable increase in wastage. I am opposed to the increase and would like for you to reevaluate there current wastage amounts and the impact it currently has on the water system.

My other comment would be for those giving the public notices out, I personally think in order for the public involved in these changes there should be a mass mailing to all person's living on the lake and the river and not just a notice in the paper. I personally do not get a paper of any kind and would not have known about this if it had not been for my neighbors.

Sincerely,

Cynthia (Cindy) Draper
224 Coy Grant Loop
Hot Springs, AR 71901

RESPONSE TO CINDY DRAPER (27B):

Thank you for taking the opportunity to provide comments on this rulemaking. Please see the response to Comment No. 27(a).

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

28. Aubrey Dunn:

Aubrey E. Dunn
149 Pintail Lane
Hot Springs, AR 71901

September 15, 2010

Mr. Doug Szenhier
Public Outreach and Assistance Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118

RE: UMETCO Permit Request

Sir,

We built our home on Lake Catherine in 1995. I am an avid fisherman and fish the Lake all year. I have noticed the bass population has continually declined. Three years ago, I found that UMETCO was polluting the lake with heavy metals. I have not eaten fish taken from the Lake since.

It is clear to me that one of the states great bass fisheries is being destroyed. A comprehensive study is needed to determine the steps required to protect the Lake.

Aubrey E. Dunn
Aubrey E. Dunn

RESPONSE TO AUBREY DUNN:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy

ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

29(a). Eddy Easley:

Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8/16/10 Verbal Comment ☐ Speaker # Written Comment ☐ (Attached or back of card)

Hearing Location Lakeside High

Name Eddy Easley

Address P.O. Box 491

City Sheridan State Ar Zip Code 72150

E-mail Address

ADEQ ARKANSAS Department of Environmental Quality www.adeq.state.ar.us

Against the proposal!

RESPONSE TO EDDY EASLEY (29A):

Thank you for taking the opportunity to provide comments on this rulemaking.

29(b). Eddy Easley:

Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8/16/2010 Verbal Comment ☐ Speaker # Written Comment ☒ (Attached or back of card)

Hearing Location Lakeside High School

Name Eddy Easley

Address 215 East Highland

City Malvern State Ar Zip Code 72153

E-mail Address

ADEQ ARKANSAS Department of Environmental Quality www.adeq.state.ar.us

Against relaxing standards in any way. ADEQ needs to be assisting the public in opposing the proposal. No! to relaxing regulations in regards to Wilson Creek

RESPONSE TO EDDY EASLEY (29B):

Thank you for taking the opportunity to provide comments on this rulemaking.

30(a). Harry Elliott:

> UMETCO Minerals Corporation (UMETCO), subsidiary of Dow Chemical, owns and operates a mine reclamation area just north of Highway 270 and Lake Catherine in Garland County, Arkansas. UMETCO was issued NPDES Permit AR 0048950 by the Arkansas Department of Environmental Quality to discharge to Wilson Creek in 2006. Wilson Creek empties into Wilson Cove, which is a small cove on Lake Catherine. UMETCO does not meet the effluent limits established in its NPDES permit. The permit limits are based on the State"s Water Quality Standards. The permit expires in February 2011.

RESPONSE TO HARRY ELLIOTT (30A):

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine. A significant portion of your comments are addressed by the General Responses to Comments found at the beginning of this document. References to the applicable general responses are found immediately below. Individual responses to comments requiring a more specific answer are included below the references to the applicable general responses.

Comments relating to permit compliance issues are outside the scope of the proposed rulemaking and these responses. As a point of clarification, the referenced permit limit issues, which relate to sulfate, chloride, and TDS, will be addressed by this proposed rulemaking.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to

meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

30(b). Harry Elliott:

UMETCO has petitioned the Arkansas Pollution Control and Ecology Commission ("Commission") to change the State"s Water Quality Standards. UMETCO is asking the Commission to remove the designated use of drinking water supply from Wilson Creek and to change the State"s mineral standards to match their actual mineral discharges to Wilson Creek. This is a third party rulemaking to modify the State of Arkansas Water Quality Standards, Regulation Number 2, for Wilson Creek. Third Party Rulemakings must follow the Administrative Procedures of Commission Regulation Number 8, and adhere to the requirements in Commission Regulation Number 2.303, 2.306 and follow the State of Arkansas Continuing Planning Process document of January 2000.

Wilson Creek is in the Ouachita Mountain Ecoregion (Plate A-23). The designated use of domestic water supply applies to all waters in the Ouachita Mountain Ecoregion. UMETCO"s petition has requested the Commission to remove the domestic water supply use designation for Wilson Creek. UMETCO"s petition cites as authority for this request in its Introduction, Section 2.306 of Regulation Number 2, Section 3.4 of Regulation Number 8 and the Continuing Planning Process. Paragraph 5 of UMETCO"s petition shows that ADEQ decided that the UAA met the requirements of Regulation 2.303, 2.306 and the Continuing Planning Process.

Regulation Number 2.303 contains the requirements for a UAA, including the requirement to **demonstrate that the designated use being removed is not attainable for one of the following:**

1. naturally occurring pollutant concentrations prevent the attainment of the use; or
2. natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or
3. human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
4. dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original

condition or to operate such modification in a way that would result in the attainment of the use; or
5. physical conditions related to their natural features of the water body, such as the lack of proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
6. controls more stringent than those required by Sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

A Use Attainability Analysis performed by UMETCO in 2004 and an addendum in 2009 **did not demonstrate that the domestic water supply designated use is not attainable for one of the six reasons** noted above as required by Regulation Number 2.303 (B) 1-6.
UMETCO proposes to remove the domestic water supply designated use. Regulation 2.306 establishes procedures for removal of any designated use other than fishable/swimmable. UMETCO"s petition cites as authority for this request Section 2.306 of Regulation Number 2, Section 3.4 of Regulation Number 8 and the Continuing Planning Process in its Introduction. The Continuing Planning Process dated, January 2000 is a document required by both the federal Clean Water Act and state law. Page IX -2 of the Continuing Planning Process specifies what information is required "in applying for site specific water quality standards modifications **in accordance with Section 2.306"** of Regulation Number 2, Water Quality Standards. One of the prerequisites states, **"May not remove *any designated use* unless one of the following conditions are met:"**

1. Naturally occurring pollutant concentrations prevent the attainment of the use; or
2. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation
requirements to enable uses to be met; or
3. Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
4. Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or
5. Physical conditions related to their natural features of the water body, such as the lack of proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
6. Controls more stringent than those required by Sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

A Use Attainability Analysis performed by UMETCO in 2004 and an addendum in 2009 **did not demonstrate that the domestic water supply designated use is not attainable for one of the six reasons** noted above as required by the Continuing Planning Process, page IX-2 (C).

I realize that in preparing a response to comments the respondent may believe that Comment 3 & 4 are similar, if not the same. So for clarification purposes, please note that in Comment 3, UMETCO failed to meet the requirements of Regulation Number 2.303. In Comment 4, UMETCO failed to meet the requirements of the Continuing Planning Process, page IX-2 (C).

Comments 3 and Comment 4 contradict the letter from ADEQ dated March 5, 2010, attached as the petitioners" Exhibit "H" because UMETCO did not meet the requirements of Regulation Number 2.303, Regulation Number 2.306 or the Continuing Planning Process.

RESPONSE TO HARRY ELLIOTT (30B):

The UAA Report and its Addendum present information supporting the applicability of APCEC Regulation No. 2, §2.303 to the requested designated use removal as well as the proposed site-specific criteria, for the following reasons: §2.303(B)(2) because natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use; §2.303(B)(3) supports the proposed rulemaking because human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; §2.303(B)(5) supports the proposed rulemaking because physical conditions related to their natural features of the water body, such as the lack of proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; and §2.303(B)(6) supports the proposed rulemaking because controls more stringent than those required by Sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

At least one of the CPP Page IX – 2 requirements was met, which, in turn, supports both the designated use removal as well as the site-specific criteria in the Reg. 2.306 language stating, "This procedure is applicable in those cases where the Commission chooses ***to establish less stringent water quality criteria without affecting a fishable/swimmable use*** or the designated use of Extraordinary Resource Water or Ecologically Sensitive Waterbody or Natural and Scenic Waterway, or when the Commission chooses ***to remove a use which is not an existing use other than fishable/swimmable,...***" The italics and bold text are added for the convenience of the commenter.

30(c). Harry Elliott:

In 2006, UMETCO was issued NPDES Permit AR 0048950 by the Arkansas Department of Environmental Quality to discharge to Wilson Creek. (Permit

referenced in paragraph 1 of UMETCO"s petition and in UMETCO"s UAA.) As part of the permitting process, UMETCO was given interim limitations for three years beginning on March 1, 2006, the effective date of the permit, and during that time only had to sample and report as specified by the permit. Compliance with the final effluent limits was to begin at the end of this three-year period. The three-year period ended on March 1, 2009. The discharge limitations effective since March 2009 are based on water quality standards and conform to the anti-degradation policy of the Arkansas Pollution Control and Ecology Commission Regulation Number 2. **UMETCO has been in violation of its permit limits since March 1, 2009.**

In lieu of complying with its permit, UMETCO has chosen to utilize the third party rulemaking process set out in Regulation Number 8 in order to change the standards its permit conditions are based on. But there is not anything in UMETCO"s **petition** that states its ultimate goal, which is a change in its permit limits to match its discharge into Wilson Creek. Once the rulemaking is approved, UMETCO will be seeking a permit modification to change its current permit limits, which it hasn"t met since March 2009. UMETCO is fixing its permit non-compliance by changing the water quality standards. This should be made clear in the **petition to initiate rulemaking** and in the **public notice** for the rulemaking.

In piecemealing these administrative decisions (rulemaking and permitting modification), the public can"t really participate fully. By the time, the permit modification is sent to public notice, the decisions on which the permit modification hinges will already be made in this rulemaking. If UMETCO needs these changes to support its permit modifications- that should be made clear in its rulemaking **petition** and in the **public notice** for the rulemaking, so the public knows what the real purposes of the rulemaking are for.

UMETCO has been working on this since its first Use Attainability Analysis conducted in 2004. Why does the Commission or ADEQ allow or even consider such a proposal without giving the public a chance to understand the purposes of the rulemaking, which is needed for the public to fully participate in these processes.

RESPONSE TO HARRY ELLIOTT (30D):

UMETCO strongly disagrees with the suggestion that UMETCO or ADEQ or APCEC is misleading the public with regard to this proposed rulemaking. UMETCO is following the requirements necessary to support the rulemaking and it is UMETCO's understanding that both ADEQ and APCEC are also following applicable regulations and requirements pertaining to the proposed rulemaking. UMETCO has been working toward a site-specific criteria change since well before the 2004 submittal of the original UAA studies. UMETCO has kept ADEQ informed as to its efforts, and ADEQ has required additional work and studies to ensure that the criteria change is appropriate and protective of downstream waterbodies. UMETCO also strongly disagrees with the commenter's

statement that it has been out of compliance since March 2009. UMETCO had a compliance period in its permit, which was extended when the initial permit was appealed; that compliance period has now expired. UMETCO sought to have the criteria change accomplished prior to the expiration of compliance period, but was delayed in order to address questions by ADEQ and the public. It is, in part, because of APCEC, ADEQ, and UMETCO's efforts to allow the public additional time to comment on the proposal that UMETCO has a noncompliance issue with the very same criteria it hopes to address in this rulemaking.

30(e). Harry Elliott:

UMETCO asked for comments from the Arkansas Department of Health (ADH). An internal March 23, 2010, ADH memo expressed concerns for the two water intake structures downstream and body contact at the mouth of Wilson Creek into Lake Catherine. ADH expressed this concern and objection by letter of March 30, 2010. ADH withdrew their concerns by letter of May 6, 2010, based on comments from UMETCO about their discharge, whether "batch" or "continuous." There was no technical justification provided to ADH to support their decision to withdraw their objection in the record.

In fact, Section 3.2 of the 2004 UAA prepared by Wright Water Engineers, Inc., for UMETCO states: "Discharges occur only when the pond reaches its full level. The amount of discharge from the East Wilson Pond has diminished in recent years with the completion of reclamation. The discharge is intermittent, and only occurs an average of 3.6 times each year, with an average of 4.04 million gallons per day each time." This is consistent with the facility permit application dated 2-26-04.

Also, UMETCO was issued NPDES Permit AR 0048950 by the Arkansas Department of Environmental Quality to discharge to Wilson Creek, on January 31, 2006. Part III, No. 7 of this permit requires that the facility maintain continuous flow from East Wilson Pond and the design of this system shall be submitted to ADEQ for approval within 6 months of the effective date of the permit. In a letter to ADEQ dated May 24, 2007, UMETCO describes their current operations and proposed installation of pumps to maintain a continuous flow. While the old system was manually operated and discharges were based on pH, the new system seems to be based on levels in East Wilson pit. I am concerned that the new system may automatically discharge into Wilson Creek without adjustments to the pH. While ADEQ has approved the installation of new pumps for a continuous discharge how will the facility maintain adequate pH with this new system?

With reference to the "batch" or "continuous" flow, the 2004 UAA and the NPDES Permit AR 0048950 are conflicting. Which document is correct?

Why should the 2004 UAA, which is out of date, be allowed to be used for amendments to Regulation Number 2, Water Quality Standards? How can ADEQ and the Commission consider changes to the water quality when the design for a continuous flow may continue to be somewhat intermittent and discharges may violate pH standards?

I ask the Commission to postpone a decision on this matter until ADEQ and ADH have had the opportunity to collaborate and completely review the proposal for the design of a continuous flow system, pursuant to the UMETCO NPDES Permit AR 0048950.

RESPONSE TO HARRY ELLIOTT (30E):

UMETCO believes the ADH letter you refer to above is dated May 5, 2010, rather than May 6, 2010. We are not aware of another letter from ADH related to this proposed rulemaking dated May 6, 2010. Direct responses to any comments specifically related to ADH decisions and actions are more appropriately addressed by ADH. However, UMETCO disagrees with the suggestion that ADH reached its final decision with regard to the rulemaking without reviewing "technical justification." It is UMETCO's understanding that the ADH review of the proposed rulemaking was based on review of technical information and information that they received from UMETCO representatives during meetings, as well as from the ADH review of the UAA Report and its Addendum.

With regard to the comment pertaining to concerns that the treatment system may discharge to Wilson Creek without treatment, UMETCO refers the commenter to the treatment process flow information included in the NPDES permit application in ADEQ files. Please note that low-pH water is treated as it flows into East Wilson Pond by the treatment system. In addition, automatic controls monitoring the pH of the discharge are in place to automatically stop the discharge if pH is detected outside of the system set points.

The NPDES discharge was a batch operation during the field work supporting the 2004 WEI UAA Report. The discharge was changed to a continuous flow after the data were collected for the 2004 UAA Report. Because of this, ADEQ suggested (and UMETCO agreed) that additional data should be collected to support the proposed rulemaking. These new data, collected in the spring and summer of 2009, along with other appropriate updates to the former 2004 UAA Report, were subsequently submitted to ADEQ as an Addendum to the 2004 UAA Report. The Addendum provided updated support for the proposed rulemaking for the APCEC submittal. The referenced addendum was titled "Addendum to the December 2004 Wilson Creek Minerals Water Quality Standards Evaluation," which also indicates that this report updated the 2004 UAA Report.

30(f). Harry Elliott:

> UMETCO submitted their petition pursuant to procedures at Regulation 2.306. The procedure is applicable in those cases where the Commission chooses to establish less stringent water quality criteria without affecting a fishable/swimmable use. However, the procedure is conditional. It states, the Commission may allow a modification of water quality criteria to accommodate **important economic or social development in a local area.** UMETCO has not provided the Commission any information to show how this change in water quality standards will provide important economic or social development in the area. UMETCO"s Economic Impact/Environmental Benefit Analysis shows a benefit to UMETCO and states that no other entities will be economically affected by this rule. As such, the Commission must deny this proposed rulemaking or postpone its decision on this request until such information is provided.

RESPONSE TO HARRY ELLIOTT (30F):

UMETCO disagrees with the commenter's interpretation of the Reg. 2.306 requirements. The commenter correctly quoted a portion of §2.306 but neglected to furnish an important portion of the regulation in his comment, as follows: ".... if existing uses are maintained and protected fully and the requirements for public participation in the Continuing Planning Process are met. As a minimum, the following information shall be submitted to the Director before initiation of the public participation process:

(A) Technological or economic limits of treatability.
(B) Economic analysis of the impact on the local area.
(C) Documentation that the use being removed is not an existing use and that all other designated uses will be protected."

These information requirements necessary to support Reg. 2.306 are all addressed in Section 5 of the 2004 UAA Report. The 2004 UAA Report and its 2009 Addendum were reviewed and approved by ADEQ in March 2010.

Regarding economic benefit and environmental impact, UMETCO has also shown that treatment would result in little or no environmental benefit, as the proposed criteria are protective of downstream waterbodies. Thus, reducing minerals in water draining from the UMETCO site will not further enhance the high-quality waters of Lake Catherine.

30(g). Harry Elliott:

> The justification required to show substantial and widespread economic and social impact to support changes under Regulation 2.303 and 2.306 is listed in the Continuing Planning Process, page IX-17, items 1-9. UMETCO has not submitted this information. In failing to provide this information, UMETCO did not provide adequate information in their petition to justify removing the drinking water

designated use and site-specific mineral changes under Regulation 2.303 and 2.306. I ask the Commission to deny UMETCO"s proposed rulemaking or postpone its decision until such information is provided.

RESPONSE TO HARRY ELLIOTT (30G):

The commenter is referred to the Arkansas CPP (2000), Justification Required for Substantial and Widespread Economic and Social Impact, Page IX-20 in our copy. The section begins with "The following is a suggested list of information to be supplied by the applicant...." The commenter apparently mistakenly thought the section said the following list was "required" as stated in the comment. In addition, UMETCO points out that the 2004 UAA Report contains a similar level of information as other, previously approved UAA reports relating to the analysis.

30(h). Harry Elliott:

UMETCO has requested the change to the water quality standards for Wilson Creek to extend .85 miles above the UMETCO treatment plant discharge point 001. There is not any information in the petition to explain why the standards need to be changed almost a mile **above** the UMETCO discharge 001. I understand that East Wilson Pond is where the pH is adjusted and the treated water is released via Outfall 001, which accounts for the majority of the flow in Wilson Creek downstream of the outfall. I also understand that this treatment increases the TDS, sulfates and chlorides. I do not understand why UMETCO wants the exact same mineral changes *upstream* of the outfall. The 2009 Addendum indicates that UMETCO may at some future point decide to treat the seep water, which would be good. But I don"t think the mineral changes should be changed upstream of Outfall 001 until a decision is made to actually treat that water. Especially since the Comprehensive Reclamation Plan submitted to ADEQ pursuant to Consent Administrative Order LIS 07-095 suggests just the opposite- that UMETCO will cease "treatment of surface flows up gradient of the East Wilson Pond." If the Commission adopts any changes to the mineral standards in Wilson Creek, those changes should not extend to any part of Wilson Creek above the 001 outfall.

RESPONSE TO HARRY ELLIOTT (30H):

The commenter suggests that there is not "any" information to support the proposed criteria in Wilson Creek – UMETCO refers the commenter to Sections 6.2.1 and 6.2.2 of the UAA Addendum where the justification for the proposed criteria both upstream and downstream of the NDPES outfall on Wilson Creek are discussed in detail. To summarize, recent data collected from monitoring stations in Wilson Creek were used to develop the proposed criteria. The derivation of the proposed site-specific criteria for chloride, sulfate, and TDS involved computing the 95$^{th}$ percentile of each parameter utilizing the appropriate data. Sulfate, chloride, and TDS levels are elevated in upper

Wilson Creek due to historical mining activities. Historical data from springs previously found in this area of the site show elevated levels of minerals, which could also contribute to elevated levels of minerals in upper Wilson Creek. Therefore, it is necessary to include this portion of Wilson Creek within the proposed rulemaking. The data and a comprehensive explanation relating to the development of the proposed criteria are provided in the UAA Addendum.

30(i). Harry Elliott:

> A document titled Comprehensive Mine Reclamation plan, submitted pursuant to CAO LIS 07-095 but not approved by ADEQ as required by the CAO, calls for the dismantling of the treatment plant at East Wilson Pond by 2013 and termination of the NPDES permit. I thought the treatment in East Wilson Pond was causing the increased minerals in Wilson Creek. Why does UMETCO need the mineral changes proposed in this rulemaking if it is going to dismantle the treatment system causing the increased minerals?

RESPONSE TO HARRY ELLIOTT (30I):

Concentrations of sulfate, chloride, and TDS have reduced over time due to the site reclamation activities and appear to have reached a roughly static level in Wilson Creek. These existing levels of sulfate, chloride, and TDS have been shown to be protective of aquatic life in the creek. Water treatment at the site using hydrated lime (i.e., calcium oxide) adds relatively insignificant levels of dissolved minerals to the effluent.

30(j). Harry Elliott:

> UMETCO proposes standards for Cl, SO4, & TDS of 56, 260, and 543. These values exceed the concentration limits for Lake Catherine beginning at Carpenter Dam for Cl, SO4, and TDS of 50, 40, & 150. **Lake Catherine„s standards are already higher then the Ouachita Mountain Ecoregion standards.**
>
> If the Commission changes the mineral concentrations for Wilson Creek, the changes should not be greater than the standards for Lake Catherine, which are already higher than the Ouachita Mountain Ecoregion standards.
>
> Documents obtained from ADEQ through the Freedom of Information Act show that UMETCO will also perform a UAA on Indian Creek to request similar changes to the water quality standards.
>
> UMETCO has provided to ADEQ for approval, a Comprehensive Plan developed for the mine pursuant to a CAO issued by ADEQ, LIS 07-095. While this plan was to be approved by the Mining and Water Division of ADEQ, there does not appear to be any approval to date. UMETCO proposes a schedule in this plan for

the removal of the treatment system at East Wilson Pond, proposes to reestablish the natural flow of Wilson Creek, and proposes to terminate its NPDES permit for the Outfall 001. I understand that at present, the treatment plant at East Wilson Pond receives water from the area of Indian Creek. So it seems that UMETCO"s current proposed rulemaking is only one small piece of the puzzle. Apparently, Indian Creek will also discharge directly into Lake Catherine, once the treatment system at East Wilson Pond is dismantled, creating a cumulative effect of the loading into Lake Catherine. If UMETCO proposes to change the water quality standards for the discharge of Indian Creek into Lake Catherine, both that proposal and this proposal should be submitted simultaneously, so the full effect of what they are proposing is made known to the Commission, ADEQ and the public. In not providing the whole picture, UMETCO seems to be "hiding the ball."

Once again, piecemealing these decisions is inappropriate. The public and the agencies making these decisions should know what the big picture is in order to make technically sound decisions and good public policy.

I ask the Commission to deny UMETCO"s proposed rulemaking or postpone its decision until all the information related to this proposed rulemaking is presented by UMETCO to the Commission and the public in one package.

RESPONSE TO HARRY ELLIOTT (30J):

UMETCO is operating under an approved comprehensive reclamation plan that has been periodically revised; the comprehensive reclamation plan is not at issue here.

The proposed rulemaking relating to Wilson Creek does not propose increased loadings or concentrations of sulfate, chloride or TDS beyond existing conditions in Wilson Creek. The UAA for Indian Springs Creek cannot proceed until final reclamation in the Lecroy area of the site is completed, feasible reductions in minerals have been achieved, and the final concentrations of these constituents in this creek are properly defined.

30(k). Harry Elliott:

UMETCO has proposed a change to remove the drinking water use for Wilson Creek.

UMETCO provides toxicity results for drainage into Wilson Creek. Page 4-2 of the 2009 Addendum states, "Results show that the unadjusted (seep) sample was acutely toxic to both test organisms." Even after the sample was "manipulated" the toxicity was not changed (page 4-3), i.e. the test organisms still died. Is toxicity one of the six reasons listed for removing a designated use not an existing use under the CPP or Regulation 2?

UMETCO plans to remove the treatment system according to the Comprehensive Plan referenced in Comment Number 11. Because of this removal, won"t the toxicity from the seeps have a direct route to Wilson Cove?

If there is something in the drainage to the creek that is toxic to living organisms, I would agree that the drinking water designated use should be removed. Residences are located all around Wilson Cove, except the point where Wilson Creek discharges into Wilson Cove. It should be a concern to the Commission that Wilson Cove is an area of primary contact recreation and adults with their children swim on a routine basis. What are the people who swim in Wilson Cove being exposed to (both in the water and the sediments)?

RESPONSE TO HARRY ELLIOTT (30K):

There appears to be some confusion about plans for the water treatment plant at East Wilson Pond. The treatment system will continue to treat water until this area is reclaimed, which will be protective.

30(l). Harry Elliott:

The public notice states the Commission will decide whether to adopt the proposed changes after the conclusion of the public comment period for the proposal and after UMETCO and ADEQ have responded to all public comments. But the proposed rule must also get legislative approval, prior to the Commission making a decision. This is an important step and should be included in the Commission"s public notice. I ask the Commission to include a statement in public notices about this process to afford the citizens the opportunity to provide comments to the legislative committees.

UMETCO utilized data older than five years by submitting 2004 Water Quality Evaluation. This is not consistent with the Use Attainability Analysis procedure in the Continuing Planning Process, page IX-6.

RESPONSE TO HARRY ELLIOTT (30L):

Updated data were provided in the 2009 UAA Addendum.

30(m). Harry Elliott:

Is a snapshot of fish in Wilson Cove taken on a single day in June 2009 really reflective of the impact of Wilson Creek on Wilson Cove? Or does it just reflect that water moves through Lake Catherine fairly quickly for a lake, and the water moves fish along with it?

The study did not make any comparison with any other cove, stream or tributary of Lake Catherine, which would seem to make any assumptions based on the study meaningless.
The study also did not consider sediments. The absence of any sediment data from Wilson Cove is a serious and significant omission.

I ask the Commission to deny UMETCO"s proposed rulemaking or postpone its decision until this information is provided.

RESPONSE TO HARRY ELLIOTT (30M):

Please refer to General Response No. 5 related to the supplemental Lake Catherine sampling. UMETCO strongly disagrees with the suggestion that this study was meaningless or that the study's conclusion (that Wilson Creek bay during sampling and while the UMETCO outfall was discharging reflected a healthy and diverse fish community) is inaccurate.

The study followed ADEQ-approved approaches, and incorporated the use of commonly accepted biological sampling and analysis techniques.

UMETCO disagrees with the suggestion that the sampling in some way did not account for potential sediment contributions to the water quality of the cove.

30(n). Harry Elliott:

The 2009 Addendum, page 2-1 identifies 6 sampling locations on Wilson Creek with sampling conducted on June 2, 2009. In addition, a location known as a seep was also selected for sampling. The toxicity assessment at Section 4.2 of the Addendum states this seep location reveals dissolved aluminum, manganese, and zinc that might be at acutely toxic levels. Might be acutely toxic? Either it is or it is not. Which is it?

No fish or benthic sampling was conducted at WIL- 5 one of the sampling locations immediately downstream of Outfall 001. Fish and benthic sampling was conducted at this location for the 2004 UAA. Why was it not sampled on June 2, 2009?

No fish were recovered from WIL-2 during the June 2, 2009 sampling event due to the toxicity of the water and "the consolidated precipitate that provide poor substrate. What is causing the toxicity? What is the "consolidated precipitate"? Where does it come from and what are its constituents?
Only 4 species of fish were identified in the sampling conducted at 5 locations on Wilson Creek, which excluded WIL-2 for some reason. Only one of the four species identified was an ecoregion key species and it was found at only 2 of the 5

locations, one of which was the "reference site." The UAA suggests that this is due to the low pH (at WIL-1, WIL-2 and WIL-2.5 all of which are upstream of 001). But the UAA also recognizes that relatively low pH is typical for Ouachita Mountain ecoregion streams. Is the pH at WIL-1, WIL-2 and WIL- 2.5 so low to account for the very poor fish sampling results in the 2009 Addendum? (The 2004 UAA results for pH for these sites were 5.01 to 6.37.) Are these results really a pH problem or a toxicity problem or both? Shouldn"t the factors causing the adverse impacts on aquatic life be identified/understood before the proposed changes to the water quality standards are adopted by the Commission? Especially if changes are allowed upstream of Outfall 001? I ask the Commission to deny UMETCO"s proposed rulemaking or postpone its decision until the toxicity is understood and provided to the Commission and the public.

Were the June 2, 2009 samples run for other parameters besides those listed in Table 4.1? If so, what were the results? If not, why not and shouldn"t they be?

RESPONSE TO HARRY ELLIOTT [30(N)]:

With regard to comments relating to 1) the low-pH seep/inflow, which is an old drainage pathway from the former Spaulding Mine area, 2) the reach of upper Wilson Creek upstream of a dam that diverts the entire creek flow through the treatment system, and 3) results of biological sampling in upper Wilson Creek, the following responses are pertinent:

- The UAA study showed that there is no toxicity in upper or lower Wilson Creek due to sulfate, chloride, or TDS. Reclamation in the area of upper Wilson Creek is not yet complete with regard to addressing low pH in this area.
- The fish sampling result was expected – fish are mobile and can avoid an area where low-pH water might exist.
- The consolidated precipitate which may, at times, be found upstream of treatment, is a thin layer of solids that form when a low-pH seep/inflow mixes with the higher pH water in Wilson Creek. The thin layer of solids occurs due to pH adjustment (i.e., pH is raised) in the seep/inflow water. The pH adjustment that occurs is similar to the adjustment that is the basis of the downstream treatment system (i.e., pH is raised and many dissolved constituents precipitate or "drop out" of solution). The constituents of the thin layer of solids found in the reach of upper Wilson Creek are principally composed of hydroxides of metals such as iron and aluminum.

- Final reclamation of the Spaulding seep/inflow will remove this effect on upper Wilson Creek but will not significantly change the sulfate, chloride, or TDS values in upper Wilson Creek. One important aspect of the UAA Addendum was to conduct the analysis that separated the sulfate, chloride and TDS effects in the area from the true source of toxicity so that it was clear to ADEQ that the effect on the biology in upper Wilson Creek was clearly not due to sulfate, chloride, and TDS.
- The sample data collected during the UAA Addendum were reported in the summary report.

Regarding the comment as to why biology was not sampled at WIL-5, a reach of Wilson Creek was monitored immediately downstream of WIL-5 (named WIL-6), which reflects the same water quality conditions as are found at WIL-5. Sampling at the additional station was not necessary to describe the biology in the reach of Wilson Creek between the NPDES outfall and the site property line.

30(o). Harry Elliott:

UMETCO says in the 2009 Addendum that the criteria proposed matches the conditions currently existing. UMETCO then claims that the changes proposed will not effect the water quality in Lake Catherine because Lake Catherine is currently meeting the state"s water quality standards which is shown by the fact that Lake Catherine is not on the 2008 303(d) list of impaired water bodies. I looked but didn"t find any sampling data that supports UMETCO"s claim that Lake Catherine currently meets the state"s water quality standards, and UMETCO doesn,,t provide any such data in its UAA. I do not think UMETCO should be able to say that its impacts on Wilson Creek are not having any effect on Lake Catherine because Lake Catherine is not on the impaired water list when there is no current data in the rulemaking record to support that statement.

The only data I could find concerning Lake Catherine"s water quality was data from 1989, 1994 and 1999 collected in the "epilimnion" and the "hypolimnion". I can"t tell where the samples were collected but the data is reported to be from upper Lake Catherine and lower Lake Catherine. There was a study conducted in 1989 assessing the state"s "significant publicly-owned lakes", which included Lake Catherine. I also found an ammonia investigation of Ouachita River that had sampling data from Lake Catherine dated April 1996. If there has been an assessment of water quality in Lake Catherine since 1999, I could not find it. I do not believe UMETCO should be able to rely on 11-year-old data, especially for a lake with water that moves rapidly through it. They do raise a good point in commenting on the Lake Catherine water quality though. I believe that UMETCO should be required to study Lake Catherine"s water quality to justify their claim that the lake meets current water quality standards and to show that Wilson Creek does not impact Lake Catherine"s water quality.

Is UMETCO"s statement that Lake Catherine is meeting the state"s water quality standards because it is not listed on the 2008 impaired waters list really enough for the Commission and ADEQ to conclude that Wilson Creek is not having any impact on Lake Catherine? I don"t think the historical data is helpful. UMETCO says in its UAA that the discharges from East Wilson Pond occurred in "batches"- large slugs 3 or 4 times a year. Even if the historical data was collected downstream of UMETCO"s discharge, how do we know that the data obtained was collected during one of UMETCO"s "batch" discharges? Especially considering how quickly water moves trough Lake Catherine. If the sampling events didn"t occur at the same time as UMETCO"s discharge, then the data does not relate to Wilson Creek"s impacts on Lake Catherine. And this type of information is needed before the water quality standards are changed.

Has UMETCO or anyone else adequately evaluated Wilson Creek"s downstream effects on Lake Catherine? If so, when and how?

I believe a seasonal study (including during drawdown) of the water quality in Wilson Cove (Lake Catherine) is needed *while UMETCO is discharging from East Wilson Pond* to assure the Commission, ADEQ and the public that Wilson Creek is having no impact on Lake Catherine. I also believe a study of the sediments in Wilson Cove is needed to assure the Commission, ADEQ and the public that Wilson Creek is not impacting Wilson Cove.

I ask the Commission to deny UMETCO"s proposed rulemaking or postpone its decision until such information is provided.

RESPONSE TO HARRY ELLIOTT (30O):

Comments regarding why Lake Catherine is not on the most recent Arkansas 303(d) list are better addressed by ADEQ. Please see General Response No. 4.a for additional information.

The data related to sulfate, chloride, and TDS in Lake Catherine reviewed by FTN Associates, Ltd. in preparing the UAA Addendum included the ADEQ Lakes Sampling Data (a 5-year revolving sampling program) and data from downstream of the lake in the Ouachita River available from ADEQ and collected as part of their monthly Ambient Monitoring Network (Stations OUA006 downstream near Malvern). In particular, the downstream ADEQ monitoring station, which is sampled monthly for sulfate, chloride, and TDS, reflects both the water quality of Lake Catherine over the long term due to the fact that only weak stratification occurs in the lake at times, as well as inputs that occur between Remmel Dam and the monitoring station. Therefore, the released water below Remmel Dam is considered conservatively characteristic of water in Lake Catherine. For the commenter's convenience, here are the data summaries for the constituents of interest for OUA006 for the most recent 5 years of data from STORET (i.e., while the UMETCO NDPES discharge was continuous):

ADEQ Monitoring Station OUA006:

- Sulfate, mean – 12.6 mg/L.
- Chloride, mean – 3.8 mg/L.
- TDS, mean – 60.4 mg/L.

These conservative data support that the Ouachita River and Lake Catherine are high-quality waterbodies with regard to sulfate, chloride, and TDS.

UMETCO reminds the commenter that ADEQ has approved the UAA Report and its Addendum, which provides the technical justification for the proposed rulemaking. Section 5.8.1 of the 2004 UAA Report presented a minerals loading analysis to evaluate downstream effects.

30(p). Harry Elliott:

> The "macroinvertebrate metrics" are not the same in the 2004 UAA and the 2009 Addendum. Why didn"t the 2009 Addendum use the same metrics as in the 2004 UAA? How can you compare results when you don"t use the same metrics?

RESPONSE TO HARRY ELLIOTT (30P):

The 2009 sampling was not designed to compare directly to the 2004 study, but rather to determine if the same factors (i.e., habitat) were limiting aquatic life.

30(q). Harry Elliott:

> There were fewer individual fish collected downstream of Outfall 001 in 2009 than in 2004. Does this suggest that water quality for fish is degrading?

RESPONSE TO HARRY ELLIOTT (30Q):

No. The 2004 sampling included a longer reach.

30(r). Harry Elliott:

> What does the fish sampling in Wilson Creek show? Does it show that water quality in Wilson Creek is impacted? If so, why doesn"t Wilson Creek impact water quality in Wilson Cove?

RESPONSE TO HARRY ELLIOTT (30R):

The fish sampling shows that the abundance and diversity of fish in Wilson Creek respond to changes in habitat more than they respond to changes in water quality. That is, it shows that water quality is not the decisive factor in what kind and how many fish are present. If water quality does not impact the fish in the creek, it should not do so in the cove where the inflow from Wilson Creek is diluted. Our cove study, conducted in 2010, noted that based on conductivity measurements, the cove water, at all depths, meets Lake Catherine water quality criteria for TDS to within a very short distance from the point of the Wilson Creek inflow.

30(s). Harry Elliott:

> The 2009 Addendum repeats that the concentrations of TDS, sulfates and chlorides are not responsible for the limited aquatic life in Wilson Creek. But the discussion of the amount of TDS and sulfates it would take to be toxic is incomprehensible to the average person. Can"t this be explained so the public can understand how the conclusion was reached that TDS and sulfates are not the source of the toxicity observed in Wilson Creek?

RESPONSE TO HARRY ELLIOTT (30S):

UMETCO refers the commenter to Section 6.0 of the Addendum for a less technical discussion. To summarize:

- Wilson Creek is an intermittent stream and the absence of water during certain times of the year affects the biological populations found there.
- Below the NPDES outfall, the UMETCO discharge dominates the stream flow in Wilson Creek.
- Aquatic insect diversity and numbers increase steadily as one moves downstream in Wilson Creek.
- The fish community is the more sensitive indicator of water quality in Wilson Creek across the former mine site. The fish community is limited in Wilson Creek upstream of the treatment system but downstream of the Spaulding inflow/seep. The fish community downstream in Wilson Creek (below the NPDES discharge) improves substantially but is still limited by the small size of the stream.
- Levels of sulfate, chloride, and TDS in the water of Wilson Creek are below levels predicted to cause problems and the sampling data confirmed these predictions.

30(t). Harry Elliott:

UMETCO submitted an addendum to the 2004 Water Quality Evaluation but it fails to address the requirements of the Continuing Planning Process, pages IX-11-- IX-17 and Regulation 2.303 and 2.306 requirements.
I ask the Commission to deny UMETCO"s proposed rulemaking or postpone its decision until these requirements are met.

RESPONSE TO HARRY ELLIOTT (30T):

UMETCO disagrees with the commenter that APCEC Regulation No. 2 and CPP requirements were not followed, as discussed previously. ADEQ reviewed the rulemaking petition and its technical justification and approved it with the specific wording in their approval that the submittal met Regulation No. 2 and CPP requirements.

30(u). Harry Elliott:

UMETCO"s proposal to change water quality standards, which allows for increased mineral loadings to Lake Catherine sets a bad precedent for all dischargers to Lake Catherine and will have a negative effect on property values.

Meeting notes obtained through the Freedom of Information Act reveal a meeting with UMETCO and ADEQ Water Division, about the Use Attainability Analysis, was held on February 17, 2010. The first item in the notes states that ADEQ is concerned that the Environmental Protection Agency will have problems with toxicity. I am also concerned with this toxicity issue and hope that the Commission and ADEQ are concerned as well.

While the notes indicate there was some discussion about the expiration date of UMETCO Permit No. AR 0048950, being either March 2009 or September 2010, they reveal the permit is currently in non-compliance. The notes do not specify when the non-compliance with the permit began. I would like to know how long the facility has been in non-compliance with its permit. I would also like to know if ADEQ proposes to initiate any action to require UMETCO to comply with their permit, as the process for amending the water quality standards continues. As the process for amending the standards may be quite lengthy, I ask ADEQ, "Will you allow UMETCO to continue to violate their NPDES permit until such time as they are able or unable to change the water quality standards to meet their permit limits?"

RESPONSE TO HARRY ELLIOTT (30U):

UMETCO was in compliance with its permit through September 2010, due to the interim compliance period and the appeal of the original NPDES Permit No. AR0048950. UMETCO had hoped to have site-specific criteria in place prior to that date, but the rulemaking was delayed.

30(v). Harry Elliott:

UMETCO has been working on this proposal since the 2004 Water Quality Study for Wilson Creek. The UMETCO file at ADEQ contains lots of information and history on the reclamation of this mine site. I am sure UMETCO has spent a great deal of time and money on plans for this reclamation project. Has UMETCO anticipated any delays that are possible in the legislative process? Has UMETCO anticipated any delay for receiving Commission approval or non-approval? Does UMETCO plan to continue their current discharge in violation of their existing permit or existing water quality standards? Does UMETCO have an alternate plan in place in case the water quality standards changes are not granted? If so, what is it? I ask the Commission, ADEQ and UMETCO to work for a solution to protect the water quality of Wilson Creek and Lake Catherine, without changing the water quality standards.

RESPONSE TO HARRY ELLIOTT (30V):

UMETCO is following the required process related to the rulemaking for developing site-specific criteria for sulfate, chloride, and TDS in a portion of Wilson Creek. This process has been pursued by many other third parties at many other stream reaches within Arkansas and has been approved on many occasions (see APCEC Regulation No. 2, Reg. 2.511). Delays in long and complicated processes such as the rulemaking process are common; in fact, this rulemaking has been delayed in order to provide additional information to ADEQ and the public, and to provide the time necessary to fully explain the proposal and answer questions relating to the proposal. If the rulemaking is not approved, UMETCO will develop an alternative, but only through appropriate discussions with ADEQ and only after proper approvals are received. It should be noted that the former mine site is not an industrial operation and therefore cannot simply terminate the discharge, which is composed primarily of stormwater runoff (including upstream flow from Wilson Creek). Due to the occurrence of this stormwater, the need to discharge it will continue regardless of whether the rulemaking is approved. The site-specific criteria approach, which has been followed for numerous other sites (including many former mine sites), was selected by the UAA analysis as the optimum approach, and ADEQ has approved the UAA Report.

30(w). Harry Elliott:

What is the environmental impact of UMETCO„s mine? ADEQ performed a study on Cove Creek, which is a tributary of the Ouachita River downstream of Lake Catherine. This study was conducted to monitor the impacts from a mine operation. Would it be possible for the Commission to request ADEQ to perform a study, similar to the one conducted at Cove Creek, targeting water quality impacts from the UMETCO mine? More information is needed to assure the Commission, ADEQ and the public that surface water runoff and discharges from the UMETCO mine are not causing harm to the receiving stream and Lake Catherine.

RESPONSE TO HARRY ELLIOTT (30W):

Please refer to General Response No. 4.a. There are no predicted negative effects on Wilson Creek, Lake Catherine, or the Ouachita River from the proposed rulemaking to set site-specific criteria for sulfate, chloride, and TDS in a portion of Wilson Creek.

30(x). Harry Elliott:

UMETCO claims, "We are not proposing to raise the standards above what we are already doing". What they are already doing is violating the State"s Water Quality Standards in Wilson Creek. Wilson Creek does not meet the State„s Water Quality Standards because it has been impacted by a mine, which no longer operates. UMETCO proposes to change water quality standards so the impacts to Wilson Creek can continue without change. UMETCO should be saying "we are not proposing to raise the standards any more than we are already degrading the water quality in Wilson Creek."

Conclusion:
These comments are being provided to the Commission to show that UMETCO has not met all of the requirements of Regulation Number 2 for changing water quality standards and the Commission should not grant UMETCO"s request to remove the drinking water use and change the mineral standards at this time.

Sincerely,
Harry Elliott
503 Wilson Lane
Hot Springs, AR 71901

RESPONSE TO HARRY ELLIOTT (30X):

Comments relating to ADEQ's authority with regard to the NPDES permit are better answered by ADEQ.

UMETCO disagrees with the commenter that the APCEC Regulation No. 2 requirements were not followed, as previously discussed. Please also see the General Responses to Comments for additional information on this subject (specifically General Response No. 2). ADEQ reviewed the rulemaking petition and its technical justification and approved it with the specific wording in their approval that the submittal met Regulation No. 2 and CPP requirements.

31. Joel Emerson:

FROM: Joel Emerson, Chemistry Teacher
emersonjoel@rocketmail.com

RE: Arkansas Water Quality, Cove Creek Watershed

Based on the study by Arkansas Department of Environmental Quality, Water Division, October 2009, there is clear evidence of a severely impaired and damaged watershed due primarily to excessively low pH levels generated by storm runoff from mining refuse accumulated since 1939. There have been some efforts made to reduce this impact, but the biological and chemical data generated by ADEQ demonstrate vividly that the streams involved and subsequently the larger bodies of water, both river and lake, will in time if not already, be adversely effected by conditions generated by improper and minimal containment of mining byproducts and waste items. Taking pH as the primary indicator, the normal level for a typical stream in this area is around 6.0 to 6.5 or very mildly or weakly acidic. pH levels have been measured as low as 3.0 with levels of 5.0 common. In short, a pH of 3.0 is 1000 (one thousand) times as acidic as a pH of 6.0

Statements made by WEI (contracted by Umetco) indicate nothing can be done to improve water quality because of prohibitive costs. This is an oversimplification of the situation based solely on what is good for Umetco. WEI is hardly an independent or unbiased evaluator. The report by WEI minimizes the use of standard biological indicators used by ADEQ to assess the vitality of a naturally existing water system, their purpose is clear and does not constitute real science.

Any water source in the immediate area or downstream is being adversely affected by this mining operation. Until the standard indicators demonstrate a return to acceptable levels of chemical content, restrictions and a more effective containment method should be implemented on said mining activity.

RESPONSE TO JOEL EMERSON:

Thank you for taking the opportunity to provide comments. UMETCO is not familiar with the ADEQ October 2009 Cove Creek watershed study referenced by the commenter, but the proposed rulemaking is related to Wilson Creek at the former Wilson Mine on Hwy 270 between Hot Springs and Malvern. Wilson Creek does not lie within the Cove Creek watershed. UMETCO has undertaken substantial reclamation activities, including regrading, reestablishing vegetation, controlling stormwater, and other activities designed to control erosion and pH of water draining from the site. UMETCO also has a treatment plant onsite where lime is added to the water to adjust the pH prior to discharge to Wilson Creek through our permitted outfall. Studies performed in conformance with APCEC Regulation No. 2, show that there is no adverse effect on Lake Catherine as a result of the proposed criteria change.

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by

commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

32. Debra Erwin:

Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8-16-10 Verbal Comment ☑ Speaker # Written Comment ☐ (Attached or back of card)

Hearing Location Lakeside High

Name Debra ERWIN

Address 198 Mallard Ln

City Malvern State AR Zip Code 72104

E-mail Address debraerwinnd@yahoo.com

ADEQ ARKANSAS Department of Environmental Quality www.adeq.state.ar.us

RESPONSE TO DEBRA ERWIN:

Thank you for taking the opportunity to provide comments on this rulemaking. We appreciate your interest and welcome feedback from members of the community.

33(a). Fisheries Answers by AC, LLC/Allen Carter:

**Fisheries Answers by AC, LLC**
Allen Carter
5901 Kentucky Road
Benton, AR 72019
August 16, 2010

Arkansas Pollution Control and Ecology Commission
Arkansas Department of Environmental Quality
Attention Doug Szenher, Public Outreach and Assistance Division
5301 Northshore Drive
North Little Rock, AR 72118

**Reference Proposed Changes to Regulation 2 submitted by UMETCO Minerals Corporation**

As a reminder to all of us, please review the following mission, goal, and purpose statements.

The Mission Statement of the Arkansas Pollution Control and Ecology Commission (APC&EC) is: **To Protect, Conserve, and Enhance the Quality of the Air, Water, and Land in Arkansas.**

The Mission Statement of the Arkansas Department of Environmental Quality (ADEQ) is: **To Protect, Enhance, and Restore the Natural Environment for the Well-being of All Arkansans.**

The Goal of the Water Division of ADEQ is: **The Physical, Chemical, and Biological Integrity of All Arkansas Water are Protected and Enhanced.**

The Purpose of Regulation No. 2 covers half of a typed page. The following are excerpts. **The water quality standards herein set forth are based upon present, future and potential uses of the surface waters of the State and criteria developed from statistical evaluations of past water quality conditions and a comprehensive study of least-disturbed, ecoregion reference streams. The standards are designed to enhance the quality, value and beneficial uses of the water resources of the State of Arkansas, to aid in the prevention, control and abatement of water pollution, to provide for the protection and propagation of fish and wildlife and to provide for recreation in and on the water. ... It is the purpose of these regulations to preserve and protect the quality of this water so that it shall be reasonably available for all beneficial uses and thus promote the social welfare and economic well-being of the people of the State. It is further the purpose of these regulations to designate the uses for which the various waters of the State shall be maintained and protected; to prescribe the water quality standards required to sustain the designated uses; and to prescribe regulations necessary for implementing, achieving and maintaining the prescribed water quality.**

RESPONSE TO FISHERIES ANSWERS BY AC, LLC/ ALLEN CARTER (33A):

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

33(b). FISHERIES ANSWERS BY AC, LLC/ALLEN CARTER:

**With all the above being true, it is the responsibility of the Commission to make sure that pollution is not allowed. Reducing the water quality standards of Wilson Creek as requested by UMETCO will permit unwanted minerals and dissolved solids to travel downstream, causing unknown problems to the various fisheries and to the drinking water intakes of the many water users.**

**Has all the incoming pollution of Wilson Creek been considered? The upper area of Wilson Creek where the area known as "Spaulding" flows into the creek has very low pH most of the year and it appears that aquatic life is non-existent. Just above this point, fish and crayfish live. Is any action being considered to correct this "discharge" from the Spaulding area?**

RESPONSE TO FISHERIES ANSWERS BY AC, LLC/ALLEN CARTER (33B):

Water originating from the Spaulding area flows to the treatment plant for treatment before its eventual discharge to Wilson Creek via Outfall 001. Therefore, the UAA analyses included the "Spaulding" seeps/inflows to Wilson Creek. The Spaulding area of the former mine site is part of the continuing reclamation ongoing at the site in cooperation with ADEQ. In addition, the minerals and TDS are addressed by the UAA studies, and have been determined not to cause "problems" to fisheries or drinking water.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based

on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

33(c). FISHERIES ANSWERS BY AC, LLC/ALLEN CARTER:

**Apparently the pollution produced in the Indian Springs area is also being dumped into the Wilson Creek watershed. However, this really does not seem to be working because when it rains, the Indian Springs area is flooded and lots of polluted water runs down the creek. Is anyone (ADEQ) checking this area when flooding occurs? When this area floods, I'm sure that the water quality standards are violated. What is the plan for this to be curtailed? Pumping the water to Wilson Creek is not working and it may be "overloading" the pollution control system on East Wilson Pit and Wilson Creek. Makes you wonder, huh?**

RESPONSE TO FISHERIES ANSWERS BY AC, LLC/ALLEN CARTER (33C):

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

Some of these comments relate to Indian Springs Creek, an area of the former mine site where reclamation is ongoing, and do not relate to the proposed rulemaking. As a result, these comments are outside the scope of UMETCO's response.

33(d). Fisheries Answers by AC, LLC/Allen Carter:

**The fishery data presented in the 2009 Use Attainability Analysis (UAA) for Wilson Creek shows that the fish species present in the creek are not the indicator species (except 1) for the Ouachita Mt. ecoregion. Where there samples taken in other watersheds in the area to support that the indicator species are simply not in the area? Where there samples taken above the "Spaulding" area to compare with the samples in Wilson Creek area where the change is requested? As I mentioned before, on a tour of the area I saw no fish where "Spaulding" drains into Wilson Creek and I saw several specimens along with crawdads above that area. If this is a natural pollution, why would aquatic life be just above the area in question?**

RESPONSE TO FISHERIES ANSWERS BY AC, LLC/ALLEN CARTER (33D):

The technical support for the criteria change does not argue that indicator species are not present in the area. Fish sampling was conducted in Wilson Creek upstream of the Spaulding area and produced two species. This reach represents an extreme headwater habitat where aquatic life is limited to enduring pools during low-flow conditions. This is the reason for the low diversity in Wilson Creek above the Spaulding seep/inflow.

33(e). Fisheries Answers by AC, LLC/Allen Carter:

There was an electrofishing (the study called it electroshocking) sample conducted in the Lake Catherine cove which Wilson Creek flows into. It indicated various species but it did not compare fish data from a similar cove in the lake. It was just a "snapshot" in time and therefore can't be considered valuable data for anything other than saying some fish were present at that moment. The cove has silted in the past and has even been dredged. At this time it is silted in and, in my opinion, needs to be dredged again. I wonder how much pollution (minerals and metals) would be found in the bottom mud if sampled. The fishery of the cove should be compared with another fishery in a Lake Catherine cove with similar habitat. That data could indicate if the water quality in the Wilson Creek cove is inhibiting the growth of the fish population. Without samples of the various elements in the bottom substrate and without comparing the fishery with another "typical" fishery, we do not have the data needed to assess the effects of Wilson Creek pollution on the fishery.

Having spent four years on the APC&EC, I understand the difficulty in making decisions concerning changing the water quality standards. I always wanted (and usually needed) more data. I'm requesting that a comprehensive analysis of the present and potential future point source and non-point source be conducted. This should be done by a task force that includes government (ADEQ and other agencies), industry (present permit holders and other industry), and Arkansans. First a map could be developed to show how many point source permits are approved at this time.. Also, the quality and quantity of the discharges should be identified. The purpose of this study would be to make sure that the amount of pollution (change from ecoregion standards) approved to be discharged would not overload the system. If you approve one today and many more in the future without looking at the whole complete picture, you will not be following your mission, purpose, and goal statements. I request that you do not consider (vote on) the UMETCO third-party rule making request until you have data from the comprehensive study. The study should include the Ouachita River area from Lake Ouachita Dam (Blakely Mt. Dam) to just past Arkadelphia. I'm sure that all of the water users (drinking water processors, anglers, other recreational water users, industry) will appreciate a well-informed decision.

Allen Carter

RESPONSE TO FISHERIES ANSWERS BY AC, LLC/ALLEN CARTER (33E):

It should be noted that all biological sampling is a "snapshot in time." The reason such data are valuable is because biological communities integrate the effects of habitat and water quality over time. The purpose of the cove sampling was to evaluate the abundance and distribution of fish in the cove according to expectations based on available habitat. Areas of the cove where cover and structure were present contained a large number and variety of fish. The area of the cove where fish abundance was greatest was the extreme

upper end closest to the Wilson Creek inflow. This area supported an abundance of cyprinid and centrarchid fish species, including the very sensitive brook silversides. It was the conclusion of the investigators that the numbers and kinds of fish present in the cove were consistent with expectations based on available habitat and that fish were not avoiding habitats closest to the Wilson Creek inflow. Accordingly, there was no reason to suggest that additional sampling at other locations was necessary. The proposed rulemaking does not discuss whether or not sediments in Lake Catherine should be removed because sulfate, chloride, and TDS are dissolved constituents and are not sediments. The data from the fish sampling in the Wilson Creek Cove suggest an abundant and diverse fishery.

UMETCO has performed the required study outlined in APCEC Regulation No. 2, and the study shows that the proposed site-specific criteria for a portion of Wilson Creek will not adversely affect Wilson Creek, Wilson Cove, Lake Catherine, or the Ouachita River. While a broad-based study of Lake Catherine could be informative, it goes beyond the studies that are required or necessary for this proposed rulemaking. For additional information, please see General Response No. 2.

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

34. Barbara Fitzgerald:

August 28, 2010
703 Clardy Street
Malvern, Arkansas 72104

RECEIVED
SEP 01 2010

Attn: Steve Drown,, Water Division Manager
5301 North Shore Drive
North Little Rock, Arkansas 72118

Dear Mr. Drown:

I read in this mornings paper the editorial letter from Chris Williams regarding the proposed dumping by UMETCO of its waster discharge into Wilson Creek, which would have a direct impact on the water supply in our home, affect ourselves and our three pets. I've grown an herb garden for 15 years without pesticides. Not one book I have says to add wasters discharge to them as they pick up what I water them with. We send herbs to friends in California, Texas, NYC, Washington D.C., Gettysburg and locally. We drink a lot of water, cook and bathe from the house supply from the City.

Multiple that by all the people affected above and below us and you have an environmental disaster which can be prevented by not allowing this to happen. It is a lot easier to design out mistakes than it is to repair them. Has there been a pro-active environmental study on the long term effects of this "discharge" on people or animals, domestic or wild? We eat beef, fish and deer here.

I am also a voter and I write letters, so I am sending my concerns to those here in the state and in Washington.

I urge you to take a pro-active stand against this dumping. I do know we need jobs here, but we also need our people to be healthy and that is the first priority. It would be a big plus for UMETCO to process their discharge before dumping in my book. I understand from the letter Chris wrote that they could and this is an option.

Thank you for your time,

Barbara Fitzgerald

Ms. Barbara Fitzgerald, Ret. RN

RESPONSE TO BARBARA FITZGERALD:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

UMETCO's request for site-specific criteria for sulfate, chloride, and total dissolved solids will not have a direct effect on the water supply at your home. The water draining from the UMETCO site runs across rocks and soils that are high in minerals and some of the water needs to be treated to adjust the pH and improve the water quality. It is this treated water, plus natural stormwater, that is discharged down Wilson Creek. The

proposed rulemaking does not include dumping; it does, however, address sulfate, chloride, total dissolved solids in Wilson Creek.

The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy

ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

35. Bob and Shirley Frazier:

BOB FRAZIER
ATTORNEY AT LAW
804 EAST PAGE
MALVERN, ARKANSAS 72103
(501) 337-9147

PLEASE REPLY TO P.O. BOX 191

16 September 2010

Doug Szenher
Arkansas Dept. of Environmental Quality
Public Outreach and Assistance Division
5301 Northshore Drive
North Little Rock, Arkansas 72118

Re: (1) Unmetco Corporation & Regulation 2
(2) Cleanup of Magcobar site in Magnet Cove, Hot Spring County, Arkansas

Dear Sir:

With regard to issue(1) we, the undersigned are emphatically and unalterably opposed to the proposed lowering of water standards for Wilson's Creek. We think these standards should be heightened and not lowered.

(2) Now concerning referenced issue (2) we live in almost in sight of Macobar's 600 acre mining site; and we know that the site and its 90 acre "lake" to be nothing but pure pollution.

On this date we attended a public meeting concerning issue (2) at the Magnet Cove Elementary School. What a farce! Those from your division who presented the "plan" were nothing but front persons for Macobar. You people are supposed to be protecting the environment, the people of Arkansas, and their real property. For shame! Do your job!

RESPONSE TO BOB AND SHIRLEY FRAZIER:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for chloride, sulfate, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The comments are acknowledged. As a point of clarification, the former mine site referenced in the comment (Magcobar) is a different mine site than the former mine site that is the subject of the proposed rulemaking. The proposed rulemaking is related to the former Wilson Mine site.

36. Michele Glover:

Michele M. Glover

**206 Fadas Road**
**Malvern, AR. 72104**
**501-844-288**

My husband and I do not wish to have higher levels of mining wastes discharged into Wilson Creek which flows into the lake on which we live and into the river from which we get our drinking water. Several downstream cities and water districts which draw from the Ouachita River will be required to purchase, haul and add even more corrective chemicals to bring our water source to the required potable standard. Why should the local tax payers of Kimsey Water District, Malvern, or any other community whose water source is the Ouachita River, have to do so? (And this especially so since we object strenuously on other grounds as well?)

My husband and I live on Lake Catherine. Our home is on the lake. UMETCO is threatening our property values when they further pollute the lake with 5X higher solids , sulfate and chloride. We purchased our lake home with the intent that our grown children would inherit it and one day would pass it along to future generations. What of those generations when UMETCO has extracted all the minerals it wants from the area, despoiled our waters and moved on?

Our friends and extended family members swim off our dock and ski in Lake Catherine. Polluted water is detestable in any area that is clearly designed for recreation. Lake Catherine State Park is directly across from our home. We look out our lakeside windows and see dozens of campers and lodgers enjoying the lake year round. Many of these campers annually come from out of state. What voice are they given in the fate of the waters to which they expectantly come each year to camp beside and play in? Furthermore, what will the local economic impact be if they stop coming because of pollution?

What of the health of all of us playing in these waters as UMETCO discharges build over time? What of the health of the wildlife? More specifically, why hasn't ADEQ required comparative studies of wildlife and flora in other bays and inlets, and in the river so that both ADEQ (the state regulating agency) and we tax payers can better see what UMETCO's "dog and pony show" study in Wilson Creek really means?

RESPONSE TO MICHELE GLOVER (36A):

Thank you for taking the opportunity to provide comments on this rulemaking. We understand your concern is about Lake Catherine. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. Accordingly, there will be no impact on recreation or tourism as a result of the proposed criteria change.

UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

We understand that you are concerned that water treatment costs will increase. However, the proposed rulemaking will not increase treatment costs (see General Response No. 4.c for further explanation). In addition, UMETCO is not discharging "mining wastes." The water that UMETCO is treating and discharging is rainwater and surface water that runs across the site, picking up minerals from the soils and rocks.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

36(b). Michele Glover:

I am convinced that there will be long term, measurable adverse health and economic consequences to our area from allowing UMETCO to continue to discharge at its requested higher levels. Further, presumably ADEQ intends to continue to allow this industry to keep on using waste collection ponds which overrun into adjacent property owners' land every time there is a heavy rain. Obviously, we object to ADEQ lethargy regarding these practices.

As a member of Malvern's Ouachita River Park Commission, my concerns extend to the recreation on and alongside the river as well. Since 2000, our local commission has built a million dollar (literally) park along the Ouachita which runs through the edge of Malvern's Water Treatment plant property. This downstream park includes an ADA trail paralleling the river, a boat ramp, a pavilion and bathrooms. The Ouachita River at this point has the only summertime natural white water ledge in the state. Kayakers come to play on it with great frequency and in large numbers. A dirty, toxic river could certainly discourage this practice. Malvern would suffer loss . One of our local commission's stated goals is to steward the natural assets the river responsibly. Allowing the greater levels of toxic discharge are entirely contrary to our commission's stated goal.

I have many questions about the position in which the public is placed with ADEQ's "third party" applications for businesses. I certainly feel that with UMETCO's application, the public has been "given the business". As I understand matters, this company is merely asking formal permission to do that which they are already doing, now that they have fulfilled all their ADEQ paperwork requirements! In cases like this, it seems the public is rendered almost powerless, no matter how much we protest ADEQ's process and decision. This is the fodder of lawsuits.

Judging from the little inside-pages news release in last week's Arkansas Democrat Gazette--- clearly from ADEQ, all our protests amount to nothing because this little release of waste products is only going into little Wilson Creek. When did ADEQ become the servant of industry instead of the public's interests? It has not always been this way. Why now? Is it just today's director, staff and PC&E commissioners? These things make a member of the general public suspicious.

The recent public hearings held by the Arkansas Pollution Control and Ecology Commission (APC&EC) also strike me as practically an exercise in public futility. You have allowed us to vent, but isn't that just about all?

My husband and I attended the public hearing at the Lakeside Junior High School media room in mid-August. We appreciated the extended time period given to respond. I did very much appreciate the opportunity to learn more, but what I

learned, I had to learn from other members of the public who had known about these occurrences sooner than I and who had scientific backgrounds I do not have. Like ADEQ's processes, APC&EC's intake was substandard and certainly not citizen friendly.

We have been suddenly required to hurriedly acquaint ourselves with government red tape and rigamarole in order to try to protest in a way which will be heard. APC&EC has taught me nothing pertinent to our situation on either a scientific or governmental front. It makes people angry to be told they must do something right away about things that deeply concern them. Yet, you have not voluntarily provided us with any information about what we should do or can do. You have not offered us any means of doing something about our concerns other than allowing us to yell very loudly! It's infuriating and emasculating.

RESPONSE TO MICHELE GLOVER (36B):

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

37. Betty Harris:

To whom it may concern – I am writing to tell of my ordeal with Umetco Mining. My dad leased a small portion of land that was & is contiguous with larger properties leased. A creek runs through my property which my husband and I purchased from my parents. As a child, I and my siblings could safely play in this clear-running creek. It is now stagnant and no life in it. The banks are gone and becoming marshy. It is very difficult to keep brush cleared away. I cannot get my bushhog & tractor as close in as needed. It has been stuck twice. Trying to keep this boggy creek clean is costing me. I have to

hire men to come in & clean it by hand. The creek is stagnant & yellow on down to my neighbors also. We were threatened with lawsuit from neighbors and had to sue on our own behalf. One neighbor had cattle who drank from this creek. I also have a well that has been adversely affected. For years this was our drinking water. We had to put in city water. The mining Umatco did here at Magnet Cove has caused lots of problems and cost to those who use and have always enjoyed a free-running creek until Umatco! Much of our water was diverted which we were assured by Umatco that it would not be as we were to get our water back when they moved out. We had to take them to court to get back the small percentage we got back - which wasn't enough to prevent per-
manent damage.

Thank you
Betty Harris
134 Hawkins Lp
Malvern, AK
72104
home (501) 332-6531
cell (501) 337-3384

RESPONSE TO BETTY HARRIS:

Thank you for taking the opportunity to provide comments. As a point of clarification, this rulemaking does not involve a former mine site near Magnet Cove but rather the former Wilson Mine on Hwy. 270 near Hot Springs.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

38. Randy Haynes:

From: bigrhaynes@aol.com [mailto:bigrhaynes@aol.com]
Sent: Monday, August 30, 2010 8:21 AM
To: Reg-Comment
Subject: UMETCO Proposal of waste increase

I am very much against the proposed increase for waste limits of UMETCO's outflow. It is hard for me to understand how this has even progressed this far, take a look at your mission statement.

Mission Statement:
To protect and enhance the water quality of the State of Arkansas in a manner consistent with the economic well being of all Arkansans.

Many rural water and municipalities use the Ouachita River as their source of water, it does not make sense to me how this proposed increase can be categorized as enhancing or protecting water quality.
As for economic well being, I do realize that further treatment of UMETCO's waste will be more costly and in the end make their product more expensive to the end user, but on that same subject if we allow for more pollutants to flow down stream it will drive the cost of water treatment up for all those who use this stream as their water source.

Thank you,

Randy Haynes
197 Windsong Terrace
Hot Springs Ar. 71901

RESPONSE TO RANDY HAYNES:

Thank you for your comment. As noted elsewhere in these responses, the proposed criteria change will not have an adverse effect on water quality in Lake Catherine or the Ouachita River. It will not impact the cost or quality of public drinking water. Therefore, additional treatment of water at the UMETCO site would have no environmental benefits and would not affect the economics of drinking water treatment.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

39. Anne Head:

From: Head, Anne [mailto:AHead@mtstmary.edu]
Sent: Monday, September 20, 2010 10:29 AM
To: Reg-Comment
Cc: Tom Head
Subject: UMETCO
My name is Anne Head. My husband Tom and I have owned a cabin on Lake Catherine for over 30 years, during which time we've enjoyed many, many blissful days & nights on this peaceful, natural, beautiful, quiet, and (till now) largely unspoiled paradise. I fear that this almost-heaven will be irreparably harmed if UMETCO is allowed to lower the standards for the release of whatever

poison they are already discharging into the water. Can "lowering standards" ever be a good thing? I don't think so. And once those standards are lowered, can they ever be raised again? I seriously doubt it. Even the UMETCO officials have stated that "the lake meets current water-quality standards." (9/17 article in Ark DemGaz). What will these water-quality standards become if UMETCO's request is approved? This makes me wonder why a fix is needed for something that is not broken.

Our little spot is where we have always planned to retire, and we are very concerned about what the future holds for our lake. This is a largely residential lake whose property owners would be devastated if this decision were to poison our lake. Please realize that people actually LIVE there; they don't just pop in for a little recreational skiing & boating & leave at the end of the day. These are the same people who got the shaft in May 1990 when the fine folks at AP&L (now Entergy) neglected to open Remmel Dam after Carpenter Dam's flood gates were opened, turning Lake Catherine into a giant churning, rushing, destructive, raging torrent that took EVERYTHING in its path & sent it over the top of Remmel Dam. (we were there & witnessed this horror). It was a terrible event, but the people living on the lake rebuilt & recovered, no thanks to AP&L. The people of Lake Catherine are a resilient bunch, but this is getting a little old! There are now several nice, new, big homes and hundreds of small homes that were repaired after the big flood. I bring this up just to say that WE HAVE SUFFERED ENOUGH! I know this has nothing to do with that, but please.....we are tired of being treated like we don't count. This whole process evidently began over a year ago, yet this is the first we've heard of it, thanks to Fox news. It makes me wonder why something that personally impacts so many was kept "under wraps" for so long, obviously with the intent of an uncontested approval.

I urge you to take a little boat ride on Lake Catherine & just take in the sheer beauty of our little lake. Blue herons, hawks, ducks, geese, even eagles can be seen in their natural habitat. The scenery and the calm, clear waters are candy for the nature-lover's soul. The sunsets are spectacular. The fishing is good; please realize that people actually eat the fish they catch from these waters! When we are there, we are in the lake. Literally. We are floating or swimming in this same water that is now being threatened. This concerns me very much, and you are in control of the approval or disapproval of something that will affect so many people.

Please do what's best for the people of Lake Catherine, and seriously consider the human side of this decision. UMETCO no doubt will continue "reclaiming" the land (as they should), but do they really need to lower any standards in order to do so?

Thank you very much for taking the time to read this long email, and I hope you will take the comments of one more person into consideration.

RESPONSE TO ANNE HEAD:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Wilson Creek or Lake Catherine. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated

that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

40. Tom Head:

From: Tom Head [mailto:thead@gainact.com]
Sent: Monday, September 20, 2010 2:37 PM
To: Reg-Comment
Subject: <no subject>

Good afternoon. My name is Tom Head. I am writing to express my concerns regarding the application by UMETCO to ADEQ to allow for increased concentration levels of certain chemicals being dumped into Wilson Creek, a feeder creek into Lake Catherine. First let me put my bias out front. I am against dumping and pollution of any kind. Having said that I also believe that until better methods of disposing of waste becomes available, there is a middle ground that can be reached without significant loss/risk to the parties involved. The issue as best I can understand it that UMETCO has been dumping chemicals into Wilson Creek at a higher concentration level than was approved and is seeking a revision to their agreement to raise the approved concentration level to the current level. As a 30 year property owner on Lake Catherine, I have been witness to many efforts to clean up the lake and improve water quality for the enjoyment of all. Now it seems there is an possibility of taking a step backwards in these efforts. From the perspective of a property owner and user of the lake, it seems I am being asked to assume all the risks associated with changing the approved

discharge levels. If the application is approved and then a few years down the road it is determined that "OOPS" we made a mistake here, who is responsible for trying to clean up the mess? Who suffers? UMETCO? ADEQ? Property owners? How can one predict the long term effects of increased concentration levels? Is it really worth the risk? It appears that the "approved" level of discharge into the water has been deemed safe, I think the term "drinking quality" has been used. I like that term as any use of the lake such as swimming and skiing is going to include "drinking" some of the water. Now that designation is being threatened and I fail to see the benefit to the greater good by allowing such a threat/risk to go forward. UMETCO has been diligent in their efforts to reclaim the land. It is their responsibility to do so but not at the expense of the "downstream" people. They agreed to do this and, I assume, do it according to a plan approved by ADEQ. There was a good reason back then for setting the discharge concentrations where they are. Those levels were considered "safe" by qualified experts. Maintaining those levels was what they agreed to do. Now "safe' is becoming a relative term with a sliding scale of unknown risk, not only to those who use Lake Catherine and but also the downstream Ouachita River. What has changed about the definition of "safe" so that now the newly requested levels are safe, just not as much so? Sounds to me like the risk just went up. Who benefits and who loses if this application is approved? This is not a win/win situation. Only win/lose. I believe the agreement (concentration levels) that was originally approved reaches the middle ground I alluded to earlier. I would ask that you reconsider your initial approval (no concerns expressed) of their request, then deny their request and maintain the approved discharge levels from the original agreement. The risk to the lake is too great!!!

Thank you for your time.
Tom Head

RESPONSE TO TOM HEAD:

Thank you for taking the opportunity to provide comments on this rulemaking. With regard to the initial establishment of water quality criteria in Arkansas, the criteria were not established based on what levels would be protective of aquatic life. Instead, they were established based on sampling of "least-disturbed" streams – headwaters without development impacts – in the region. Because natural conditions, development, and industry all impact the ability of a stream to meet these water quality criteria, ADEQ established a procedure in APCEC Regulation No. 2 to establish site-specific criteria. Such changes are only allowed if appropriate studies show that the new standards will be protective of the aquatic life and human uses of the water. Such changes have been approved for approximately 100 stream reaches in Arkansas. UMETCO's studies show that the proposed criteria would be protective of aquatic life in Wilson Creek and downstream.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are

protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

41. Jennifer Higgins:

I would like to object to the UMETCO request to change the release of wastewater changes
into Wilson Creek and then Into Lake Catherine.

I can onnly assume from reading your pamphlet from the August meeting that if it wont
change the amount of pollution going into the lake they are already unable to meet
the permit requirements.

Your department is in charge of our environments cleanliness therefore you should
come up with a solution for us to consider which will leave us with a clean
environment instead of making your department look like its not doing its job.

I have no solution except for UMETCO to treat the water in a more rigorous
method.

No economically feasable treatment method is a way of saying we dont want
to spend our money doing this even though its a mess. Well I haave to drink
it since I live in Malvern and I dont want to pay a higher bill which the mayor says
it may take. I dont want to pay for what they dont want to pay for.

Lake Catherine is a small body of water and catches enough crud from
Lake Hamilton pollution already.
We just dont need anymore waste of any kind in our lake. or our river.

Dont you think a lot more study should go into this before you approve such
a request?

Sincerely Yours
Jennifer Linn Higgins

Jennifer Linn Higgins

28643 hwy 67
malvern, ar 72104

RESPONSE TO JENNIFER HIGGINS:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has

historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

42. Danny Hobbs:

Danny Hobbs
116 Pintail Lane
Hot Springs, AR 71901

September 14, 2010

Mr. Doug Szenhier
Public Outreach and Assistance Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118

RE: UMETCO Permit Request

Sir,

We just completed the construction of our new home on Lake Catherine. Now we find that there are real concerns about the water quality of the Lake. We assumed that ADEQ was protecting the quality of the Lake. That assumption appears to have been ill founded.

While UMETCO says there is no economic impact to their request, I will assure you that there will be a huge economic impact on us if the Lake is polluted.

We ask that a comprehensive study be made to assure the residents that the Lake is being protected.

Danny Hobbs

Danny Hobbs

RESPONSE TO DANNY HOBBS:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

43. Stephen Holt:

We are against the raising of Stan Sands

From: Steve Holt [mailto:steveholt9@yahoo.com]
Sent: Saturday, September 18, 2010 1:39 PM
To: Reg-Comment
Subject: UMETCO standards
Dear Sirs,

I am vehemently opposed to lowering the discharge standards of UMETCO into Wilson Creek and therefore into Lake Catherine. Until an environmental study can be done, and the results of the long term effect of the discharge into Lake Catherine can be analyzed, I believe that lowering the standards (which UMETCO does not currently meet) could possibly result in an environmental disaster in the future.

If UMETCO does not meet the current standards, and the Pollution Commission does not enforce these current standards, why would anybody think that lowering the standards would do anything but allow UMETCO continually exceed the next threshold. I have lived on Lake Catherine for 9 years. In that time, I have seen a decrease in the wildlife population and a degradation of the fishing quality. Although I have no proof, I do believe that this is an indirect result of the poisons being discharged into Wilson Creek and the seepage of these poisons into the ground, possibly contaminating the underground water system of this area.

Please deny the request of UMETCO to allow higher concentrations of pollutant's into Arkansas streams, particularly Wilson Creek and Lake Catherine.

Thank you for your time.

Stephen E. Holt
155 St Andrews Dr
Hot Springs, AR 71913
501-262-0322
steveholt9@yahoo.com

RESPONSE TO STEPHEN HOLT:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of

Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

44. Keri Huckaby:

From: web.site@adeqinternal.state.ar.us
[mailto:web.site@adeqinternal.state.ar.us]
Sent: Saturday, August 21, 2010 12:04 PM
To: Complaint-HW
Subject: Hazardous Waste Online Concern/Complaint Form Submission

County: Garland
Name: Keri Huckaby
Address: 103 Riverview Pt
City_State_Zip: Hot Springs Ar. 71901
Phone:
E_mail: kerimcfarlin@hotmail.com
H_Division: HazWaste
Date: 8/21/2010
Time: 11:53:40

Description:

Stratcor Inc. dumping waste into Lake Catherine (in Garland Co.). Supposedly a meeting was held at Lakeside School on this situation. I live on the lake myself and never recieved a notice. Why are they allowed to dump 15% of their waste into a lake where children swim and considered a state park?

Directions:
4285 Malvern Road into creek that flows into Lake Catherine

Owner:
Stratcor Inc.

RESPONSE TO KERI HUCKABY:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

As a point of clarification, the proposed rulemaking that is the subject of these responses to public comments is related to the former Wilson Mine. This proposed rulemaking does not involve Stratcor, which is a separate site near the former mine.

45. William and Paula Jackson:

From: Paula Jackson [mailto:Paula_Jackson@milestonehealth.com]
Sent: Wednesday, September 08, 2010 4:05 PM
To: Reg-Comment
Subject: UMETCO MINERALS CORPORATION

I want to protest the dumping of UMETCO Minerals Corp. waste discharge into Wilson Creek which flows into Lake Catherine. We are property owners on Lake Catherine and strongly protest the approval of this application. Arkansas Pollution Control and Ecology Commission has shown no concern toward UMETCO cleaning up their waste discharge. UMETCO should be forced to dispose of their waste other than dumping in Lake Catherine. The APC&E Commission should be protecting the people's rights and ecological assets in Arkansas and not following the wishes of this corporation. No matter where you live in Arkansas, the APC&E should be protecting all of Arkansas' resources. We do not want Lake Catherine and the Ouachita River to become polluted and unsafe. Arkansas' slogan is the "Natural State". We want it kept that way.

William and Paula Jackson
Lake Catherine

RESPONSE TO WILLIAM AND PAULA JACKSON:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of

Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

46. Freddy Johnson:

Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8-16-10 Verbal Comment ☐ Speaker # Written Comment ☐ (Attached or back of card)

Hearing Location Lakeside School

Name Freddy Johnson

Address 287 Cowlwood Rd

City W.S. State Ar Zip Code 71901

E-mail Address

ADEQ ARKANSAS Department of Environmental Quality www.adeq.state.ar.us

RESPONSE TO FREDDY JOHNSON:

Thank you for taking the opportunity to provide comments on this rulemaking.

47. Eugene Jones:

From: Eugene Jones [mailto:ejones@connect4business.com]
Sent: Tuesday, September 07, 2010 7:32 AM
To: Szenher, Doug
Subject: UMETCO Minerals Corp. wants a change in the Arkansas Water Quality Standards, known as Regulation 2
Good Morning Doug,

I'm interested to state my opinion on the possible change in water quality standards. Seems like we've quite a few issues with the environment these days. This seems like an opportunity to hold the existing standard. All of these little sources, degrade the quality of fishing waters in Arkansas, something that we Arkansans use to draw tourism, and enjoy ourselves. So one company saves a few bucks, what about the impact of lost tourism and the businesses associated with that industry? Who will make that up when the streams are not fish-able? I'm sure that UMETCO is a very reasonable company, and this does impact their bottom line, you cannot blame them for trying, but it's our jobs as people of Arkansas to protect our environment.

Best Regards,

Eugene Jones
2823 Painted Valley Drive
Little Rock, AR 72212
501-223-2100

RESPONSES TO EUGENE JONES:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

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48(a). Lynn Kidder:

Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8-16-10 Verbal Comment ☐ Speaker # Written Comment ☒ (Attached or back of card)

Hearing Location Lake Side Jr. High Hot Springs

Name Lynn Kidder

Address 20524 Hwy 67

City Malvern State Ar Zip Code 72104

E-mail Address

ADEQ ARKANSAS Department of Environmental Quality www.adeq.state.ar.us

As a property owner on Lake Catherine I do not want any more pollution of this lake. My Children and grand children and great grand children swim in this lake. I want them to grow up and old healthy. Do not allow this to happen

RESPONSE TO LYNN KIDDER (48A):

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following

major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

48(b). Lynn Kidder:

In reference to the Wilson Creek/UMETCO Third par
Change of release of
wastewater into the creek and lake Catherine.

I wish to convey my annoyance at having to deal with
a company who is
supposed to be under your control of wastewater
runoff rules and
regulations. They are specific and no company of thi
size should be asking
to further polute the creek and therefore the lake.

The studies made were far inadequate and much
further investigation would
be needed to prove they can not hurt the lake by
raising the pollution even
higher. It was to me a half hearted attempt to pass
something off and no one
would pay any attention. That may have been true in
the past but we are sick
of what has happened to this lake over the last 30
years. It was once a beautiful
and fish filled place to be. Not so today. If it meets
water standards they must
be pretty low.

In the pamphlet handed out at the Lakeside Junior
high school meeting it states
that this proposed rule does not represent a change
for current conditions of
current quality on Lake Catherine. That it would not
increase the loading of Wilson Creek but will establish
water quality criteria for Wilson creek at a level
consistent with the current conditons. It would not
affect any agri. or bus. usage of the water couses.
That there is no
economically feasible treatment for the removal of
minerals.
That says to me that they are not meeting their permit
now and therefore it wont hurt it any
worse than it already is. I would bet you would not
answer the question what is they output at this time. If
they are not meeting permit requirements they are
subject to fines. I want some answers but dont expect
any. If our water treatment facilities at Malvern and
Arkadelphia can remove them and as stated by
ARkadelphia water commisioner at a greater
cost so can UMETCO. What it really says is they dont
want to spend the money they want
the who use it downstream to pay to take it out and to
heck with those of us with lakeside
property who swim and fish in it. Let UMETCO build
a water treatment plant like you made
JJs truck stop do for a little diesel that may spill. If
they can afford it these guys who
messed up our beautiful area a mess pay for what
they did with the profits they made in the past. A lot of
businesses have to work at a loss for a while to pay
for there misdeeds and this one should be no
exception.

As for the fish found in the cove that was pretty lame to s ay the least if you fish at all.
If the rest of the lake you didnt compare it to is like that then game and fish needs to wake up and stock what is being ruined.
Further study is needed as I said and it will show they need to straighten up their own mess.

My husband and I own a home at 240 Coy Grant Loop that we use for swimming and fishing in the summer when the lake is up. We live in Malvern so that is an investment in property that we pay higher taxes on for Garland county every year.

We used to canoe crooked creek to fish in Northern Arkansas but after the last trip no more.
It looks like someone bombed it . And your department allowed it. I dont think you will stop anything. But this one you w ill meet a lot of people and a lot that dont live on the lake that are going to try and stop UMETCO.

Lynn Kidder
Lynn Kidder
Mailing address
20524 hwy 67
Malvern ark. 72104

RESPONSE TO LYNN KIDDER (48B):

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based

on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

49(a). Pam and David Kidder:

From: pakidder [mailto:pakidder@att.net]
Sent: Friday, September 17, 2010 1:32 PM
To: Szenher, Doug
Subject: WILSON CREEK
I JUST ATTENDED THE MEETING WITH UMETCO LAST NIGHT AND I WAS NOT IMPRESSED WITH THEIR ANSWERS TO SOME OF THE QUESTIONS. I DO NOT THINK THEY SHOULD BE ALLOWED TO PUT ANY CHEMICALS IN WILSON CREEK, LAKE CATHERING AND THEN TO THE OUACHITA RIVER. I LIVE ON THE LAKE AND MY CHILDREN, GRANDCHILDREN AND MANY OTHERS SWIM IN THAT LAKE. OUR DRINKING WATER COMES FROM THE RIVER, MANY CITIES DRINKING WATER COMES FROM IT. I JUST CANNOT BELIEVE THAT YOU WOULD ALLOW THEM TO ADD MORE CHEMICALS INTO THIS PRECIOUS WATER SUPPLY. THIS IS MY SECOND LETTER AND I PRAY THAT THIS IS NOT ALLOWED TO HAPPEN. PLEASE REMEMBER THE CHILDREN IN THE YEARS TO COME WHEN YOU CONSIDER THIS PROPOSAL.
THANK YOU, PAM KIDDER, 246 COY GRANT LP, HOT SPRINGS, AR 71901

RESPONSE TO PAM AND DAVID KIDDER (49A):

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore

has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

49(b). Pam and David Kidder:

We do not want anymore Chemical runoff going into Lake Catherine. This is our permanent home and we swim and boat in this lake. Our children and grandchildren also swim in the lake. We are against any permit for this to happen.

Pam Kidder and
David Kidder
246 Cory Grant Lp
Hot Springs Ar 71901
August 14, 2010

RESPONSE TO PAM AND DAVID KIDDER (49B):

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

50. Steve Kidder:

My family has maintained a home on Lake Catherine at 240 Cy Grant Loop. I purchased the home in 1987. I have watched this Lake go from Pristine clean with a large fishery to, at times in the party, leaving you so sticky after swim you had to take a shower to Better But not quite it should be.

I wish to state my objections to UMETCO raising the output into Wilson Creek and Lake Catherine. It will affect not only Lakeshore Owners But all cities downstream on the Rivers. I Live in the cove where a Landfill put illegal cancer causing agents into the Cove. Only 4 homeowners that were there at that time still live there. I have had cancer. My Brother cancer, My nephew has cancer the other neighbor Lupus. I also suffer from Rheumatism. So I have reason for concern.

I attended the meeting at Lakeside School. There was only 1 cove represented. So no compromise is available. We also don't know if UMETCO is meeting its Permit Limits at this time.

I 35 Truck Stop Between Malvern and Benton had to put in a water treatment plant for water runoff. What wrong with UMETCO doing that? Let them pay for what we did not cause. They just don't want to spend the money. Instead let the cities downstream pay to have good water and pass it on to the users.

It is past that we have much more comprehensive study in order to offer a solution for coexistence while maintaining or improving a cleaner environment for our citizens.

Sincerely,
Steve Kidder

Mailing address: Care of
Steve Kidder
20524 Hwy 67
Malvern, Ar. 72104

RESPONSE TO STEVE KIDDER:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based

on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

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Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

51. Nancy Kimball:

NANCY KIMBALL
307 MITCHELL
HOT SPRINGS, AR 71913
PHONE: 501/624-1653
September 18, 2010

Arkansas Department of Environmental Quality
Public Outreach and Assistance Division
5301 Northshore Drive
North Little Rock, AR 72118
Attn: Doug Szenher

Re: Wilson Creek

Dear Mr. Szenber,

I am writing in reference to Umetco Minerals Corporation's request to initiate rulemaking to amend regulation no. 2. I am in disbelief that a the EPA and the Arkansas Department of Environmental Quality would even entertain the idea of lowering the water standards to enable Umetco Minerals in Hot Springs, Arkansas to comply.

When I first looked into the environmental issues Umetco is causing, I was terrified that there were many other companies allowed the freedom to set their own limits and have so many ongoing Serious Non compliance violations In reviewing the documents through the EPA Echo reports, it appears Umetco is the greatest ongoing flagrant violator with the greatest disregard for Arkansas Clean Water Standards. Even in a non-major classification, Umetco has a confirmed history of serious non-compliance violations and it would appear with the evidence of the pollution it would force the ADEQ and the EPA to address the problem.

Please do not allow Umetco to change the standards, make them responsible for the damage and the pollution, or at the least force them to comply with Arkansas Clean Water Act.

Arkansas is the Natural state, lowering our water standard will cause the following issues:

- Loss of tourism dollars due to the lack of clean water for swimming and fishing.
- Health issues for the due to the added Sulfates, chlorides and TDS.
- Damage to a non renewal natural resource

Keep Arkansas the natural state and allow Umetco to comply.

RESPONSE TO NANCY KIMBALL:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

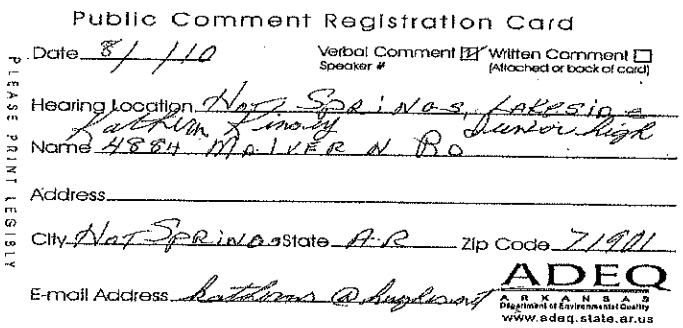
The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy

ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

52. Kathern Kimsey:


Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8/1/10 Verbal Comment ☐ Speaker # Written Comment ☑ (Attached or back of card)

Hearing Location Hot Springs, Arkansas

Name Kathern Kimsey 4864 McIver N Rd Junior High

Address

City Hot Springs State AR Zip Code 71901

E-mail Address kathern@hughes.net

ADEQ ARKANSAS Department of Environmental Quality www.adeq.state.ar.us

RESPONSE TO KATHERN KIMSEY:

Thank you for taking the opportunity to provide comments on this rulemaking.

53. James Kimzey Regional Water Distribution District:

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

| | | |
|---|---|---|
| **IN RE: REQUEST BY UMETCO MINERALS CORPORATION TO INIIATE RULEMAKING TO AMEND REGUILATION NO. 2** | ) ) ) | **DOCKET No. 10-005-R** |

**JAMES KIMZEY REGIONAL WATER DISTRIBUTION DISTRICT'S COMMENT, OPPOSING PROPOSED AMENDMENT OF REGULATION NO. 2**

COMES NOW, James Kimzey Regional Water Distribution District ("Kimzey"), by and through its attorney, Eric G. Hughes of the Hughes and Hughes Law Firm, and for its Comment Opposing the Proposed Amendment of Regulation No. 2, states as follows:

**I. INTRODUCTION**

UMETCO Minerals Corporation d/b/a Wilson Mines ("UMETCO"), has petitioned this Commission to upwardly modify the maximum discharge limits for chlorides, sulfates, and total dissolved solids ("TDS") and to remove the "domestic water supply" designation for Wilson Creek, a tributary of Lake Catherine. Lake Catherine is an impoundment of the Ouachita River upstream from Kimzey's water intake and water treatment facilities. Kimzey opposes UMETCO's petition for the reasons stated herein, and asks this Commission to deny UMETCO's Proposed Amendment of Regulation No. 2.

**II. THE JAMES KIMZEY REGIONAL WATER DISTRIBUTION DISTRICT**

The James Kimzey Regional Water Distribution District provides water to a substantial number of households and businesses in the Ouachita River watershed, and is significantly impacted by any discharge of pollutants in the watershed above its Ouachita River intake structure and water treatment facilities. The District was created by order of the Hot Spring County Circuit Court pursuant to the Arkansas Regional Water Distribution District Act. See Ark. Code Ann. § 14-116-101 et seq., and it obtains



water from the Ouachita River pursuant to its riparian rights and also pursuant to permits from the Federal Energy Regulatory Commission ("FERC"), and from the Arkansas Soil & Water Conservation Commission (now the Arkansas Natural Resources Commission (ANRC)), Permit No. Non-Riparian Right-02-13. Kimzey's FERC and ANRC permits allows it to intake 25 million gallons per day (mgd) of raw water from the Ouachita River.

Lake Catherine, into which Wilson Creek flows, is merely an impoundment of the Ouachita River, and Kimzey's water intake structure and water treatment facilities are the first such facilities on the Ouachita River below the Lake Catherine impoundment. Any discharge into Lake Catherine ultimately effects the quality of water utilized by Kimzey to supply water services to its customers.

Kimzey provides treated water to retail customers in Hot Spring, Garland, Clark, and Montgomery Counties. The District provides water to approximately 4,000 households directly through retail sales and, in addition, provides water wholesale to Hot Spring County Water Association and Magnet Butterfield Association. Moreover, Kimzey provides water to Hot Spring Power Company, LLC. under an agreement that permits HSPC to purchase up to 6 mgd at a maximum diversion rate of 4,500 gallons per minute. Kimzey also provides water supply to Entergy's Lake Catherine Steam Electric Plant.

Because both Hot Springs Power Company and Lake Catherine Steam Electric must treat water supplied to ultra-pure standards before it can be used in the boilers and turbines to generate electricity, increasing the total dissolved solids, chlorides, and sulfates that are scale formers will require both Hot Springs Power Company and Lake Catherine Steam Electric to incur increased cost to remove these substances before the water can be utilized as boiler feed water.

Kimzey opposes any rules change that decreases the water quality of Lake Catherine, which ultimately affects the raw water quality in the Ouachita River.

**III. UMETCO'S DISCHARGE HAS AN ADVERSE ECONOMIC IMPACT.**

The sole purpose of UMETCO's proposed rule change is to allow it to transfer the cost of treating its discharge from itself to the citizens of the State of Arkansas. UMETCO's current discharge permit was issued by ADEQ to become effective on September 28, 2007, and the numeric limits for chloride, sulfates and TDS will become effective September 28, 2010. According to UMETCO's petition, "the discharge will not meet the permit limitation." Thus, rather than complying with the requirements of the permit issued by ADEQ, UMETCO seeks to remove the Domestic Water Supply designation of Wilson Creek, among other things

Regulation 2.306 permits the Commission to "allow a modification of the water quality criteria . . . to accommodate important economic or social development in a local area . . . ." The economic analysis contained in UMETCO's Use Attainability Analysis (UAA) is a mere two paragraphs, and does not address the economic impact of decreased water quality standards for Kimzey or its customers. Wilson Creek Minerals Water Quality Standards Evaluation § 5.4 (2004). Rather, the UAA indicates that "the mine employs less than five local people. . . ." Id. The economic analysis does not identify any "important economic or social development" to be achieved in the local area by reducing the water quality standards. While providing very little economic benefit to the area, UMETCO seeks to pass on the costs of mine ownership to area businesses, consumers, and taxpayers.

UMETCO estimates the cost of treating the water from Wilson Creek is $2,700,000.00 or roughly $7,397.26 a day. § 5.3.3. Construction of a treatment plant



would, by UMETCO's estimate, cost roughly $8,400,000.00. Id. Assuming for the sake of argument that these figures are accurate, it is clear that it may not be in *UMETCO's* best interest that it pay for these activities; however, the fact is that Wilson Creek contributes to bodies of water that other people pay to treat. In effect, if UMETCO's petition is granted everyone who utilizes Lake Catherine and the Ouachita River downstream of Wilson Creek is subsidizing UMETCO's ownership of Wilson Mine. That is not the "important economic or social development" identified in Regulation 2.306 that permits the Commission to modify the water quality criteria or the removal of a Domestic Water Supply use designation.

The exact manner in which the contaminants diffuse downstream is currently unknown. Obviously, the various contaminants discharged from Wilson Creek do not simply vanish at the confluence of Wilson Creek and Lake Catherine. If UMETCO is not paying to clean the water, it stands to reason that *someone else* does.

As an example, in addition to its 4,000 retail customers from whom Kimzey treats Ouachita River water, Kimzey provides Ouachita River water to Hot Spring Power Company, LLC ("Hot Spring Power"). Hot Spring Power requires ultra-pure water for steam to power its generators. If the water cannot be properly purified, the electricity-generating turbines can be damaged by precipitate build-up or corrosion. If UMETCO's discharges into Wilson Creek travel through Lake Catherine and into the Ouachita River, Kimzey, Hot Spring Power, and electricity consumers are paying to remove those contaminants from the water. Applying UMETCO's formula for estimating the operating and maintenance cost for water treatment facilities outlined on pages 23 and 24 of its UAA, the cost to Hot Spring Power Company would be $2,332,800 per year ($1/1,000 gal. x 4,500 gpm x 24 hrs/day x 30 days/month x 60 min/hr = $194,400/month =

$2,332,800 per year). If UMETCO does not pay the cost of treating the water, the downstream users will be burdened with the obligation.

In addition, UMETCO only employs five local people; however, if this Commission requires UMETCO to comply with the current water standards and its current NPDES permit, UMETCO alleges it will have to build additional treatment facilities. Both the construction and operation of those facilities will create more local jobs, thereby positively impacting the economy.

**IV. UMETCO'S DISCHARGE HAS AN ADVERSE ENVIRONMENTAL IMPACT.**

In its Economic Impact / Environmental Benefit Analysis, UMETCO states that its proposal would allow "current conditions to be maintained." See Economic Impact / Environmental Benefit Analysis 2B.1. (June 14, 2010). This is precisely the problem: UMETCO asks this Commission to acquiesce in and ratify UMETCO's permit violations and excessive contamination of Wilson Creek. The current water quality criteria for Wilson Creek are 15 mg/L Chloride, 20 mg/L Sulfate, and 142 mg/L TDS, and UMETCO's proposed rule would increase the chloride limit to *more than three times* its current level (15:56 mg/L), *the sulfate limit to thirteen times* its current level (20:260 mg/L), and the TDS limit to *more than three times* its current level (142:543 mg/L). Compare Reg. 2.511(B) *with* Draft Regulation 2 Markup (Docket # 10-005-R). UMETCO seeks permission to increase its discharge limits, to the detriment of the ultimate public users of water, rather than take the steps necessary to meet its current discharge limits.

The Wilson Creek Minerals Water Quality Standards Evaluation prepared by UMETCO and submitted with its current petition is dated 2004. This appears to be a coincidence, because April 27, 2004 is the date that UMETCO completed its application for its current NPDES Permit (Permit No.: AR0048950; Iss. January 31, 2006; eff. Mar. 1,



2006).[1] On pages two and three of its 2004 evaluation, UMETCO proposed adoption of the following standards: TDS – 600 mg/L, Chloride – 116 mg/L, Sulfate – 277 mg/L. Those limits were rejected, and UMETCO's discharge limitations for the identified contaminates are: 19 mg/l Sulfates, as $SO_4$; 20 mg/l Chlorides; and 173 mg/l TDS. Its current permitted figures are well in line with the current Regulation 2 requirements, and UMETCO has advanced no compelling argument supporting approval of its rejected 2004 request, other than its effort to avoid incurring the cost of treatment itself.

Furthermore, Regulation No. 2 states that "the pH of water in streams or lakes must not fluctuate in excess of 1.0 unit over a period of 24 hours and pH values shall not be below 6.0 or above 9.0." Reg. 2.504. In addition, these are the pH values described in UMETCO's NPDES permit. The 2009 Addendum to the Water Quality Standards Evaluation states, "Low pH is a likely cause of at least some of the acquatic life suppression," and, in fact, the current pH levels reported by UMETCO at the five sites that it selected are: 5.7, 4.8, 4.5, 5.0, 6.2, and 5.9. See § 4.1, T. 4.1. Even assuming the pH could be corrected to a permissible level of 6.0 through the addition of lime or other basic chemicals, the process would result in a fluctuation of greater than 1.0 at least two of the reported sites.

UMETCO states that "the characteristics of the NPDES discharge dominate flows and water chemistry" See § 5.1 (emphasis added). The discharges "domination" of the water chemistry is directly responsible for "reduced levels of biological diversity and/or production," because of "lowered pH and/or factors correlated with reduced pH (e.g., toxicity due to metals in dissolved form and/or in toxic valence states." See Id. In fact,

[1] See ADEQ, NPDES Permit Tracking Event List Searchable Database, "AR0048950," http://www.adeq.state.ar.us/water/branch_permits/individual_permits/data/npdes_permit_tracking_event_list.asp#Display.

the results of the anion, cation, and metals analyses show a pH of 3.4 in the seep sample. See § 4.2, T. 4.2. The anion, cation, and metals analysis further "reveals dissolved aluminum, manganese, and zinc concentration (3.9 mg/L, 12 mg/L, and 0.55 mg/L, respectively) that might be at acutely toxic levels." § 4.2. Even at one of the sites selected in UMETCO's study, "there was a precipitate on rocks and what appeared to be compacted or consolidated precipitate covering the substrate." § 4.3.

As a habitat, UMETCO paints Wilson Creek as supporting low biodiversity. Its report concludes that this is primarily "due to season flows and small stream size." § 6.1. While as a general proposition, this may be true, the report downplays the fact that the small habitat is "further limited by inflows from seeps." Id. At one of the reported test sites, "no fish were collected," which the report attributes to "low pH levels due to the influence of seep inflow." § 5.3.1. At yet another reported test site, orangebelly darters were absent, even though riffles and habitat scores were similar to another site where they were found. § 5.3.1. The report attributes this to lowered pH levels "due to the influence of the seeps." Id. In other words, the small size of Wilson Creek is certainly a factor in the low biodiversity; however, that is also precisely the reason that biodiversity there must be protected from further retardation resulting from the discharge of toxic contaminants. The water flow through Wilson Creek is simply not sufficient to effectively dissolve and disperse the current levels of contaminants to protect its limited biodiversity. Allowing UMETCO to continue to discharge at its historically high levels will only further endanger this naturally precarious habitat.

Succinctly stated: UMETCO's current excessive discharge of sulfates, chlorides and TDSs, and the overall toxicity of Wilson Creek has a negative impact on the environment today. Not only is Wilson Creek currently much more acidic and toxic



than allowed under Regulation No. 2, but UMETCO also wishes to allow more sulfates into the creek, which will likely further decrease the pH levels, resulting in a corresponding suppression of aquatic life. In addition, allowing UMETCO to continue discharging at its current unpermitted rates will only maintain, rather than correct, the acute toxicity of Wilson Creek.

**V. UMETCO'S PETITION VIOLATES THE PROVISIONS OF THE ARKANSAS CONTINUING PLANNING PROCESS**

The Arkansas "Continuing Planning Process" (CPP) was implemented in accordance with the provisions of the Clean Water Act, 33 U.S.C. 1251 et seq. The "general purpose" of the Arkansas CPP "is to describe the principal management processes of the state's water quality management programs." Continuing Planning Process, I-1, January 2000. Wilson Creek, Lake Catherine and the Ouachita River are all designated for domestic, industrial, and agricultural water supply. Regulation 2, Appendix A, A-23. In that connection, the CPP implemented in Arkansas, as required by the Clean Water Act, provides under the section entitled INFORMATION REQUIRED IN APPLYING FOR SITE SPECIFIC WATER QUALITY STANDARDS MODIFICATION IN ACCORDANCE WITH SECTION 2.306 OF THE WQS:

> C. May not remove any designated use unless one of the following conditions are met:
>
> 1. Naturally occurring pollutant concentrations prevent the attainment of the use; or
>
> 2. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or
>
> 3. Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

4. Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original conditions or to operate such modifications in a way that would result in the attainment of the use; or

5. Physical conditions related to their natural features of the water body, such as the lack of proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

6. Controls more stringent than those required by Sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

Neither UMETCO's Petition nor its UAA present any facts or information that would allow the Commission to find that the Petition meets any of those conditions. UMETCO's Petition simply indicates that it is not now meeting the discharge limits described in its permit; that UMETCO does not want to incur the cost of meeting the discharge limits; and that the discharge limits and designated use of Wilson Creek should be changed.

**VI. CONCLUSION**

Unfortunately, the full extent of the environmental and economic impacts of UMETCO's discharges is currently unknown. No comprehensive study has been completed, which would allow this Commission, the ADEQ, or any other entity to track the flow and diffusion of the contaminants discharged from Wilson Mine. UMETCO's one-day test provides only a snapshot of its selected testing sites. What is known is that Wilson Creek is not an isolated body of water. The chlorides, sulfates, and total dissolved solids discharged into Wilson Creek flow into Lake Catherine. From Lake Catherine, those chlorides, sulfates, and total dissolved solids flow into the Ouachita River. It is undisputed that Lake Catherine and the Ouachita River are multiple-use natural resources that must be protected.



Due to the adverse environmental and economic impact caused by UMETCO's current and ongoing violation of its NPDES permit limits and the limits of Regulation No. 2, the commission should reject the proposed third-party rule. In fact, this Commission should request an independent, comprehensive study from ADEQ regarding the impact on Wilson Creek and Lake Catherine of the various contaminants discharged from UMETCO and neighboring sites. Kimzey predicts that a truly independent analysis will reveal that heightened standards may be required to minimize and reverse the contamination of Lake Catherine and the Ouachita River.

Respectfully submitted,

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By _____
ERIC G. HUGHES AR BIN 95034

Attorneys for James Kimzey Regional Water Distribution District

RESPONSE TO KIMZEY REGIONAL WATER DISTRIBUTION DISTRICT:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine. A significant portion of your comments are addressed by the General Responses to Comments found at the beginning of this document. References to the applicable general responses are found immediately below. Specific responses to the various comments found in your comment are provided below and arranged by the same numbering system utilized in the comment. Our responses follow under the headings given in your comments (which are italicized).

To summarize, the proposed rulemaking will not increase sulfate, chloride, or TDS above existing levels in Wilson Creek; therefore, there is no cost impact to downstream water users. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for chloride, sulfate, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine. ADEQ has reviewed and approved the UAA, including the 2009 Addendum to the UAA, and has stated in writing that it meets regulatory requirements and the CPP.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has

been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

Specific responses follow:

*I. "Introduction"*

a. Regarding the comment pertaining to the maximum discharge limits, as a point of clarification, the proposed rulemaking relates to developing site-specific criteria for sulfate, chloride, and TDS in a portion of Wilson

Creek and removal of the designated drinking water use for Wilson Creek. For further information, please see the General Responses to Comments located beginning on page 1 of this document. Specifically, UMETCO directs the commenter to see General Response No. 1.

*II. "The James Kimzey Regional Water Distribution District"*

a. Background comments and information relating to the Water District are acknowledged.

b. Regarding the comment that increasing the sulfate, chloride, and TDS (which are scale formers) will require Hot Springs Power and Lake Catherine Steam Electric to incur increased costs, please see General Response No. 2 relating to regulatory requirements that were met in developing this proposed rulemaking, including a comprehensive study, and General Response No. 4.c, which explains that the proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and thus has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs. Because the proposed rulemaking does not request an increase in sulfate, chloride, or TDS beyond existing levels in Wilson Creek, UMETCO disagrees with the suggestion that the proposed rulemaking will result in increased costs for treatment of sulfate, chloride or TDS by either Hot Springs Power or Lake Catherine Steam Electric.

c. With regard to the suggestion that the proposed rulemaking will decrease the water quality of Lake Catherine (and thus the Ouachita River), please see General Response No. 4.a, which explains that these proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek.

*III. "UMETCO's discharge has an adverse economic impact"*

a. Please see General Response No. 4.a, which explains that these proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek.

b. Please see General Response No. 2 relating to regulatory requirements that were met in developing this proposed rulemaking, including a comprehensive study.

c. Please also see the response to Comment 53, Item II.b above. There is no anticipated economic impact to Kimzey or its customers because there will be no increase in either loadings or concentrations of sulfate, chloride, or TDS beyond existing levels due to the proposed rulemaking.

d. Comments regarding Kimzey's opinion as to the suitability of the economic impact analysis presented in the WEI 2004 UAA Report are acknowledged. UMETCO disagrees with these comments and points out that ADEQ appropriately reviewed and approved the UAA Report and its Addendum as the necessary technical justification for the proposed rulemaking.

e. UMETCO also disagrees with the suggestion that the mine site during the mining operation and during the reclamation has provided "very little economic benefit to the area." As an example relating only to the reclamation efforts at the site, over $40,000,000 has been spent to date, which has resulted in substantial improvements to the site of which UMETCO is extremely proud. This work has resulted in attainment of the currently protective levels of sulfate, chloride, and TDS that have existed in Wilson Creek over the past several years. To UMETCO, this contradicts the commenter's suggestion that UMETCO seeks to pass along costs of mine ownership to businesses, consumers and taxpayers.

f. Other various comments in this section seem to be suggesting that discharges of sulfate, chloride, and TDS from the former Wilson Mine site somehow affect the cost of treating water for Kimzey (or Hot Springs Power or Lake Catherine Steam Electric). As the water at Kimzey's intake already meets drinking water standards. Companies requiring ultra-pure boiler make-up water will have to treat their water regardless of any input from Wilson Creek. Naturally occurring levels of minerals in Lake Catherine and the Ouachita River – certain levels of which are essential for aquatic ecosystems – must be removed to prevent scaling; this treatment by Hot Springs Power and Lake Catherine Steam Electric would be required even if there were no minerals in Wilson Creek. Please see General Response No. 4.c, which explains that the proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and thus has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs. Finally, Kimzey's application of UMETCO's projected costs to the treatment of boiler make-up water is not reasonable. Power companies treat a considerably smaller volume of water (sufficient to make up for evaporation from the boilers) than UMETCO. UMETCO would have to treat a much larger volume of water, and the feasibility and economics associated with this treatment are substantially different and are not comparable with treating boiler make-up water from a relatively clean inflowing stream.

*IV. "UMETCO's discharge has an adverse environmental impact"*

a. UMETCO disagrees with the suggestion that there is "excessive contamination" present in Wilson Creek water that, in turn, enters Lake Catherine. The ADEQ-approved UAA Report and its Addendum provide actual data supporting that Wilson Creek currently meets its designated aquatic life use designation (please see General Response Nos. 4.a, 4.b, 5.a, and 5.b). UMETCO points out to the commenter that the proposed rulemaking proposes no changes to "fishable/swimmable" uses.

b. Regarding comments pertaining to possible detrimental effects to public users of the water, please General Response Nos. 5.a and 5.b relating to comments expressing concerns about the suitability of Lake Catherine for swimming, fish consumption, or drinking and the existing conditions of Wilson Creek.

c. Regarding the comment suggesting that ADEQ "rejected" the 2004 UAA Report and its proposed site-specific criteria, UMETCO points out to the commenter that ADEQ approved the 2004 UAA Report. The proposed rulemaking utilizes the ADEQ-approved UAA Report and its 2009 Addendum to pursue a third-party rulemaking to amend APCEC Regulation No. 2. Until the rulemaking is approved, the NPDES permit limitations will reflect default ecoregional sulfate, chloride, and TDS criteria that were not water quality-based but rather reflect minerals levels in least-disturbed streams in the ecoregion (see General Response No. 5.b).

d. As described in the UAA Report and its Addendum, the Spaulding seep/inflow and upper Wilson Creek exhibit low pH values. As a point of clarification, the Spaulding seep/inflow is the subject of continuing reclamation at the site, which will address its pH and the pH of upper Wilson Creek. That reclamation is continuing under a cooperative agreement with ADEQ, and until that reclamation is completed, the Spaulding seep/inflow and upper Wilson Creek will continue to be diverted for treatment and subsequent discharge from the NPDES outfall back to Wilson Creek downstream of the treatment system. UMETCO's NPDES outfall has one pH permit limitation exceedance in the past 5+ years. The low value was 5.7 su and occurred in May 2009. This pH value is in the range of regional rainfall pH. This should demonstrate that the low-pH water treated by the treatment system can be corrected.

e. As a point of clarification, the reported low pH values occur in upper Wilson Creek (above the diversion to treatment) and the discharge from UMETCO's NPDES outfall dominates the flow and chemistry of lower Wilson Creek, downstream of treatment. The reported effects on the biology occurred in upper Wilson Creek in an area that is upstream of the treatment system. There were no negative effects found in the biology (fish or macroinvertebrates) due to water quality of lower Wilson Creek downstream of the treated discharge.

f. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing levels in Wilson Creek (please see General Response No. 1).

*V. "UMETCO's petition violates the provisions of the Arkansas Continuing Planning Process"*

a. Please see General Response No. 2 relating to regulatory requirements that were met in developing this proposed rulemaking, including a comprehensive study. UMETCO disagrees with the comment that the UAA Report and its Addendum do not provide information that shows, at minimum, one of the factors listed at Title 40 Code of Federal Regulations (CFR) Part 131.10(g) (and listed in the Arkansas CPP) are met. ADEQ reviewed and approved the UAA Report and its Addendum in their March 2010 letter to UMETCO. In that letter, ADEQ specifically stated that applicable requirements of the APCEC Regulation No. 2 and the Arkansas CPP were met.

*VI. "Conclusion"*

UMETCO strongly disagrees with the suggestion that the environmental and economic impacts (actually the lack thereof) are currently unknown. Please see General Responses No. 4.a, 4.b, and 5.a for further explanation.

54. Ruth and Arthur Kopkau:

From: ruth kopkau [mailto:ruthkopkau@yahoo.com]
Sent: Monday, September 20, 2010 3:58 PM
To: Drown, Steve
Subject: Lake Catherine

To Whom it may concern:
We moved to our Lake Catherine residence in 1983. At that time, the Lake had a poor reputation of unsafe discharge and run offs from neighboring plants. Now that things have improved, you are considering allowing UMETCO's to discharge additional chemicals from their site into Wilson's Creek which will flow to Lake Catherine.

At this time we would like to be added to your list of Lake Catherine residents that do not approve any permit to allow such action.
Ruth and Arthur Kopkau 424 Hideaway Hills Dr 501 262-2009

RESPONSE TO RUTH AND ARTHUR KOPKAU:

Thank you for taking the opportunity to provide comments on this rulemaking, and thank you for acknowledging the improvements that have taken place due to the mine reclamation activities. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. UMETCO remains committed to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

55. Brittany Lindon:

From: bmann@gmu.edu [mailto:bmann@gmu.edu]
Sent: Wednesday, September 15, 2010 8:06 PM
To: Reg-Comment
Subject: Keep Wilson Creek "Drinkable" Status

Dear ADEQ,

As a lifelong resident of Hot Springs Arkansas, I feel passionately about our beautiful lakes and pristine drinking water. I grew up playing in Wilson Creek and in area lakes such as Lake Catherine. I hope that the ADEQ will continue to keep these resources clean for me and my children.

Once we allow additional pollution to enter our lakes and drinking system it is very difficult to remove it. I see no clear reason to remove this drinkable status of Wilson Creek. While this may save some money for corporations in the short term, the long term costs are very real. Once we pollute these great assests, we have no known way of cleaning them up.

Much of the pollution bioaccumulates and moves up the food chain polluting the fish that we eat and the water that we drink. Industrial waste contains many pollutants and known carcinogins. I do not think it is fair to increae our community's exposure to toxins, especially to vulnerable populations of children and eldery. Please watch out for our best interests of everyone and not just those of corporations. Thank you for your important role in protecting our water and our citizens. I appreciate you reading my comment and taking the time to listen to my concerns. I hope you will help keep the water clean for my children and the many generations to come.

Brittany Lindon
mom, lifelong Hot Springs resident

RESPONSE TO BRITTANY LINDON:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified

criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

56(a). Jeff and Brittany Lindon:

From: Young Brakeman [mailto:youngbrakeman@yahoo.com]
Sent: Monday, September 20, 2010 12:55 PM
To: Reg-Comment
Subject: Wilson Creek / UMETCO

To whom it may concern:

I'm writing to express my concern over the proposed change in drinking water status for Wilson Creek. I see no reason to grant the status change UMETCO has requested. A much better solution, in my opinion, is for them to upgrade their facilities as necessary in order to meet the existing water quality standards. Doing so would not incur unreasonable expenses for them, while it would protect our water resources from further degradation. On the other hand, relaxing the standards would make it very likely that future costs to cleaning up environment damage would not be carried by UMETCO but rather by taxpayers like myself. Environmental damage is diffuse and very hard to attribute to sources, and these days I am not at all confident in the government's ability to hold corporations accountable for any damage to public goods and well-being they cause. It therefore seems to me fairer and less costly overall in the long-run to maintain high water quality standards and let parties who wish to use public resources pay their costs upfront to preserve them. I am counting on the ADEQ to represent citizens of the public -- who own our water resources -- in this matter.

Sincerely,
Jeff Lindon
112 Brookdell Place
Hot Springs, AR 71913

RESPONSE TO JEFF AND BRITTANY LINDON (56A):

Thank you for taking the opportunity to provide comments on this rulemaking.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality

resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

56(b). Jeff and Brittany Lindon Family:

As a family, we care about the water quality in our town, Hot Springs.

Over dinner one night this week, we discussed concerns about removing the drinking water status of Wilson Creek. Our whole family felt that this would cause many long term problems, as increased pollution, once present, is very hard to remove.

We value our clean drinking water & enjoy being able to swim in the local lakes. My 6-year old daughter got very involved in the discussion & decided to tell her 1st grade class about it the next day. The class had many personal stories to share about the creek. They decided to write a letter to you & sign it (see enclosed).

Please keep the "drinkability" status on Wilson Creek in Hot Springs, (Garland County) Arkansas in place so our children can have clean water to drink & to swim in.

Sincerely,
The Lindon Family
Jeff, Brittany, Avonelle (6) & Vivette (3)

Please Do Not put trash in Wilson creek.

we will not have
Clan Drinking
water if
you put
trash in the
Lake it will
Not be fun
to swim in.
Willsin creek
Runs into
My favrit Lake
Lake Ouachita
Plaese keep
the Drinking
water in Hot Spring
Clean for Me
And my sister
Avonelle Lindon
Used to
Live in Dade
My Hole Hot Springs
Except Life
a third Win I was on

RESPONSE TO JEFF AND BRITTANY LINDON FAMILY (56B):

Thank you for providing these comments from your family. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming in Lake Catherine. UMETCO remains committed to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following

major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

57. The Honorable Stephen Northcutt, Mayor, City of Malvern:

It has recently been brought to our attention that UMETCO Minerals has requested removal of the Domestic Water Supply use designation for Wilson Creek. It appears that the basis for this request is so that UMETCO can then be allowed to increase the discharge limits for Total Dissolved Solids, Sulfate, and Chloride. I am aware that all of the discharge increases are classified as secondary standards and that there is currently no requirement for water utilities to provide treatment for these standards. However, the requirements placed on water utilities have changed many times over the years and have become increasingly stringent. My question is how many discharge permits will we allow to increase their contaminants before these secondary standards are changed to primary standards? Then who pays the bill for treatment? It is my opinion that permit holders should clean up their discharge before it becomes problematic for consumers downstream. For this reason I am opposed to allowing the permit change for UMETCO.

Sincerely,

Stephen Northcutt
Mayor

RESPONSE TO MAYOR NORTHCUTT:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of

swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

58. Manataka American Indian Council

From: manataka@sbcglobal.net [mailto:manataka@sbcglobal.net]
Sent: Saturday, September 18, 2010 1:30 PM
To: Reg-Comment
Subject: Umetco Minerals Corp. Application to change Regulation No. 2, Section Reg. 2.306 for Wilson Creek
Arkansas Department of Environmental Quality

Re: Umetco Minerals Corp. Application to change Regulation No. 2, Section Reg.
2.306 for Wilson Creek

On behalf of the Manataka American Indian Council, we submit the following comments prior to the September 20 deadline for public comment.

We are opposed to any change in the water quality standards for the benefit of Umetco.

1. A third-party request from Umetco should not be granted because they have never complied with the standards -- and have no intention of doing so regardless of their rhetoric to the contrary. 3rd party requests from any entity currently in violation of the standards should never be granted.

Allowing a criminal to change the laws to make prosecution more difficult is insane.

2. In the event PC&E and/or the EPA deny their request, Umetco has not submitted to the State their alternative plans. Even after repeated requests by the State, Umetco has withheld reporting their specific plans. Specific requests to Umetco by citizens for this information has been ignored.

It is imperative that the public and the State be fully aware of Umetco's specific plan to deal with continued violations of the standards in the event their request is denied. In the absence of a "Plan B", will Umetco run pipes directly into Lake Catherine? Or will Umetco spend the millions of dollars necessary to install new technology to deal with the mess? Or, will they continue to do 'business-as-usual' and remain in violation indefinitely? Their answer is vital to any decision by the State.

3. The State has no current scientific data to determine the amount of toxic material that is being leached into the ground from the sides and bottoms of the North Wilson Pond and the East Wilson Pond. Does the State have scientific data and reports regarding contaminate levels from the test bore wells and drinking wells adjacent to the Umetco site? Two ADEQ officials said the State does not have this information.

If contaminate levels in the water flowing down the creeks horrifically exceeds water quality standards, how can the State ignore the untreated (and unreported) water seeping from Umetco's site into underground creeks and aquifers that will eventually emerge in springs, streams, lakes and rivers?

The over 700-foot deep pond poses a particularly dangerous threat to the environment. And, there are no plans made public by Umetco to address these tremendous threats to groundwater.

We realize the State has no groundwater standards at present and those issues will be address in the upcoming legislative session, but in the absence of groundwater standards, the State has a responsibility to exercise its powers to require Umetco meet or exceed current water quality standards for creeks, streams, lakes and rivers before it helps Umetco in relaxing the standards.

Moving the goal post backwards is not in the best interest of the environment, the public or the State. The proposed change only benefits Umetco by not requiring them to spend the money necessary to attain compliance. The Commission should not financially subsidize Umetco by allowing them to do business as usual.

5. In a "Fact Sheet" distributed to the public and media on September 16, 2010, Umetco states, "Umetco's current and proposed discharge concentrations [of toxic material] do not adversely affect either Wilson Creek or Lake Catherine."

This is not true.

6. In a "Fact Sheet" distributed to the public and media on September 16, 2010, Umetco states, "Even if additional treatment approaches were to be implemented, further reductions in chloride, sulfate, and TDS concentrations would not be expected to provide appreciable protection to the eco-system.

This is not true. Additional technology is available that guarantees reductions. The big problem for Umetco is they do not want to spend the millions of dollars necessary to install and maintain new techonologies.

7. Relaxing the standards to financially benefit Umetco and their parent companies, Union Carbide and Dow Chemical, et al is aberrant to the spirit and intent of laws creating the Commission by State Legislature to insure excellent water standards.

Hold their feet to the fire. Demand compliance -- whatever it costs them -- otherwise, it WILL cost all of us.

We ask that the Commission deny Umetco's request to relax the standards.

Thank you.

Lee Standing Bear Moore, Secretary

For the Elders and Members of the
Manataka American Indian Council
P.O. Box 476
Hot Springs National Park, Arkansas 71902-0476
501-627-0555
manataka@sbcglobal.net

RESPONSE TO MANATAKA AMERICAN INDIAN COUNCIL:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The UAA Report and its Addendum included an alternatives analysis and specific recommendations for developing site-specific criteria for a portion of Wilson Creek. ADEQ approved the UAA Report and its Addendum. UMETCO is committed to providing the necessary information to ADEQ and APCEC in order to allow approval of the proposed rulemaking. If the proposed rulemaking is denied, UMETCO will pursue an alternative approach in cooperation with ADEQ and APCEC requirements.

It is technologically feasible, at considerable financial and ecological expense, to treat the UMETCO discharge to meet existing ecoregion-based water quality criteria in Wilson Creek. However, such costly treatment would provide little, if any, benefit to aquatic life or human health, as the flow in Wilson Creek would remain a limiting factor. In fact, based on technical evaluation of the system, the power requirements alone for available treatment could exceed a carbon footprint of 750 metric tons of carbon dioxide per year indefinitely, and the treatment would create a waste stream of concentrated minerals that would have to be disposed of by deep well injection – a controversial technology in Arkansas – or by desiccation and landfilling. If the waste stream was dried and landfilled, an additional carbon footprint of 12,600 metric tons of carbon dioxide per year would be expected. Therefore, in contrast to the money spent on reclaiming the site (which has resulted in substantial benefits to Wilson Creek), the considerable amount of money that would be spent treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine, and would actually have adverse effects on the environment in the form of excessive greenhouse gas emissions and waste generation.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based

on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

59. Neil Maness:

I own residential property on the banks of Lake Catherine. I object to UMETCO's Minerals Corporation (UMETCO) proposal to change APCEC Regulation 2 of the Arkansas Water Quality Standards.

1) The request by UMETCO to remove the current Domestic Water Supply designation use for Wilson Creek to increase the streams minerals content degrades the water quality of Lake Catherine. I attended both the August 16, 2010 Public Hearing and the September 16, 2010 UMETCO Public Meeting and the only reason I heard for this requested Rule Change is that removing these minerals from the storm water runoff to meet the existing Wilson Creek designation is expensive .

UMETCO, like all for profit corporations, is in business to make a profit for its owners. UMETCO said they have spent $40M to "reclaim" this site? Is UMETCO under another government order to clean up the site or is the reason for UMETCO spending so much money there to make a future profit at this site or have they spent the money to avoid a future loss at this site?

UMETCO showed the public a few pictures of areas that have been converted back to a more natural condition. Great work. What else is back there? What do the ponds look like and what are the analytical results of the pond water? UMETCO has failed to provide to the public convincing reasons to justify their rule change request.

2) As a property owner on Lake Catherine, I am obligated to comply with the Entergy Shoreline Management Plan (SMP). Among other requirements, I am required to notify and get the approval of my neighbors before I conduct any changes to the shoreline on my property. As described in the SMP, Entergy does not have jurisdiction for enforcement of storm water runoff into Lake Catherine. That jurisdiction belongs to the ADEQ. In this case, since there is a self-acknowledged entity responsible for the quality of the water entering Wilson Creek which by definition contributes to the quality of the waters of Lake Catherine, the ADEQ should consider the feelings of the neighbors in the same fashion Entergy provides in its SMP.

3) The Steve Drown, Chief of the Water Division of the ADEQ is in possession of Water Quality records for the Ouachita River at Rockport that shows the Water Quality has improved over the last couple of years. That data should not be used to judge the Water Quality of Wilson Creek. While the data for Rockport is favorable, that data would more correctly indicate the performance those sources of water that enter the Ouachita River below Remmel Dam. Those sources include: ALCOA Rolling Mill, the Hot Springs County Industrial Park (formerly the Reynolds Metals Reduction Plant), General Cable, the Baroid Mines in Magnet Cove contributions to Cove Creek, and the Hot Springs County Power Company, LLC. The change in water quality at Rockport could also be attributed to operational changes of Remmel Dam. No data presenting water quality or soil/sediment quality in Wilson Creek has been presented other than an Aquatic Fish Study conducted by consultants FTN of Little Rock. Before we allow an increase in the pollutions contributions to Wilson Creek, we should understand the current condition of Wilson Creek. An unbiased study of Wilson Creek will be difficult because UMETCO has

been discharging at the proposed elevated rates into Wilson Creek for the last 2 – 3 years. At a minimum, sediment samples should be taken and analyzed for the full battery of pollutants and compared with the results submitted by UMETCO.

4) The Ouachita River is a Water of the State classified for raw water source for public, industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses. The receiving stream of Wilson Creek is the Ouachita River. Therefore, the classification of Wilson Creek should not be lower than the Ouachita River.

Sincerely,
Neil Maness
767 Couchwood Road
Hot Springs, AR 71901
Neil.Maness@gmail.com

RESPONSE TO NEIL MANESS:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

Under UMETCO's current NPDES permit, water quality data are provided to ADEQ every month. In addition, as a normal part of the permit renewal request, UMETCO analyzed for a "battery of pollutants," called a Priority Pollutant Scan, and these data are included in the permit renewal request to ADEQ for their consideration.

Regarding the comment suggesting that the ADEQ data from the Ouachita River near Rockport (downstream of Remmel Dam) should not be used to evaluate the water quality of Wilson Creek, UMETCO agrees. The UAA Report and its Addendum were based on extensive sampling of the biology, chemistry, and habitat of Wilson Creek. However, UMETCO believes the data from the ADEQ station downstream of Remmel Dam are useful in describing the water quality of Lake Catherine, including downstream inputs, as the commenter indicated.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by

commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

60. Lorraine Mason:

From: Lorraine Mason [mailto:l.mason07@yahoo.com]
Sent: Friday, September 10, 2010 11:42 AM
To: Drown, Steve; Reg-Comment
Cc: Commissioners; safewater@arkansas.gov
Subject: UMETCO

September 10, 2010

Mr. Steve Drown
Water Division Manager
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Dear Mr. Drown

I would like to voice my opposition to the proposed modifications to Arkansas Pollution Control and Ecology Regulation No. 2 as requested by UMETCO Minerals Corporation. The petition to change legal discharge levels states "the rulemaking does not represent a change from current conditions" and "will establish the water quality criteria...at a level consistent with current conditions". After researching this issue, I have concluded that UMETCO, by its own admission, is already discharging chloride, sulfate, and total dissolved solids (TDS) at levels above the limits of its permit. As I understand it, though the NPDES permit issued by AEDQ became effective in September 2007, the numeric permit limits on these substances will not become effective until September 28, 2010. As a frequent recreational user of Lake Catherine, as well as being a consumer of the water from Malvern's public water supply, I am very concerned about future health effects of swimming in and drinking water with high levels of chloride, sulfate, and dissolved solids. Even though Wilson Creek is not used as a primary water source, it flows directly into Lake Catherine, thence into the Ouachita River, which is the domestic water supply for many people in Hot Spring County and numerous other locations downstream. I swim in the lake and consume fish caught from Lake Catherine, as do most of my friends and relatives. Many families with children spend hours in the water at a sandbar area which is less than .5 mile from the mouth of Wilson Creek. Apparently, we have been exposed to these high levels of pollutants for many years. UMETCO claims that there "do not appear" to be any ill effects of the current levels of chloride, sulfate, and TDS being discharged. However, it may take years to see adverse effects of exposure to these substances by both humans and aquatic life. Perhaps

more stringent controls should be considered, instead of raising the limits so that UMETCO will now be in compliance with current laws.

The water quality of our lakes and streams is very important to me and my family. We feel it is your duty as a state agency, to protect the interests and health of the people of Arkansas. The ADEQ website states: "We protect, enhance, and restore the natural environment for the well-being of all Arkansans". It appears to me that the well-being you are protecting is that of the corporations, rather than that of ordinary citizens. What is of even greater concern is that corporations, instead of abiding by existing laws, are allowed to have the rules and laws changed when they are out of compliance. Most of the time, the general public never knows about this, not due to ignorance or apathy, but due to less than adequate notification. A notice hidden in a newspaper is hardly adequate.

I believe it would be in the best interests of all who would be impacted and the state of Arkansas, to reject the request by UMETCO. Water quality laws should be determined with the welfare of all Arkansans in mind and not by a corporation's inability to comply with regulations.

Respectfully,

Lorraine Mason
P. O. Box 551
Malvern, AR 72104
(501) 337-0773

RESPONSE TO LORRAINE MASON:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

As a point of clarification to the commenter, a typical approach to accomplishing reclamation at former mine sites involves achieving protective levels of sulfate, chloride, and TDS. Following improvements in these constituents to an approximately static level, site-specific criteria based on those levels are typically developed – see APCEC Regulation No. 2, §2.511 for multiple examples.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified

criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and

documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

61. George McClure, Jr.:

**McClure Title Company**

*TITLE INSURANCE – ESCROW SERVICE*

230 SOUTH OLIVE * P.O. BOX 400 * MALVERN, AR 72104

Telephone/Fax
501/332-5767 * 501/332-3386

September 17, 2010

Mr. Doug Szenher
Public Outreach and Assistance Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Re: UMETCO Minerals Corporation Discharge to Wilson Creek Branch,
Garland County, Arkansas.
NPDES Permit No. AR0048950 – 3rd Party Docket 10-005-R

Dear Mr. Szenher:

I am writing this letter to strongly protest the application before ADEQ by UMETCO to lessen the water discharge standards for this corporation into Wilson Creek, then Lake Catherine, and ultimately the Ouachita River.

I am a lifelong resident of Malvern, and an avid outdoorsman. I have spent a lifetime fishing and floating Lake Catherine and the Ouachita River. We have fought pollution into this great resource for decades, and have seen the overall water quality improve to the point where native smallmouth bass again inhabit this beautiful river.

Companies like UMETCO are a threat to the health, general welfare of the public, and to the fisheries of this river when they do not comply with current water standards. They do not comply now, and they want you to make it easier on them to pollute by asking you to lessen the standards. You are the watchdog for the people of this state, and it is your job to protect us. If someone digs a ditch without a silt fence, you are all over them. However, you let continuing pollution run into one of our great fisheries, recreational lakes, and the drinking water source for Malvern, Arkadelphia, Camden, El Dorado and others. You are not doing your job.

As a businessman, realtor, and attorney in Malvern for many years, I can tell you that this request will have an adverse economic impact upon our area. We rely on tourism, retirees, and recreational visitors to fuel our economy.

I, and many others, are watching you to see if you will protect the citizens of this state; or if you will bend to the will of large industry, to the detriment of the Ouachita River basin. I strongly urge you to deny this application by UMETCO, and to enforce your current standards upon them.

Sincerely,

George L. McClure, Jr.

RESPONSE TO GEORGE MCCLURE, JR.:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following

major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit

to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

62. J.A. McGuire:

Please do not lower the quality of water in the State. Do not allow further pollution of Wilson Creek by UMETCO. Please do not lower the standards for water quality in a source of drinking water.

Sincerely,
J. A. McGuire
1319 Elm St
Malvern AR 72104

RESPONSE TO J.A. MCGUIRE:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

63. Betty McGuire:

Please do not lower the quality of water in the State. Do not allow further pollution of Wilson Creek by UMETCO. Please do not lower the standards for water quality in a source of drinking water.

Sincerely,

Betty McGuire
1318 Flower Street
Malvern, AR 72104
501-332-2079

RESPONSE TO BETTY MCGUIRE:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

64(a). Joe Nix:

From: joe nix [mailto:river1939@suddenlink.net]
Sent: Tuesday, August 31, 2010 10:55 AM
To: Drown, Steve
Subject: Wilson Creek

Steve,

I did a little more work looking into the Wilson Creek situation. I continue to be amazed at the amount of confusion that exists over this issue. People are considering UMETCO and STRATCOR as one company. If you mention vanadium mining and processing, people think about the ponds and spoil piles they see from Hwy 270 and they make no distinction between the old UMETCO mine and the later STRATCOR OPERATION. Anyway, I felt like I had to write a formal letter expressing my concerns. Although the original is in the mail to you, I have attached it to this email. I also sent copies to a few of the PC&E Commissioners.

Did you hear that River Valley Water District postponed their push for Pine Mt. Dam at a meeting yesterday? Apparently their own engineering study showed that what everyone was saying about Lake Ft. Smith was right. I also heard the Corps encouraged them to look at the use of "near river wells" (I forget what they call those things) for long range supply. Things sure do move slowly.

Joe

*Nix*
*2809 Walnut Street*
*Arkadelphia, Arkansas 71923*

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RESPONSE TO JOE NIX (64A):

Thank you for taking the opportunity to provide comments on this rulemaking. The comments are acknowledged.

64(b). Joe Nix:

**I would like to offer some comments about and some suggestions regarding the request for rule changes for Wilson Creek proposed by UMETCO, Southeast of Hot Springs, Arkansas.**

**First, there is way too much confusion surrounding this proposed rule change. Clearly some of the people who live on Lake Catherine and the Ouachita River downstream from Lake Catherine are concerned. I do not think it is well understood that this rule change for mineral standards applies**

only to the older part of the vanadium mining within the watershed of Wilson Creek. If I understand correctly, UMETCO continues to reclaim this area in an attempt to reduce its discharge of acid mine drainage. I also believe that UMETCO is subjecting at least part of their acid mine drainage to treatment (neutralizing) of some of this drainage before discharging it into Wilson Creek.

It would appear to me the actual changes which are proposed would probably have little impact on Wilson Creek and I see nothing wrong with removing water supply as a designated use. But there are concerns which I believe need to be addressed.

After reviewing some of the water quality data from this area, including some in the UAA, it appears that some heavy metals are associated with this acid mine drainage. For example, the nickel concentration in water from a "seep" from this operation is reported to be over 0.1 ppm in the UAA. Some earlier data indicate that it has been even higher. As for an analyses of water from Wilson Creek below their 001 Outfall, it seems that there has been very little done, possibly limited to work done by ADEQ one time every 5 years.

Streams (even small ones like Wilson Creek) are very dynamic systems and I expect the amount of discharge as well as the concentrations of metals and other components in it also change in response to storm events, degree of treatment, and frequency of treatment. Given the variability of such systems, sampling once every 5 years is simply not adequate to determine the effective concentration of potentially toxic substances, especially heavy metals which are known to be present.

It is my suggestion that ADEQ withdraw their application for changes in mineral criteria until it can be established that there is no impact from heavy metal discharge on Wilson Creek and Lake Catherine in the vicinity of the confluence of Wilson Creek. At a minimum, such a survey should include sampling from several stations on Wilson Creek and possibly two on Lake Catherine at a frequency of at least one time per month over a period of one year. Should such a survey indicate that the concentration of heavy metals is within acceptable limits, the request for change in rules could proceed.

I fully realize that the proposed rule change does not address heavy metal concentrations but the information available suggests that nickel, zinc, and possibly other metals are associated with this discharge. I believe that the type of study I propose will provide information to clear up this matter and will help to relieve some of the concerns of people who live in this area.

Although it is somewhat of a side issue, I think it is truly unfortunate that there is so much confusing and inaccurate information associated with this issue. I realize that there has already been one public hearing but some of the

**comments made there may have been driven by the fact that there was little understanding of the overall situation. I believe that it would be to the distinct advantage of UMETCO as well as residents of the area to improve communications. It is possible that some type of citizens group which could work with UMETCO and ADEQ personnel would help to resolve some of the confusion surrounding this issue. I think that professionals who work in the water quality area often forget how very confusing even the process of rule changing actually is, to say nothing about understanding technical aspects involved in issues such as this.**

**This latter concern is not restricted to only the Wilson Creek proposal. The gap between public understanding of water quality issues and the regulatory processes which were created to protect the water resources of this state is getting wider and wider. I fear that it will ultimately end with actions which are not protective and with a public in a state of total confusion. The system of holding "public hearings" as required by current regulations, is simply not effective. Most of the public are frustrated. Correcting this situation will require a massive educational program involving information exchange in small working groups. It will also require that sound scientific information be placed on the table in a manner which can be understood by non-technical people. There is a way to take care of this problem.**

**I often quote a paragraph from David Peat's book entitled <u>From Certainty to Uncertainty</u>. I believe Mr. Peat's concept is applicable to the problem which I have described. I have copied it below:**

Reference: <u>From Certainty to Uncertainty</u>, by F. David Peat, Joseph Henry Press, Washington, D.C., 2002.

*"The authoritarianism of logic is a form of confrontation in which there is no middle ground. It is a logic of the excluded middle. It is a logic of winners and losers. It is a showdown in which either we triumph, so that our opponent does our bidding, or we lose face and lose power. Far better is when each voice has been heard and each position respected, when everyone has made a creative contribution and feels he or she has gained something while defeating no one. For how can "right action" flow out of anger and conflict? This is not compromise, in the sense of giving ground, but of creating a framework flexible enough to tolerate multiple points of view and contexts. It is an approach in which each person can work out of his or her own center and act in a gentle way."*

**Thank you for the opportunity to make these remarks.**

**Sincerely,**

**Joe F. Nix, Ph.D.**

RESPONSE TO JOE NIX (64B):

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO appreciates your suggestions for improving communication with the community to dispel the misunderstandings associated with this proposed rulemaking. UMETCO shares your concern about public misperceptions and misunderstandings around technical and regulatory issues and we are striving to communicate more effectively through the public meeting UMETCO hosted in September 2010, as well as through ongoing communication efforts on our website, www.umetcowilsonmine.com.

The UAA Report and its Addendum support your comments relating to the expected lack of effects from the proposed site-specific criteria for sulfate, chloride, and TDS in Wilson Creek and removal of the designated drinking water use for Wilson Creek. As you have noted, this proposed rulemaking is only for these minerals, and is not related to metals that are regulated individually by ADEQ.

Ongoing reclamation at the site is proceeding cooperatively with ADEQ and will address the presence of metals in upper Wilson Creek that result from the low-pH seep/inflow from the Spaulding area. As a point of clarification, the entire flow of upper Wilson Creek is diverted for treatment to adjust pH and remove metals prior to being discharged through the NPDES outfall into lower Wilson Creek.

Regarding comments pertaining to postponing the rulemaking to specifically evaluate metals at the confluence of Wilson Creek and Lake Catherine, UMETCO respectfully disagrees with this suggestion because of the following line of reasoning:

- The UAA Report and its Addendum specifically evaluated the biological communities of upper and lower Wilson Creek and found no negative effects on the biology in lower Wilson Creek (i.e., the expected community exists there), but found an effect on the biology in upper Wilson Creek (i.e., the expected community did not exist there);
- The UAA Addendum presented results of an evaluation of the cause of the biological impact in upper Wilson Creek and determined that the effects in this reach were not related to sulfate, chloride, or TDS, but rather due to the presence of dissolved metals. Additional reclamation efforts will address this issue. For the time being, this water is diverted into East Wilson Pond for treatment;
- The UAA Addendum specifically evaluated the effect of existing levels of sulfate, chloride, and TDS levels on aquatic life in lower Wilson Creek (i.e., downstream of the outfall) and concluded that toxicity (chronic) would not occur in lower Wilson Creek unless sulfate, chloride, or TDS levels were approximately two to three times higher than the levels of the proposed criteria. Therefore, there is a significant safety factor associated with the proposed site-specific sulfate, chloride, and TDS criteria based on these analyses using the same matrix as the water in lower Wilson Creek.

- UMETCO collects metals data as part of its NPDES permit as well as a monthly sample from lower Wilson Creek near the UMETCO property line. Metals analyzed for the NPDES permit include vanadium (twice/year), arsenic (three times/month), beryllium (three times/month), cadmium (three times/month), and zinc (three times/month). There is no Arkansas water quality criterion for vanadium but there are water quality criteria for the other metals. Permit limits for the metals with associated water quality criteria are designed to protect downstream waters from water quality criteria exceedances in Wilson Creek. UMETCO has had one permit limit exceedance in the past 5 years for a metal (zinc). These samples cover a variety of seasonal conditions.
- As stated above, UMETCO also collects monthly data in Wilson Creek near their southern property line to evaluate water quality in the creek that would include all inputs from the site (including the NDPES outfall). These data cover a wide range of seasonal conditions also and are collected and submitted to ADEQ monthly (and are therefore public record). Metals with associated Arkansas water quality criteria analyzed in these monthly samples include cadmium, copper, lead, nickel, and zinc. A review of these data over the past two years, at the hardness levels found in Wilson Creek, indicate no exceedances of Arkansas water quality criteria.
- To summarize, the biological and chemical data from Wilson Creek and the NPDES outfall do not indicate a metals issue or any other impacts to water quality in lower Wilson Creek. The same data point to a biological effect in upper Wilson Creek, which is the subject of ongoing reclamation to address that effect. Further, multiple analyses, as described in the UAA Report and its Addendum and which include toxicity testing on water from Wilson Creek, verify that the proposed criteria should not have a negative effect on the creek.

65. Larry and Diane Orlicek:

We are writing because we are very concerned about the recent proposal to increase the level of contaminants being released into Wilson Creek in Garland County. We live on the Ouachita river below Remmel Dam, and the water in Wilson Creek eventually flows past our house. We frequently float the river from the dam back to our house. Our grandchildren play along our shoreline, and our dogs drink out of the river. We already have a problem with litter and debris that collects on our property after the water level changes. Please do not allow the level of pollution to increase. We have lived here for twenty one years, and have watched the area grow from wilderness to a well populated neighborhood. Many families would be affected by this threat to the safety of our river. Your decision could have long lasting consequences for all the residents downstream from Wilson Creek. Please do not allow the level of pollutants to increase.

Thanks for hearing our request.

Sincerely,

Larry Orlicek, Diane Orlicek

Larry and Diane Orlicek
286 Riverpark Drive
Malvern, AR 72104

RESPONSE TO LARRY AND DIANE ORLICEK:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. UMETCO remains committed to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy

ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

66. Ouachita River Commission:

Rt. 2, Box 129 A, Hampton, AR 71744

September 16, 2010

Mr. Doug Szenher
Public Outreach and Assistance Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Re: UMETCO Minerals Corporation Discharge to Wilson Creek Branch, Garland County, Arkansas.
NPDES Permit No. AR0048950 – 3rd Party Docket 10-005-R

Dear Mr. Szenher:

It is the understanding of the Ouachita River Commission that UMETCO Minerals Corporation has applied for a change in the standards of water discharge into Wilson Creek and ultimately Lake Catherine and the Ouachita River downstream. This request appears to be inconsistent with the practices and goals of other companies who are seeking to reduce their discharges into our waterways. Also, is it true that UMETCO is trying to get the standards raised to meet their current discharge? And if so, why hasn't the permitted limits been enforced? This third party rulemaking should be denied.

The Ouachita River Commission has great interest in the impact, both environmentally and economically, of any regulated discharge into the Ouachita River. We are greatly concerned about the environmental, health, fisheries and economic ramifications of any lessening of the water standards for industries that discharge into the Ouachita River basin. It is the Ouachita River Commission's understanding that UMETCO has not provided the APC&EC with any information to show how this change in water quality standards will provide economic or social development in the area.

We are stewards of this resource appointed by the State of Arkansas, and charged with the duty to enhance the quality of life along the Ouachita River below Lake Catherine to the Louisiana line. We would like to go on record as opposing this request by UMETCO Minerals Corporation for this change (Chloride from 15 mg/L to 56 mg/L; Sulfate from 20 mg/L to 260 mg/L; and Total Dissolved Solids from 142 mg/L to 543 mg/L. in water standard release into Wilson Creek.

The results of this request, if granted, will not enhance or benefit the water quality of this great resource. It will negatively affect the quality of life, health, recreation, or fishing for the citizens in the Ouachita River basin.

Please deny this request. Arkansas is so blessed with such great natural resources, water, wildlife and recreational areas, and this request will be detrimental to all concerned.

We earnestly trust that you will make the decision that is best for our state.

Sincerely,

OUACHITA RIVER COMMISSION

Renita Wingo

Renita Wingo
Secretary Commissioner / Hot Spring County

RESPONSE TO OUACHITA RIVER COMMISSION:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. As such, the proposed rulemaking will not provide economic or social development in the area; however, UMETCO points out that providing either economic or social development is not a requirement for the proposed rulemaking. UMETCO remains committed to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

67. Ouachita River Park Commission:

Ouachita River Park Commission
206 Fadas Road
Malvern, AR 72104

Arkansas Pollution Control and Ecology Commission
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Attn: Doug Szenher, Public Outreach and Assistance Division

Subject: Comments on Proposed Changes to Regulation 2 Submitted by UMETCO s

The Ouachita River Park Commission (ORPC) seeks to improve the quality of life for the citizens of Hot Spring County and our guests through environmentally responsible development of a public park along the Ouachita River in Malvern, Arkansas. The ORP provides direct access to the Ouachita River for picnicking, nature tours, fishing, swimming, floating, kayaking, canoeing, boating, and swift-water rescue training. The ORPC opposes the reduction of water quality standards for any tributary of Lake Catherine and/or the Ouachita River downstream.

Arkansas' water quality regulations were created to preserve and protect the quality of our natural waters os that they will continue to be available and free from unsafe contamination for all beneficial uses such as those enjoyed at the ORP. The UMETCO variance further degrading the water quality of a tributary of Lake Catherine, Wilson Creek, by over 300 percent both for total dissolved solids and chlorides, and over 1,300 percent for sulfates, will undoubtedly increase the levels of undesirable contaminants downstream. Increases in these contaminants at the levels proposed could restrict the potential uses of the Ouachita River (e.g., Kayaking) thereby limiting the Ouachita River Park's economic benefit to the community.

The section along the Ouachita River downstream of Remmel Dam already experiences extreme fluctuations in water levels seasonally due to lake draw-downs, extreme precipitation events, and from daily releases. Increasing contaminants entering the watershed will create unforeseen problems to the environmental quality and economic well-being of many downstream communities. For example, increases of contaminant load in the river during periods of low water could affect the amount of chemicals needed to maintain drinking water standards by local providers (e.g., Kimzey; City of Malvern). These costs are typically passed along to customers.

Any decision about the UMETCO petition to increase the contaminant load should be based on sound science. There have been several recent studies relating mostly to game fish diversity but comparative studies are few. There is no information related to the tissue levels of aquatic fauna for contaminants coming from Wilson Creek. Indeed, the 1999 Fisheries Baseline Characterization Study to evaluate the impacts related to the (2003) relicensing of Remmel Dam by Entergy Arkansas observed that the lowered fish diversity may be a result from the operation of the Carpenter-Remmel project, acid mine drainage, or municipal effluents.

The ORPC requests distribution of an analysis and evaluation of results pertaining to the tributaries of Lake Catherine and the Ouachita River below Remmel Dam regarding the:

(1) timing of non-compliant UMETCO process water discharges;
(2) situations that the discharges in (1) have been non-compliant
(3) toxicity tests on the UMETCO discharge constituents at both the levels currently permitted and the proposed levels;
(4) levels of inorganics in the sediments in Lake Catherine down-channel from Wilson Creek and the section of the Ouachita River from Remmel Dam to the Tanner St. Bridge, including the off-river channel at Jones Mill wastewater treatment outfall, and Cove Creek confluence;
(5) water sampling data collected during various water release events from Remmel Dam at the sites in (4);
(6) levels of inorganic contaminant contained in fish and fish-eating wildlife.

In short, we request comprehensive testing for the areas above named. These comments have been approved by the ORPC.

Sincerely.

Michele Glover (for the attached names of members)

Acting Members of the Ouachita River Park Commission

David Crow, Malvern
Diane Olicek, Malvern
Glen and Marcille Coston , Malvern
Jan Glidewell, Malvern
Jeff and Joye Short, Malvern
Jeremy Harper, Malvern (Malvern Fire Chief)
Lance Jones, Little Rock (Arkansas Canoe Club)
Michael Coogan, Little Rock
Pat Heard, Lono, Clear Creek Township
Patsy Melton, Lono, Clear Creek Township
Michele Glover, Malvern
Ted Smethers, Hot Springs
Connie Roberts, Glen Rose

RESPONSE TO OUACHITA RIVER PARK COMMISSION:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. UMETCO remains committed to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

A number of your comments are best answered by our General Responses to Comments provided at the beginning of this document. References to general responses are provided below, followed by specific responses to comments that are not fully addressed by the general responses.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality

resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

The ORPC requests distribution of an analysis and evaluation of results pertaining to the tributaries of Lake Catherine and the Ouachita River below Remmel Dam regarding several numbered requests. These numbered requests and UMETCO's responses are provided as follows:

(1) Timing of non-compliant UMETCO process water discharges:

Response: UMETCO does not discharge "process" water. Surface water and stormwater that have picked up minerals as the water runs over soils and rocks on the site are treated to adjust pH and remove metals. Prior to the effective date of mineral standards in UMETCO's permit in October 2010, two incidents of NPDES non-compliance were reported for the outfall at the former Wilson Mine Site over the past approximately

5 years. One was for pH in 2009 and one was for zinc in 2010. The NPDES outfall is currently non-compliant with the sulfate and TDS limitations, which are two of the constituents associated with the proposed rulemaking. This compliance issue with the sulfate and TDS will be addressed if the proposed rulemaking is approved.

(2) Situations that the discharges in (1) have been non-compliant:

Response: The two non-compliant situations relating to pH and zinc were considered anomalies that have not reoccurred. Though they have reduced over time as reclamation has progressed at the site, the sulfate and TDS concentrations appear to have stabilized at a level exceeding ecoregion-based criteria. In fact, levels of minerals, in particular sulfates, are consistent with available data for these minerals before any mining occurred on the site (see General Response No. 5.b and attached historical data from onsite springs).

(3) Toxicity tests on the UMETCO discharge constituents at both the levels currently permitted and the proposed levels:

Response: The UAA Addendum specifically evaluated the effect of existing levels of sulfate, chloride and TDS levels on aquatic life in lower Wilson Creek (i.e., downstream of the outfall) and concluded that toxicity (chronic) would not occur in Wilson Creek downstream of UMETCO's outfall unless the levels of sulfate, chloride or TDS were approximately 2 to 3 times higher than the proposed criteria levels. Therefore, there is a significant safety factor associated with the proposed sulfate, chloride and TDS site-specific criteria for Wilson Creek.

(4) Levels of inorganics in the sediments in Lake Catherine down-channel from Wilson Creek and the section of the Ouachita River from Remmel Dam to the Tanner St. Bridge, including the off-river channel at Jones Mill wastewater treatment outfall, and Cove Creek confluence;

Response: The proposed rulemaking does not involve sediment data; however, potential impacts from sediment on the water quality of downstream waterbodies have been addressed by the studies. The proposed rulemaking only addresses dissolved inorganics. UMETCO refers the commenter to ADEQ for this data request in the event that ADEQ has such data. These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River.

(5) Water sampling data collected during various water release events from Remmel Dam at the sites in (4);

Response: The proposed rulemaking does not involve this type of data and UMETCO cannot provide it as a result. UMETCO refers the commenter to ADEQ for this data request in the event they have such data. These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River.

(6) Levels of inorganic contaminant contained in fish and fish-eating wildlife.

Response: The proposed rulemaking does not involve this type of data and UMETCO cannot provide it as a result. UMETCO refers the commenter to ADEQ for this data request in the event they have such data. It should be noted that the minerals at issue in this rulemaking do not accumulate in fish tissues and do not affect the suitability of fish for eating.

68(a). Denise Parkinson:

From: Denise Parkinson [mailto:denise@wspice.com]
Sent: Monday, September 20, 2010 7:24 AM
To: Reg-Comment
Cc: 'Marc Harrison'
Subject: re: UMETCO

September 19, 2010

Arkansas Department of Environmental Quality
Arkansas Pollution Control & Ecology
Public Comment on UMETCO 3rd Party Rule
Change Request Regarding Wilson Creek, etc.

Dear Sir or Madam:

I am writing to oppose any and all requests by UMETCO Minerals Co. for relaxation of water quality standards, removal of drinking water designation, or any amendment that allows UMETCO to change Arkansas' Water Quality Regulation (#2) Section Reg. 2.306 to increase water quality criteria and allowable concentrations for sulfates, chlorides, and total dissolved solids (TDS) in Wilson Creek.

As this situation has been ongoing for some time, I base my total opposition to UMETCO's requests before the ADEQ/PC&E on the following, which I witnessed at their Community Information Meeting when I stood and asked two questions:

1) When I asked about the toxicity of "Total Dissolved Solids," I was ridiculed by a Mr. Malcolm, the UMETCO Chemist, who said that Total Dissolved Solids were safe enough to drink and added that he would drink them.

2) When I then asked about a $26,400 fine assessed in 2007 against UMETCO, the UMETCO chemist Mr. Malcolm, as well as Mary Draves (UMETCO External Communications), Lucius Boudreaux (UMETCO Remediation Leader – actually

a DOW Corporation employee) conferred and then announced they did not have that information but would contact me at a later date with the answer.
The following day, after hours of telephone calls and research, I was told by ADEQ that the $26,400 fine was due to repeated releases and seepage of Total Dissolved Solids (as well as other heavy metals and acidic PH violation.)

What makes this pattern of deceit so egregious is that, prior to my questions, a Lake Catherine property owner was inquiring about the ADEQ and PC&E's Consent Administrative Order of 2007. UMETCO representatives acknowledged this Consent Administrative Order (the same Administrative Order in which the $26,400 fine was contained, as I later learned). However, when I rose and asked my questions, immediately after the above exchange, the UMETCO representatives denied knowledge of the fine.

This exchange confirms to me that UMETCO is a threat to not only the adjacent community, but to the Natural State as a whole. When a corporation sends its top representatives to meet with community residents inside a Church, then proceeds to lie openly and repeatedly, as well as insult residents that have asked questions in good faith, then that corporation should not be granted exemptions, special consideration, etc., by the State it is actively harming.

When a company exhibits a chronic pattern of lying repeatedly, openly, and unrepentantly, then it is impossible to expect any positive, measurable, or desired outcome based upon worded agreements. For the most tragic example of this, one has only to look to the Gulf Coastal states' experience with British Petroleum over the past months.

I witnessed during this public meeting many other examples of UMETCO's complete disregard for the families that make up this community, but I present my own personal experience that clearly demonstrates UMETCO's utter dishonesty and malice.

I urge everyone who reads this to remember that DOW Chemical Corporation (which owns UMETCO) is, like BP, a multi-billion dollar company with the means to clean up its own mess. Whether those dollars will go instead to continual Public Relations exercises like the one I witnessed depends upon the established protective and regulatory agencies of Arkansas – "The Natural State."

Thank you,

Denise Parkinson
3831 Spring Street
Hot Springs, AR
501.802.1003

RESPONSE TO DENISE PARKINSON (68A):

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b). The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state

and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

Regarding comments pertaining to allegations of UMETCO or its representatives not being open or honest, UMETCO strongly disagrees with this suggestion by the commenter.

68(b). Denise Parkinson:

From: Denise Parkinson [mailto:denise@wspice.com]
Sent: Monday, September 20, 2010 2:41 PM
To: Reg-Comment
Subject: re: UMETCO 3RD PARTY RULE CHANGE REQUEST
Dear Sir or Ma'am:

I would like to add to the public comments that UMETCO should be denied its requests currently before the PC & E and ADEQ because it was wrongly classified as a minor, rather than major, discharger. One has only to go through the docket # 06-003-p to understand that this is a collossal misstep that renders the entire third party rule change request moot.

Thanks very much,

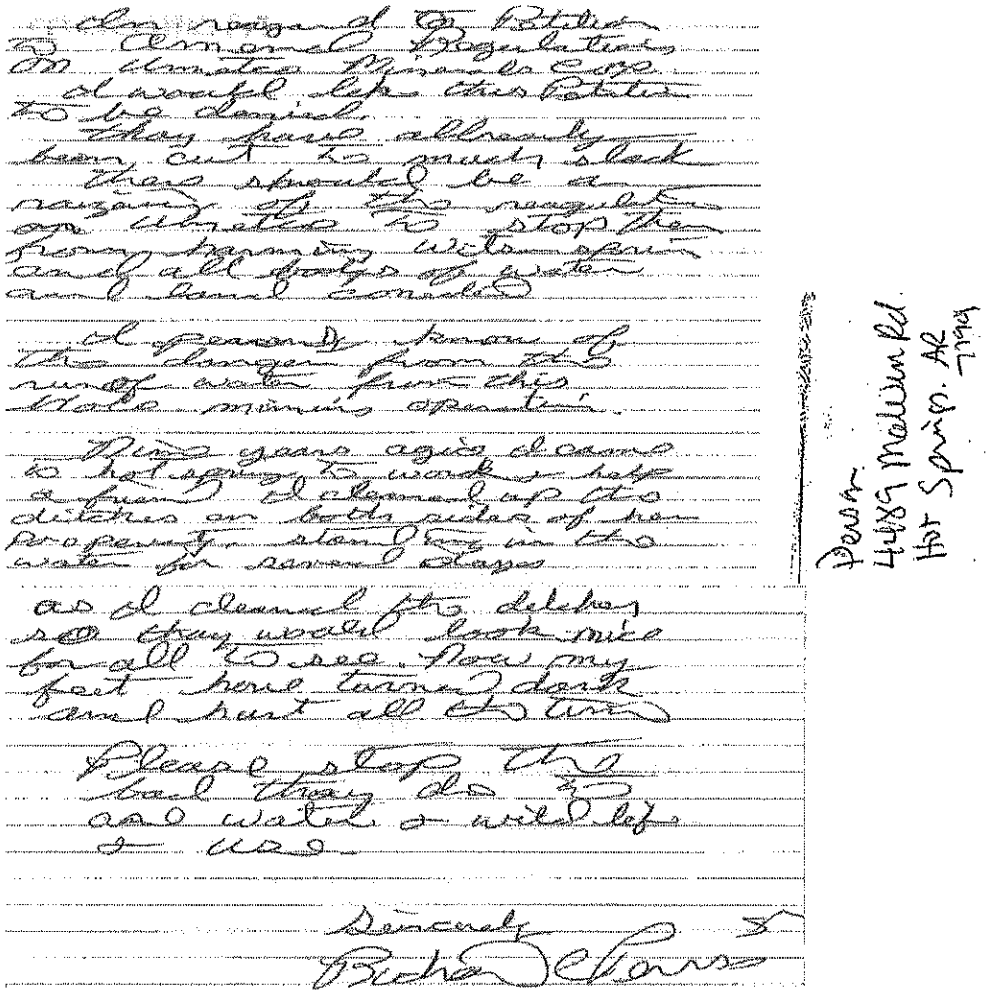
Denise Parkinson
3831 Spring Street
Hot Springs, AR 71901

501.802.1003

RESPONSE TO DENISE PARKINSON (68B):

UMETCO's Wilson Mine is properly characterized a minor discharger. Comments pertaining to actions of ADEQ are better addressed by that agency.

69. Richard Person:



I am against the petition to change regulations on Umetco Minerals Corp. I would like this petition to be denied.

They have already been cut to much black there should be a rezoning the the regulation on Umetco to stop them from pumping water from and all forms of water and land conditions.

I personally know of the danger from the runoff water from this waste mining operation.

Nine years ago I came to Hot Springs to work on help a friend I cleaned up the ditches on both sides of his property standing in the water for several days.

as I cleaned the ditches so they would look nice for all to see. Now my feet have turned dark and hurt all the time.

Please stop the bad they do to our water & wildlife & us.

Sincerely,
Richard Person

Person
4489 Malvern Rd.
Hot Spring. AR
71909

RESPONSE TO RICHARD PERSON:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

70. Clifford Phipps:

Clifford Phipps
684 Couchwood Road
Hot Springs, AR 71901

September 15, 2010

Mr. Doug Szenhier
Public Outreach and Assistance Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118

RE: UMETCO Permit Request

Sir,

Six years ago, we purchased a home on Lake Catherine. We have renovated the home and it now is the only asset we have. If UMETCO is allowed to continue to pollute the lake, our home will become worthless and we will have no means to move away from the toxic lake.

Please, do a complete study about the quality of Lake Catherine and the pollution sources dumping into it.

RESPONSE TO CLIFFORD PHIPPS:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. UMETCO remains committed to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy

ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

71. Lowell Price:

September 15, 20 I0

Mr. Darwin Hendrix - Chair
Arkansas Pollution Control and Ecology Commission
101 E. Capitol Ave., Suite 205
Little Rock Arkansas 7220 I

Dear Mr. Hendrix:
I am writing in regards to a meeting I attended last night by an organization (Friends of the River) at Arkadelphia. Numerous people were there including attorneys, a mayor, a district judge, water department representatives, biological experts and just ordinary people. The people were shocked at the facts that were presented about the proposed UMETCO pennit request to ADEQ. We are concerned about the damage this heavy metals waste has done and will continue to do in Lake Catherine and the Ouachita River. We do not feel that UMETCO has presented the complete picture to the ADEQ board. If this request goes forward Lake Catherine and the Ouachita River will be damaged for recreational, fishing, and drinking water source to many people thorough out the state. We are requesting that ADEQ do a common study of the effects of what will transpire if this is allowed to continue and become permanent. The residents of the lake and river are ITn:. concerned about this serious matter.
Thank you for your prompt attention to this issue.
Sincerely,
Lowell Price
765 Couchwood Road
Hot Springs, AR 71901

RESPONSE TO LOWELL PRICE:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine. As a point of clarification, the proposed rulemaking does not seek to change water quality criteria for metals. If the proposed rulemaking is adopted, UMETCO will still be required to comply with permit limits for other criteria.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of

Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

72(a). Ted Price:

Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8-16-10 Verbal Comment ☒ Written Comment ☐ (Attached or back of card)
Speaker #

Hearing Location LAKESIDE JR HIGH

Name TED PRICE

Address 761 COVERWOOD ROAD

City HOT SPRINGS State AR Zip Code 71901

E-mail Address ROADHOGS58 at SBCGLOBAL.NET

ADEQ ARKANSAS Department of Environmental Quality www.adeq.state.ar.us

RESPONSE TO TED PRICE (72A):

Thank you for taking the opportunity to provide comments on this rulemaking.

72(b). Ted Price:

> Dear ADEQ, I'm very concerned that Umetco is wanting to change the domestic water supply designation use for Wilson Creek. This does not make any sense. Wilson Creek may not be a water supply but down stream sure is.I live here on Lake Catherine. My kids and grand kids fish and swim in this lake every summer. This lake has always had a bad name for what has happened in the past. Please do not approve the changes that Umetco wants. This is our lake. This is our water. Your job is to protect the water and people of this state. Umetco wants to dump their waste down our waterways so they can save money. This is what the issue is. Money. $$$$$$$. Do what's right and stop this from happening. Sincerely, Ted L. Price- 761 Couchwood Road, Hot Springs, AR 71901-8840.

RESPONSE TO TED PRICE (72B):

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Wilson Creek or Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO remains committed to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality

resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

73(a). Evelyn and Robert Pye:

Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8-16-10 Verbal Comment ☐ Speaker # Written Comment ☑ (Attached on back of card)

Hearing Location Lakeside Jr. High

Name Evelyn Pye

Address 200 Harmon Ave

City Wilson State AR Zip Code 72104

E-mail Address pyeh@prodigy.net

ADEQ ARKANSAS Department of Environmental Quality www.adeq.state.ar.us

I spent several of my childhood years (from 7-) growing up along Chamberlain Creek in Magnet Cove. It was orange, colored and had no life of any kind in it from Kuen-off of Magnet Cove, Barton as far as I know it is still disfigured and "dead" Creek. Don't let this happen in the UMETCO case.

RESPONSE TO EVELYN AND ROBERT PYE (73A):
Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Wilson Creek or Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected

to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

73(b). Evelyn and Robert Pye:

200 Harver Hills Rd.
Malvern, Arkansas 72104
September 10, 2010

Mr. Doug Szenher
Arkansas Department of Environmental Quality
Public Outreach and Assistance Division
5301 Northshore Dr.
North Little Rock, AR 72118

Dear Mr. Szenher and other ADEQ representatives:

I am seventy-one years old, born in Malvern and have lived there and in Magnet Cove all my life. My dad raised me to fish and hunt and I have raised my two boys to do the same. We thought this area was as close to paradise as you could find on Earth. We fished the Ouachita River from Carpenter Dam, including Lake Catherine, and the river south to Arkadelphia.

Now my boys are grown and things have changed. Baroid has ruined one beautiful creek (Chamberlain) by their discard of wastes. It has gone from a pretty mountain stream to an ugly orange lifeless stream. UMETCO themselves ruined the stream that runs along Harkins Lp. In Magnet Cove where I once kept my leftover minnows alive. The present condition of the stream makes that no longer possible. Both streams then eventually run into the Ouachita River.

My wife and I attended the quiet kept meeting at Lakeside School. We found out about it by accident. It is unbelievable the grief Union Carbide (UMETCO) has caused these people around their plant. UMETCO disposes of their waste water full of chemicals down another creek (Wilson) and on into the Ouachita River by way of Lake Catherine. This will effect innocent and trusting people all the way to the Gulf. Carbide's excuse is it will cost too much for them to keep their word and all these people who depend on this water can pay more for having it treated so it will be safe to drink. This will not help the fish, animals and birds. The river no longer has the bull frogs, brim and perch it had when I was young. This is all permanent damage.

What about future generations? I am asking you to enforce the present limits not to raise them.

Sincerely,

Robert E. Pye

Robert E. Pye

RESPONSE TO EVELYN AND ROBERT PYE (73B):

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by

commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

73(c). Evelyn and Robert Pye:

200 Harmer Hills Rd.
Malvern, AR. 72104
August 29, 2010

Governor Mike Beebe
State Capitol Rm. 250
Little Rock, AR. 72201

Dear Governor Beebe:

My husband and I attended an ADEQ meeting at Lakeside Schools concerning UMETCO's proposal to release more mining wastes into Lake Catherine and on down the Ouachita River.

We have lived long enough to see specific results of industrial pollution that has affected our lives. I lived for a period along Chamberlain Creek that was ruined by Barold. This was before the 1950's. It is still a "dead", discolored creek. In the late 80's and early 90's UMETCO themselves had an operation going in Magnet Cove. They promised my dad that everything would be returned to its "before UMETCO state when they left. There was a beautiful free flowing creek

beside our home that I played in as a child, catching hundreds of abundant crawfish, etc. UMETCO is gone from that area but the creek is "dead", red in color, choked by silt and grasses. Grandchildren can no longer play in it.

Past behaviors are indicative of future behaviors.

We remember when the Ouachita River was cleaner and clearer, bullfrogs, brim and perch were abundant. You can seldom find one now. The Arkansas fatmucket mussel is now endangered. Its home is the Ouachita River.

Our experiences alone indicate to us there should be more, not less restrictions on industry.

And what about the cost to Arkansas citizens to clean up the water for drinking purposes? the damage to our tourist industry from questionable water quality? What about the cost to future generations? What are the risks to our health? Let them meet the present standards which they are not doing. And where do all these polluted small creeks run except into the Ouachita River?

Please stop this trend to overlook industrial responsibility for the sake of their bottom line and put the focus on our environment and the cost to us and future generations.

We believe this is an important enough issue for your involvement. The deadline for citizen input has been set by ADEQ for Sept. 20. Most of our citizens do not even know about this. We must depend on you, the ADEQ and other agencies to protect our interests.

Sincerely, Evelyn Pye Robert E. Pye

RESPONSE TO EVELYN AND ROBERT PYE (73C):

Regarding the comment pertaining to the Arkansas Fatmucket (*Lampsilis powellii*) in the Ouachita River that has been documented below the Interstate 30 bridge by Haris et al. (Journal of the Arkansas Academy of Sciences, Vol. 63, 2009), there are no current or predicted measurable effects of the discharge on sulfate, chloride, or TDS levels in the Ouachita River below Remmel Dam (see the UAA Report, 2004, Section 5). Therefore, there are no expected potential effects on the mussels.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally,

the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

74. James Reinmiller:

From: Jim Reinmiller [mailto:reinmillerj@wletc.com]
Sent: Thursday, September 16, 2010 5:21 AM
To: Reg-Comment
Subject: comment
Dear Sir/Ms:

My name is James Reinmiller and I live on Lake Catherine at 109 Lonesome Pine Terrace. I am sending this comment in regards to the mattter of:
UMETCO Minerals Corporation (UMETCO) to change APC&EC Regulation 2, the Arkansas Water Quality Standards

First, Wilson Creek runs into Lake Catherine just upstream from my property. Obviously, therefore I am extremely oppossed to granting this application. Lake Catherine in the past has had extreme water quality issues. I have witnessed them firsthand. During periods of high runoff, and overall for that matter, the water

was dirty. Over the last 10-15 years this has slowly changed and that is a great thing.

To know that there is a sludge pond less than 5 miles from my house that apparently, based on your data, has "unacceptable discharge incidents" every time there is a heavy rain event is disconcerting, to say the least. Heavy metals and other chemicals simply running over the top of the pond into the lake. Granted, I have not read all of the details regarding this matter, but I look to your department to live up to your mission statement and reject this application.

Furthermore, I feel the matter of the sludge pond should be addressed. How long is that going to be allowed to sit there discharging pollution into the lake/river? They no longer mine there and I have read where the mine has been reclamated. What about this, as they call it, Tailings Lake?

Bottom line I do not like this, it is bad for the economy of Hot Springs, which relies on tourism, and this application should not be granted.

Thank you,

James Reinmiller

RESPONSE TO JAMES REINMILLER:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The commenter states that there is a "sludge pond" at the former mine site that overflows "every time there is a heavy rain event." This is not true.

The commenter refers to a "Tailings Lake" at the site. It is unclear what the commenter is referring to here as no tailing deposition occurred at the mine site even during active mining years from the mid-1960s to 1986.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of

Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

75. Virginia Rushing:

ADEQ Aug 28, 2010

Dear Mr Brown

It has been called to our attention that UMETCO has plans to discharge more of its waste discharge into Wilson Creek which empties into Lake Catherine. Lake Catherine flows back into the Ouachita River. Malvern gets its water from the river.

Just a few years ago Malvern residents had their rates nearly doubled to pay for a new system. We do not think we should have to pay again to make the water safe to drink. No water should be discharged unless UMETCO restores it to safe standards. That water belongs to the company. We live here and don't want the health of our families in jeopardy.

Sincerely, Virginia Rushing

Virginia D. Rushing
314 Clardy St.
Malvern, AR 72104-4244

RESPONSE TO VIRGINIA RUSHING:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Wilson Creek or Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of

Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to

meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

76. Bill Saunders:

Public Comment Registration Card

Date 8/16/10 Verbal Comment ☐ Speaker # Written Comment ☑ (Attached or back of card)

Hearing Location Lakeside Jr. High

Name Bill Saunders

Address 115 Connie Jo

City Hot Springs State AR Zip Code 71913

E-mail Address billsaunders1@prodigy.net

ADEQ Department of Environmental Quality www.adeq.state.ar.us

PLEASE PRINT LEGIBLY

I have a degree in Biology, with emphasis in marine & terrestrial ecology. I did some post bachelaureate course work in Zoology & environmental engineering. There is a reason why Kentucky coal miners took a canary into the mines. There is a reason why these fish in the stream are dying... they are DOE canary. The solution to pollution is not dilution. Not only lives of people are at stake, not just the lake, but down stream. Business is at stake (although lives should only be the deciding factor). Lake Catherine is considered the "polluted lake". If this were concerning Lake Hamilton, and if it had been publicized (which it was hardly done) you would have had to have met in the gym. Fixing this pollution is expensive — it is a cost of doing business. Clean it up. You are charged by the State of Arkansas to protect us AND our business. Please do this!!!. Deny this request.

RESPONSE TO BILL SAUNDERS:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Wilson Creek or Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following

major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with

this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

77. Barbara Shain:

E_Mail_Address: BShain.1@gmail.com
Name: Barbara Shain
Mailing_Address: 341 Catherine Cove Loop
City_State_Zip: Malvern,AR 72104
Phone_Number: 501-844-3191
H_Division: Water
H_Serial: 1284488970749
Date: 09/14/2010
Time: 13:21:07

Questions_Comments:

I am against you granting UMETCO a permit to increase their discharge limits of their runoff that enters Lake Catherine. I live on Lake Catherine and understand this will affect our water there and also our drinking water from Kimzey Water Co. at Jones Mill. Please consider this when making your decision. Thank you, Barbara Shain

RESPONSE TO BARBARA SHAIN:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

78. Jeffrey Short:

September 15, 2010

Jeffrey Short
122 Riverpark Dr
Malvern AR 72104

Arkansas Pollution Control and Ecology Commission
Arkansas Department of Environmental Quality
Attention Doug Szenher, Public Outreach and Assistance Division
5301 Northshore Drive
North Little Rock, AR 72118

Subject: Comments on Proposed Changes to Regulation 2 submitted by UMETCO Minerals Corporation

My family lives along the Ouachita River and we come in close contact with its waters almost daily during the summer and periodically throughout the rest of the year. Therefore, we contend that the reduction of water quality standards for any tributary of Lake Catherine and/or the Ouachita River will downstream from Remmel Dam to Rockport is not in our family's best interest. When contaminants are introduced into the Ouachita River channel, they eventually find their way downstream and/or are incorporated into the fauna and sediments of the river. Increases in these contaminants at the levels proposed could restrict the potential uses of the Ouachita River thereby limiting the river's economic benefit to the communities it passes through.

The Natural State's water quality regulations were created to preserve and protect the quality of our natural waters so that they will continue to be available and free from unsafe contamination for all beneficial uses. The UMETCO variance requested for Wilson Creek is a harbinger of further degradation of the Ouachita River watershed on the whole. The issue that needs to be addressed is not the nominal increase of UMETCO discharges—of over 300 percent both for total dissolved solids and chlorides, and over 1,300 percent for sulfates—which will undoubtedly increase the levels of those undesirable contaminants downstream, but the attendant metal-mixtures with those discharges that are not being measured in the areas they will most likely accumulate.

The section along the Ouachita River downstream of Remmel Dam already experiences extreme fluctuations in water levels seasonally due to lake draw-downs, extreme precipitation events, and from daily releases. Increasing contaminants entering the watershed will create unforeseen problems to the environmental quality and economic well-being of the communities. It is known that releases from STRATCOR and Jones Mill are timed to coincide with water releases from Remmel Dam. Contaminants are moving along with the "normal" flows of the Ouachita River down past my house. (Curiously, could that be the cause of skin lesions that sometimes erupt after tubing in the river?)

ADEQ's support of the UMETCO proposal to increase the contaminant load for Wilson Creek—and elsewhere—must be based on sound science, particularly the entire contaminant load delivered over the long-term. Current data related to the contaminants coming from UMETCO and its industrial partners, is insufficient to determine there is no heavy metal contamination of the sediments or the aquatic fauna. Arkansans rely on ADEQ to be THE repository of data relating to environmental degradation and compliance for the State waters and lands and when appropriate, to ensure timely restoration of non-compliant sites.

I request a moratorium on the change of Regulations relating to contaminants entering the tributaries of Lake Catherine and the Ouachita River below Remmel Dam until such time that data can be presented and evaluated regarding the:

(1) timing of non-compliant UMETCO process water discharges with Remmel Dam water releases;
(2) situations that the discharges in (1) have been non-compliant;
(3) toxicity tests on the UMETCO discharge constituents at both the levels currently permitted and the proposed levels;
(4) levels of inorganics in the sediments in Lake Catherine (down-channel from Wilson Creek) and the section of the Ouachita River from Remmel Dam to Rockport, including the off-river channel at Jones Mill wastewater treatment outfall, and Cove Creek confluence ;
(5) water sampling data collected during various water release events from Remmel Dam at the sites in (4); and,
(6) levels of inorganic contaminants contained in fish and fish-eating wildlife (if available).

Who should pay for this sampling and laboratory tests? I suggest that UMETCO and its industrial partners should pay for the baseline sampling and for the first year. If there is not an institutional mechanism in place to allow this participation, then there should be a legislative effort to establish it.

Thank you for allowing me to register my opposition to the proposed increase in contamination of Wilson Creek, Lake Catherine, and the Ouachita River.

Sincerely,

RESPONSE TO JEFFREY SHORT:

Thank you for taking the opportunity to provide comments on this rulemaking. The commenter requests that data be presented and evaluated regarding six numbered items. These numbered requests appear to be identical to Comment No. 67 from the Ouachita River Park Commission, of which you are a member. Please see responses to Comment No. 67 in general, as well as to specifically address the numbered requests.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with

this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

79. Fred Smith:

Fred Smith
128 Pintail Lane
Hot Springs, AR 71901

September 14, 2010

Mr. Doug Szenhier
Public Outreach and Assistance Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118

RE: UMETCO Permit Request

Sir,

In 1978, I purchased property on Lake Catherine and built a home. My dream was at the end of my military career to return to the lake home. After 33 years, my dream was realized. However, when I returned I found that UMETCO had been allowed far all those years to pollute the lake with heavy metals and other minerals far above the standard. My dream is turning into a nightmare as I worry about my grandchildren swimming in water tainted with Nickel, Zinc, and Copper.

The heavy metal content can not be ignored any longer by hiding them in the category of dissolved solids. A comprehensive study needs to be made and the remediation plan modified accordingly.

Fred Smith, COL (ret), USAF

RESPONSE TO FRED SMITH:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

As a point of clarification, the proposed rulemaking does not seek to change water quality criteria for metals, only for minerals. Total dissolved solids are those solids, including minerals and metals, that are small enough to be called "dissolved" in a water sample. TDS values are determined by analyzing water that has been passed through a filter. The principal components of the TDS at the UMETCO site are calcium and sulfate.

Water quality data from Outfall 001 (after water treatment) are provided to ADEQ every month in accordance with UMETCO's current NPDES permit. In addition, as a normal part of their permit renewal request, UMETCO analyzed for an extensive list of chemicals that includes heavy metals, called a Priority Pollutant Scan, and these data were included in the permit renewal request to ADEQ for their consideration of which parameters need to be included in the permit. UMETCO also collects monthly data in Wilson Creek near their southern property line to evaluate water quality in the creek at a location that includes all inputs from the site (including the NDPES outfall). These data cover a wide range of seasonal conditions and are submitted to ADEQ monthly, thereby making the data public record. Metals with associated Arkansas water quality criteria analyzed in these monthly samples include cadmium, copper, lead, nickel, and zinc. A review of these data over the past two years, at the hardness levels found in Wilson Creek, indicate no exceedances of Arkansas water quality criteria.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected

to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

80. Jane Smith:

From: john umphers [mailto:umpco@sbcglobal.net]
Sent: Monday, September 20, 2010 1:26 PM
To: Reg-Comment
Cc: John Umphers
Subject: Umetco
In reference to your request for public comment regarding the petition for the lowering of our water standards to allow Umetco to comply, I am against it.
Jane Smith
191 Eaglewood Ct.
Pearcy, AR 71964
Phone: 501/520-4202

RESPONSE TO JANE SMITH:

Thank you for taking the opportunity to provide comments on this rulemaking.

81. Nancy Smith:

951 Plum Hollow Blvd
Hot Springs, AR 71913
September 17, 2010

Doug Szenher
Arkansas Department of Environmental Quality
Public Outreach and Assistance Division
5301 Northshore Drive
North Little Rock, AR 72118

Re: Umetco Minerals Corporation Proposed Water Quality Criteria change for Wilson Creek

Dear Mr. Szenher,

As an Arkansas resident with a waterfront home downstream from Wilson Creek on Lake Catherine, I am writing to register my objection to Umetco's proposal.

I understand that Umetco successfully generated revenue for their parent company, Union Carbide Corporation, from the mining of vanadium at the Wilson mine site from 1960 to 1986. I appreciate that Umetco has spent over $40 million on mine reclamation activities at their mining site since 1986. I also understand that Umetco has been aware of their failure to adhere to the chloride, sulfate, and total dissolved solids (TDS) standards specified in the Arkansas Water Quality Standards, Regulation 2, since 2004.

It is time for Umetco, Union Carbide and their new parent company, Dow Chemical Company, to live up to their corporate responsibility for environmental safety and devote their vast resources to the implementation of those additional treatment approaches necessary to further reduce the chloride, sulfate and TDS concentrations to the levels specified in the Arkansas Water Quality Standards, Regulation 2. I do not want to see Arkansas taxpayers forced to spend our own money and resources on clean up and remediation of the negative effects of these substances downstream, or on "Colorado-style" litigation with Union Carbide to recover damages from contamination.

Our goal should be to preserve the beauty of Arkansas' Diamond Lakes and keep Arkansas "The Natural State" !

Thank you for the opportunity to provide public comment and register my objective to the above criteria change.

Sincerely,

Nancy Smith

RESPONSE TO NANCY SMITH:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

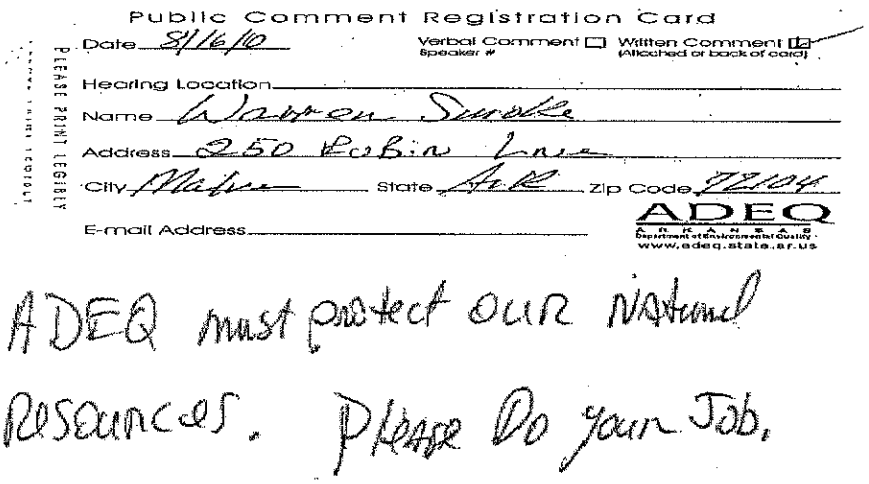
The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected

to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

82. Warren Smoke:


Public Comment Registration Card

Date 8/16/10 Verbal Comment ☐ Speaker # Written Comment ☑ (Attached or back of card)

Hearing Location

Name Warren Smoke

Address 250 Robin Lane

City Mabelvale State Ark Zip Code 72104

E-mail Address

ADEQ ARKANSAS Department of Environmental Quality www.adeq.state.ar.us

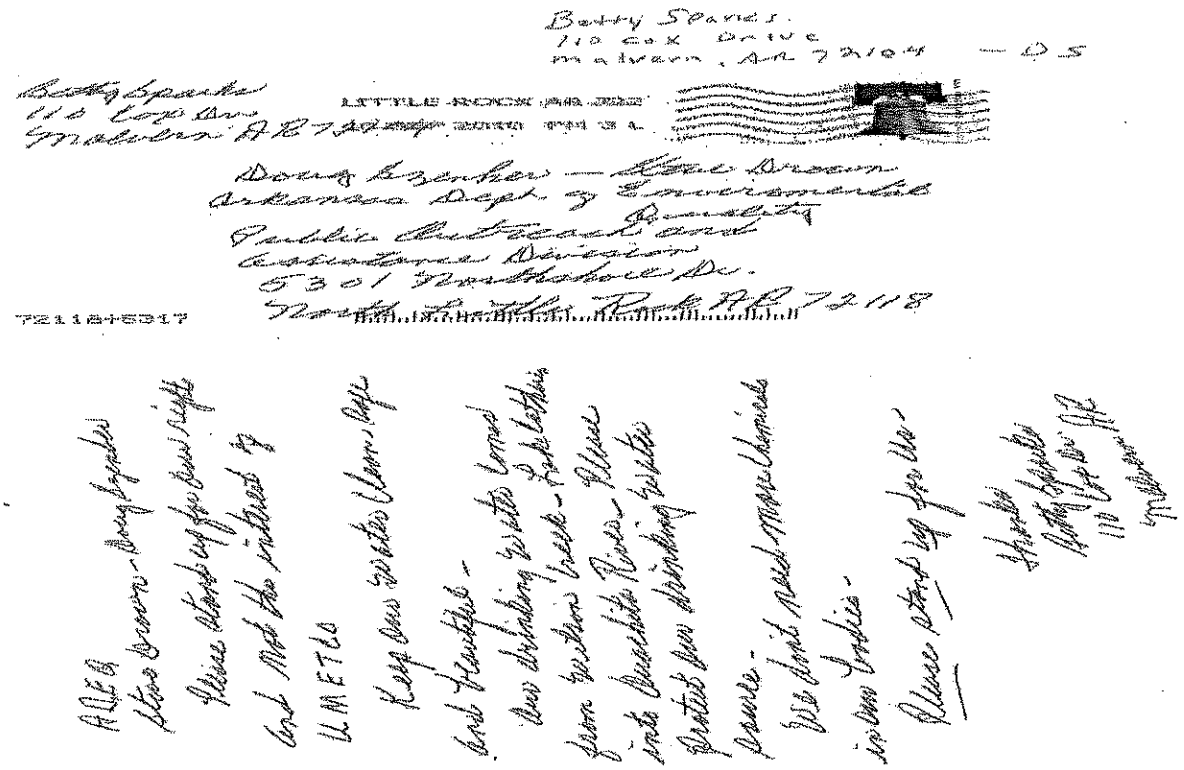
PLEASE PRINT LEGIBLY

ADEQ must protect OUR Natural Resources. Please Do your Job.

RESPONSE TO WARREN SMOKE:

Thank you for taking the opportunity to provide comments on this rulemaking.

83. Betty Sparks:




RESPONSE TO BETTY SPARKS:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

84. Lucinda Spinks:

From: Lucinda [mailto:midnightrider5@aol.com]
Sent: Friday, September 17, 2010 5:16 PM
To: Reg-Comment
Subject: Fwd: letter

September 10, 2010

Mr. Steve Drown
Water Division Manager
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Dear Mr. Drown

I would like to voice my opposition to the proposed modifications to Arkansas Pollution Control and Ecology Regulation No. 2 as requested by UMETCO Minerals Corporation. The petition to change legal discharge levels states "the rulemaking does not represent a change from current conditions" and "will establish the water quality criteria…at a level consistent with current conditions". After researching this issue, I have concluded that UMETCO, by its own admission, is already discharging chloride, sulfate, and total dissolved solids (TDS) at levels above the limits of its permit. As I understand it, though the NPDES permit issued by AEDQ became effective in September 2007, the numeric permit limits on these substances will not become effective until September 28, 2010. As a frequent recreational user of Lake Catherine, as well as being a consumer of the water from Malvern's public water supply, I am very concerned about future health effects of swimming in and drinking water with high levels of chloride, sulfate, and dissolved solids. Even though Wilson Creek is not used as a primary water source, it flows directly into Lake Catherine, thence into the Ouachita River, which is the domestic water supply for many people in Hot Spring County and numerous other locations downstream. I swim in the lake and consume fish caught from Lake Catherine, as do most of my friends and relatives. Many families with children spend hours in the water at a sandbar area which is less than .5 mile from the mouth of Wilson Creek. Apparently, we have been exposed to these high levels of pollutants for many years. UMETCO claims that there "do not appear" to be any ill effects of the current levels of chloride, sulfate, and TDS being discharged. However, it may take years to see adverse effects of exposure to these substances by both humans and aquatic life. Perhaps more stringent controls should be considered, instead of raising the limits so that UMETCO will now be in compliance with current laws.

The water quality of our lakes and streams is very important to me and my family. We feel it is your duty as a state agency, to protect the interests and health of the people of Arkansas. The ADEQ website states: "We protect, enhance, and restore

the natural environment for the well-being of all Arkansans". It appears to me that the well-being you are protecting is that of the corporations, rather than that of ordinary citizens. What is of even greater concern is that corporations, instead of abiding by existing laws, are allowed to have the rules and laws changed when they are out of compliance. Most of the time, the general public never knows about this, not due to ignorance or apathy, but due to less than adequate notification. A notice hidden in a newspaper is hardly adequate.

I believe it would be in the best interests of all who would be impacted and the state of Arkansas, to reject the request by UMETCO. Water quality laws should be determined with the welfare of all Arkansans in mind and not by a corporation's inability to comply with regulations.

Respectfully,

lucinda spinks
1424 e page ave
malvern, ar 72104
501-229-4893

RESPONSE TO LUCINDA SPINKS:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to

meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

85. Joanne Sprague:

From: J Sprague [mailto:jody345@gmail.com]
Sent: Monday, September 20, 2010 12:50 PM
To: Reg-Comment
Subject: UMETCO proposal re Reg. 2

I understand that UMETCO Minerals Co. is requesting changes to water quality regulations, which could lower water quality standards, remove drinking water designations, or other amendments. Arkansas' Water Quality Regulation (#2) Section Reg. 2.306 should not be amended. Allowing more runoff of sulfates, chlorides, and total dissolved solids (TDS) in Wilson Creek is unacceptable.

As an important protective and regulatory agency of Arkansas, we count on you to curtail these attempted takeovers of our resources. Instead of contemplating allowing more waste materials we should be looking for ways to have less.

Thank you for your consideration in this matter.

Joanne Sprague
Hot Springs, AR

RESPONSE TO JOANNE SPRAGUE:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

86. Denzil Stratton:

September 10, 2010

Mr. Steve Drown
Water Division Manager
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Dear Mr. Drown

I would like to voice my opposition to the proposed modifications to Arkansas Pollution Control and Ecology Regulation No. 2 as requested by UMETCO Minerals Corporation. The petition to change legal discharge levels states "the rulemaking does not represent a change from current conditions" and "will establish the water quality criteria…at a level consistent with current conditions". After researching this issue, I have concluded that UMETCO, by its own admission, is already discharging chloride, sulfate, and total dissolved solids (TDS) at levels above the limits of its permit. As I understand it, though the NPDES permit issued by AEDQ became effective in September 2007, the numeric permit limits on these substances will not become effective until September 28, 2010. As a frequent recreational user of Lake Catherine, as well as being a consumer of the water from Malvern's public water supply, I am very concerned about future health effects of swimming in and drinking water with

high levels of chloride, sulfate, and dissolved solids. Even though Wilson Creek is not used as a primary water source, it flows directly into Lake Catherine, thence into the Ouachita River, which is the domestic water supply for many people in Hot Spring County and numerous other locations downstream. I swim in the lake and consume fish caught from Lake Catherine, as do most of my friends and relatives. Many families with children spend hours in the water at a sandbar area which is less than .5 mile from the mouth of Wilson Creek. Apparently, we have been exposed to these high levels of pollutants for many years. UMETCO claims that there "do not appear" to be any ill effects of the current levels of chloride, sulfate, and TDS being discharged. However, it may take years to see adverse effects of exposure to these substances by both humans and aquatic life. Perhaps more stringent controls should be considered, instead of raising the limits so that UMETCO will now be in compliance with current laws.

The water quality of our lakes and streams is very important to me and my family. We feel it is your duty as a state agency, to protect the interests and health of the people of Arkansas. The ADEQ website states: "We protect, enhance, and restore the natural environment for the well-being of all Arkansans". It appears to me that the well-being you are protecting is that of the corporations, rather than that of ordinary citizens. What is of even greater concern is that corporations, instead of abiding by existing laws, are allowed to have the rules and laws changed when they are out of compliance. Most of the time, the general public never knows about this, not due to ignorance or apathy, but due to less than adequate notification. A notice hidden in a newspaper is hardly adequate.

I believe it would be in the best interests of all who would be impacted and the state of Arkansas, to reject the request by UMETCO. Water quality laws should be determined with the welfare of all Arkansans in mind and not by a corporation's inability to comply with regulations.

Respectfully,

denzil stratton
117 lorraine st
hot springs, ar 71910
870-814-7929

RESPONSE TO DENZIL STRATTON:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water

quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

The opportunities provided for the public to comment on this proposal exceed requirements for these types of actions (see General Response No. 3).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated

that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

87. Dorinda Suitor:

Public Comment Registration Card

PLEASE PRINT LEGIBLY.

Date 8-16-10 Verbal Comment ☐ Speaker # Written Comment ☐ (Attached or back of card)

Hearing Location Hot Springs Lakeside School

Name Dorinda Suitor

Address P O Box 495

City Arkadelphia State AR Zip Code 71923

E-mail Address dsuitor@cityofarkadelphia.com

ADEQ Arkansas Department of Environmental Quality www.adeq.state.ar.us

RESPONSE TO DORINDA SUITOR:

Thank you for taking the opportunity to provide comments on this rulemaking.

88. Donald Tanner:

Public Comment Registration Card

Date 3-16-10 Verbal Comment ☑ Speaker # Written Comment ☐ (Attached at back of card)

Hearing Location Lake Side

Name Donald TANNER

Address 6671 Ridge Road

City MALVERN State AR Zip Code 72104

E-mail Address

PLEASE PRINT LEGIBLY

ADEQ Arkansas Department of Environmental Quality www.adeq.state.ar.us

RESPONSE TO DONALD TANNER:

Thank you for taking the opportunity to provide comments on this rulemaking.

89. Dottie Tarlton:

Dear Mr. Spencer,

As a citizen of Hot Spring County and a property owner on Lake Catherine, I strongly object to UMETCO's proposal to lower the quality of water discharge into Lake Catherine from Wilson Creek. In this day and age we should be trying to improve water quality in every way we can. I know they (UMETCO) want to save money, but I'm afraid it will cost the taxpayers to clean up after them. Please do not let this happen to us. Do not make us pay for their greed!

Sincerely,
Dottie Tarlton
142 Lazy Acre Rd.
Malvern, AR 72104

501-337-4178
dtar@suddenlink.net

RESPONSE TO DOTTIE TARLTON:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in

Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to

meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

90. Jeff Tarlton:

Name: Jeff Tarlton
E_Mail_Address: JTTarlton@aol.com
Date: 9/17/2010
Time: 06:44:27

Comments:

I want to find a form to express my feelings on UMETCO. They should be forced to clean up their mess at Hot Springs. My family swims in Catherine and the Ouachita River. Many towns downstream use the Ouachita as a drinking water source. I could not find a form for this or who I should send an email to on this subject.

RESPONSE TO JEFF TARLTON:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality

resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).
The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

91. Joe Tarver:

From: jtarver295@yahoo.com [mailto:jtarver295@yahoo.com]
Sent: Monday, September 20, 2010 12:03 PM
To: Reg-Comment
Subject: UMETCO Dumping Issue

My name is Joe Tarver, and I'm an avid user of both Lake Catherine and the Ouachita River. I am sending this email in protest to UMETCO's increased dumping of their waste materials in the bodies of water. The water quality of the river and lake systems are suffering from this, and increased dumping will only precipitate further degradation of the wildlife, recreational use, and water quality of these areas.

Please DO NOT let UMETCO or any other company for that matter continue to dump or at the very least increase dumping of their waste materials in our rivers and lake systems.

Thank you for your time,
Joe Tarver

RESPONSE TO JOE TARVER:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The water which flows from the UMETCO site runs across rocks and soils that are high in minerals and some of the water needs to be treated to adjust the pH and improve the water quality. It is this treated water, plus natural stormwater, that is discharged down Wilson Creek. The proposed rulemaking does not include dumping; it does, however, address sulfate, chloride, total dissolved solids in Wilson Creek.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking <u>does not</u> request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking <u>does not</u> seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

92. US Environmental Protection Agency

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**REGION 6**
**1445 ROSS AVENUE, SUITE *7200***
**DALLAS, TX 75202-2733**

The U.S. Environmental Protection Agency (EPA) provides the enclosed comments on a third-party proposed amendment to *Regulation* No. *2: Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas.* The proposal was submitted by UMETCO Minerals Corporation to the Arkansas Pollution Control and Ecology Commission (APC&EC or the "Commission") through a petition to initiate rulemaking filed on June 14,20 10.

Please note that the enclosed comments are preliminary in nature and do not constitute a determination by EPA under Clean Water Act $303(c). Approval/disapproval decisions will be made by the Region following adoption of newly revised standards by the State and their formal submission to EPA.

Thank you for the opportunity to provide these comments. If you have any questions or concerns, please contact me at (214) 665-6644, or have your staff contact Matt Hubner at (2 14) *665-9736.*

Sincerely,
**Philip A. Crocker**
Chief, Watershed Management Section

**EPA Comments on Addendum to the December 2004 Wilson Creek Minerals Water Quality Standards Evaluation**

1. The study uses calculations based on collected samples to derive toxic acute and chronic **values** for minerals. This data is beneficial, but no whole effluent toxicity (WET) data from outfall 001 was provided in the studies to verify that cwrent loadings are not detrimental to aquatic life. Such testing is outlined as a component to demonstrate maintenance of aquatic life uses in the State of Arkansas's Continuing Planning Process Administrative Guidance Document. In addition, toxicity testing of ambient water with minerals spiked to proposed criteria levels would strengthen the case for the protection of aquatic life under the new criteria levels.

2. Toxicity testing of the seeps, as done in the current project, provides evidence to support that upstream effects are governed by the nature of the seeps and not minerals; however, the study lacks toxicity testing regarding current mineral loadings and/or proposed maximum values at outfall 001 to show with greater

certainty that such concentrations are adequate to support the beneficial aquatic life use.

3. The 2004 and recent study both indicate that low diversity observed in Wilson Creek **are** due to the limited size and intermittent nature of the watershed. The detrimental nature of the seeps is also likely limiting biodiversity. Since a least-impacted reference stream was not used for comparison, **the** study would benefit **from** an evaluation of whether observed species in the studies **are** those found to be more tolerant of increased minerals concentrations. **A** composition of species **that tend** to be more hardy and salt tolerant would indicate that aquatic diversity may be limited in Wilson Creek.

4. The addendum briefly mentions that current effluent loadings will be maintained and will not increase loads to Lake Catherine. The study does not evaluate loadings from other industries in the area to consider cumulative effects of minerals downstream. Though Lake Catherine currently meets standards, it is imperative to ensure that downstream uses are not impacted by proposed criteria.

5, Beyond the scope of minerals, the study mentions the treatment of the seeps. Since the results of the toxicity identification evaluation (TIE) are inconclusive for metals, is UMETCO planning to address the source of the unknown to toxicity? If the facility is planning to use technology to mitigate the toxic effects of the seeps, is it not possible to combine such efforts to mitigate minerals as well?

RESPONSE TO UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

The following memorandum was prepared and submitted to Mr. Steve Drown of ADEQ who, in turn, submitted it to Mr. Crocker at EPA Region 6.

**MEMORANDUM**

**DATE:** September 13, 2010

**TO:** **Mr. Steve Drown**
Arkansas Department of Environmental Quality

**FROM:** **Mr. Pat Downey**
FTN Associates, Ltd.

**SUBJECT:** Response to EPA Comments
FTN No. 6571-051

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On behalf of Umetco, Inc., we are providing responses to EPA's comment the justification report for the requested change in water quality standards and criteria on Wilson Creek. EPA comments are reproduced and numbered followed by the responses in italics.

1. The study uses calculations based on collected samples to derive toxic acute and chronic values for minerals. This data is beneficial, but no whole effluent toxicity (WET) data from outfall 001 was provided in the studies to verify that current loadings are not detrimental to aquatic life. Such testing is outlined as a component to demonstrate maintenance of aquatic life uses in the State of Arkansas's Continuing Planning Process Administrative Guidance Document.

***Although ADEQ did not request this information as part of their original request for additional information, toxicity testing at Outfall 001 is conducted and submitted to ADEQ on a regular basis. Those data will be assembled and provided as part of the UAA submission.***

In addition, toxicity testing of ambient water with minerals spiked to proposed criteria levels would strengthen the case for the protection of aquatic life under the new criteria levels.

***This type of testing was performed on lab water and showed no lethal or sub-lethal toxicity at TDS concentrations corresponding to levels 2.6 to 3.6 times the levels found in the effluent. This information will be assembled and provided.***

2. Toxicity testing of the seeps, as done in the current project, provides evidence to support that upstream effects are governed by the nature of the seeps and not minerals; however, the study lacks toxicity testing regarding current mineral loadings and/or proposed maximum values at Outfall 001 to show with greater certainty that such concentrations are adequate to support the beneficial aquatic life use.

***See response to #1 above.***

3. The 2004 and recent study both indicate that low diversity observed in Wilson Creek is due to the limited size and intermittent nature of the watershed. The detrimental nature of the seeps is also likely limiting biodiversity.

***Clarification: toxicity in the seeps limits biodiversity in the portion of Wilson Creek upstream of Wilson Pond irrespective of the habitat and flow considerations. The "detrimental nature" of the seeps does not impact Wilson Creek below the Outfall. As stated in the report, the entire upstream flow of Wilson Creek is diverted into East Wilson Pond for treatment prior to releasing it back into the Wilson Creek channel downstream of East Wilson Pond. This diversion was implemented as in interim measure pending final reclamation activities to address the seeps in upper Wilson Creek per the approved Reclamation Plan.***

Since a least-impacted reference stream was not used for comparison, the study would benefit from an evaluation of whether observed species in the study are those found to be more tolerant of increased minerals concentrations. A composition of species that tend to be more hardy and salt tolerant would indicate that aquatic diversity may be limited in Wilson Creek.

***The study does not suggest that the biological communities in Wilson Creek are comparable to a "least disturbed" water body nor does the study argue that aquatic diversity is not limited in Wilson Creek below the Outfall. The fish community of Wilson Creek downstream of Outfall 001 is, in fact, made up of more tolerant species such as chub sucker, creek chub and green sunfish. Tolerant species are generally tolerant of many water quality and habitat characteristics, including, most likely, increased TDS. For example, creek chubs dominate both the low TDS headwaters <u>and</u> the elevated TDS lower reaches of Wilson Creek. The point of the study is not that the aquatic community is pristine or least disturbed, but rather that it is strongly habitat limited and would not benefit appreciably from a reduction in TDS/$SO_4$/Cl. However, we will complete additional literature searches to evaluate if the invertebrate communities present show a shift toward specifically salt tolerant species rather than generally tolerant species and summarize conclusions and references for you.***

4. The addendum briefly mentions that current effluent loadings will be maintained and there will not be increased loads to Lake Catherine. The study does not evaluate loadings from other industries in the area to consider cumulative effects of minerals downstream. Though Lake Catherine currently meets standards, it is imperative to ensure that downstream uses are not impacted by proposed criteria.

***There are no other NPDES permitted discharges to Wilson Creek upstream or downstream of the Umetco outfall and Umetco has verified through a field reconnaissance that there are no other discharges or withdrawals. As you indicated, there is no request for increased loading to Wilson Creek from the Umetco site (the proposed criteria reflect the 95$^{th}$ percentile of extensive dissolved minerals data collected from Wilson Creek during the two years previous to submittal of the UAA Report that was approved by ADEQ). We agree with your statement that Lake Catherine currently meets applicable water quality criteria including dissolved minerals criteria. Based on a review of ADEQ's Ambient Monitoring Network stations upstream and downstream of Lake Catherine in the Ouachita River, it is clear that the river easily meets applicable dissolved minerals criteria with a wide margin of safety <u>under current conditions</u>. We are not aware of any further evaluations that can more conclusively show that downstream uses will not be impaired by the proposed criteria. Additionally, it is also our understanding that cumulative loading of other discharges along the Ouachita River (and Lake Catherine) are addressed through ADEQ's NPDES permitting evaluations of dischargers in the watershed on a routine basis.***

5. Beyond the scope of minerals, the study mentions the treatment of the seeps. Since the results of the toxicity identification evaluation (TIE) are inconclusive for metals, is UMETCO planning to address the source of the unknown to toxicity?

***Water from these seeps flows in to Wilson Creek which is then captured, treated, held in East Wilson Pond and ultimately discharge through Outfall 001. Therefore, any water quality impacts from the seeps to Wilson Creek downstream of Outfall 001 are already incorporated into the UAA. It is clear that there are biological impacts in Wilson Creek between the seeps and East Wilson Pond and that these impacts are not due to the existing mineral concentrations. The reclamation plan will address these impacts.***

If the facility is planning to use technology to mitigate the toxic effects of the seeps, is it not possible to combine such efforts to mitigate minerals as well?

***UMETCO has not completed its evaluation of options to address the seeps entering upper Wilson Creek that you reference. Therefore it is not possible to say with complete assurance that the solution in this area will or will not mitigate dissolved minerals concentrations or loadings from the seeps. However, it is likely that capturing and transferring the seepage directly to East Wilson Pond for pH adjustment will be a feasible option that will rapidly address upper Wilson Creek toxicity detailed in the UAA. If this option is selected, dissolved minerals loading and concentrations downstream in Wilson Creek will not be altered. Having said that, the alternatives analysis to address the seeps will certainly consider opportunities to leverage mitigation of one parameter towards another.***

If you have any questions or concerns regarding this memorandum, please feel free to call me or Jim Malcolm at (501) 225-7779 if you have any questions.

PJD/rml

CC: Lucius Beaudreaux and Karen Maestas (Umetco)

93. John Watson:

I attended the public hearing in Hot Springs on Aug. 16th. I also went to the library and reviewed the Wilson Creek evaluation done for UMECTO by Waste Engineering Inc. dated Oct 2004. As someone not familiar with this subject my understanding is that at that time the existing standards were not being met and were only slightly below the new standard being requested. If the standards have not been met since 2004, why hasn't something been done during the past 6 yrs.?

I do not understand how the ADEQ can even consider changing a standard based on an evaluation performed 6 yrs. ago. Also based on some of the comments regarding health issues and wells going bad in the past I do not see how a reduction in standards can be considered without a health study of those residing in the area of Wilson Creek. With current issues of environmental concerns I do not understand how ADEQ could even consider relaxing standards, we should be setting higher standards instead. We hear too many instances where problems created years ago are now causing health and environmental concerns, all the more reason for a current evaluation.

I am opposed to allowing the reduction of the current standards and feel that you should consider what steps must be taken to insure that current standards are met.

Respectfully,

John Watson

John Watson

110 Springbrook Pt.

Hot Springs, AR 71913

RESPONSE TO JOHN WATSON:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

Please note that an Addendum to the 2004 UAA report was prepared in 2009 with updated sampling data, and this report was reviewed and accepted by ADEQ as meeting

regulatory requirements (documented in a letter from Steve Drown, Water Division Chief, ADEQ, dated March 5, 2010).

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

94. Jerry Weber:

**From:** Gerald Weber [mailto:jerryweber@mvtel.net]
**Sent:** Thursday, July 29, 2010 1:07 PM
**To:** Pond-Mayo, Cecillea
**Subject:** UMETCO requested change to Wilson Creek Water Quality Standards

Dear Commission members,

Regarding the PC&EC hearing of a proposal by UMETCO to make changes to Regulation 2 affecting the current domestic water supply designated use for Wilson Creek:

I consider this a preposterous proposal and would hope the Commission would see this the same way. UMETCO was apparently set up as an environmental clean up company by Union Carbide to clean up former mining sites. How an environmental clean up company could even suggest changing a creek designated as a domestic water supply to one which will be used as a chemical dump is beyond belief. Their proposal, if accepted by the Commission would allow the total dissolved solids to increase by 382%, the sulfates by 1300% and chlorides by 373%! Obviously these huge increases in dissolved solids and chemical concentrations in wastewater will affect the water quality in this creek, and I believe will also have an effect on Lake Catherine. It would appear to me that any legitimate environmental cleanup company would have access to sequestering or other means of disposing of this waste from their cleanup activities. Dumping it in the local creek might save this company money, but diminishing this water supply resource would be a tragic loss to the area. And, any legislated loss of a high water quality creek in Arkansas should be completely unacceptable. This proposal should be considered as an environmental attack on Arkansas' waters.

I often read that communities current fresh water supplies are at risk and as they seek to meet the demands of future growth, they are looking to increase their access to fresh water. Here's a creek which is designated as a domestic water supply which is being proposed to take off the list. Does the Commission not see the irony in this? Business and industry needs can not be allowed to trump the public's current and future freshwater needs.

As the overall water quality in Arkansas continues to decline and, with the plethora of natural gas related drilling, fracking, gas line installations and the recent start of frac-sand mining operations, all of which are already placing significant risks to our fresh water supplies, the idiocy of this proposal should be immediately obvious. Arkansas' and the Nation's fresh water supply is at risk! Aquifers are being depleted, waterways and groundwaters are being polluted. It is time for the Commission to recognize the fragility of our current fresh water reserves and say no to this proposal.

Although I do not live in the area of Wilson Creek and Lake Catherine, I and others in Arkansas are becoming ever more concerned about the threats to our fresh water supplies and the water quality of Arkansas water resources. I consider this proposal another in a continuing series of threats from industries who don't appear to care about Arkansas' waters, environment or the quality of life we Arkansans have enjoyed. Pollution of our waterways must end and this proposal will simply threaten another of our quality water resource creeks.

I urge the Commissioners to deny this proposal and will make every attempt to address the commission on this issue on the 19th.

Jerry Weber

17221 Highway 9

Mountain View, AR 72560

870-269-2704

jerryweber@mvtel.net

RESPONSE TO JERRY WEBER:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its

commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

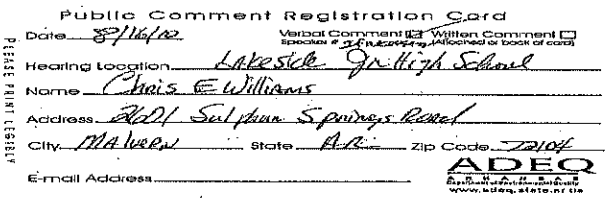
UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

95. Chris E. Williams:


Public Comment Registration Card

Date 8/16/10 Verbal Comment ☐ Written Comment ☐

Hearing Location Lakeside Jr. High School

Name Chris E Williams

Address 2001 Sulphur Springs Road

City Malvern State AR Zip Code 72104

E-mail Address

ADEQ

RESPONSE TO CHRIS E. WILLIAMS:

Thank you for taking the time to comment on this rulemaking.

96. Dennis and Benna Williams:

From: benna [mailto:bennak@direclynx.net]
Sent: Friday, August 27, 2010 11:47 AM
To: Reg-Comment
Subject: UMETCO vs. Wilson Creek/Lake Catherine
We realized Lake Catherine didn't have the reputation of being as clean, clear and pollutant free as Lake Ouachita when we decided to reside on it's banks. However, there is no rhyme or reason to turning our heads and allowing UMETCO to dump a higher percentage of foul wastes into the water that is a few feet from my front door here at 213 Riverview Pt. Hot Springs. In the past our water quality in this lake has been compromised by septic systems, mining operations, etc. Across the lake from my home, Diamondhead doesn't even have a city sewer system, yet they are still allowed to build right on the banks of the lake. The wise thing to do to ensure we can continue to use this lake for a source of city water and recreation without compromising the future generations health is to become more strict with pollution control instead of going the other way. Property values are at stake here, but more importantly our health and those who visit from other areas are in jeopardy.
Thank you,
Dennis & Benna Williams
bennak@direclynx.net

RESPONSE TO DENNIS AND BENNA WILLIAMS:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with

this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

97. Marsha Williams:

Public Comment Registration Card
Date 8/16/10 Verbal Comment ☐ Written Comment ☑ (Attached or back of card)
Hearing Location Lakeside High
Name Marsha Williams
Address 108 Boone E. Trail
City Malvern State AR Zip Code 71901
E-mail Address
ADEQ

ADEQ must protect our Natural resources. Do not Let UMETCO Have Any Extention

RESPONSE TO MARSHA WILLIAMS:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine.

98. Alan Willis

Public Comment Registration Card
Date 8-16-10 Verbal Comment ☐ Written Comment ☑ (Attached or back of card)
Hearing Location LAKESIDE SCHOOL
Name ALAN WILLIS
Address 149 WILLIS CIRCLE
City HOT SPRINGS State AR Zip Code 71901
E-mail Address
ADEQ

I WOULD LIKE TO SEE MORE STUDIES DONE AS TO WHAT THE IMPACT OF PAST LEVELS HAS DONE, TO NOT ONLY HUMAN BUT ALL SPECIES AND ALSO WHAT IMPACT FUTURE LEVELS WILL DO. IF THE PAST IS ANY INDICATION THEN WHAT IS GOING TO HAPPEN IN THE FUTURE.

RESPONSE TO ALAN WILLIS:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

99. Scott Willis

Public Comment Registration Card

Date 8-16-10 Verbal Comment ☐ Written Comment ☒ (Attached or back of card)

Hearing Location Lakeside Jr. High School

Name Scott Willis

Address 131 Hideaway Hills Hot Springs AR 71901

City ____ State ____ Zip Code ____

E-mail Address scottwillis28@gmail.com

ADEQ

Do not consider lowering the standards of pollution. Why would you even consider such a request that jeopardizes our ecosystem.

The only benefit of lowering the standards of the discharge, is to save UMETCO money.

ADEQ, it is your responsibility to protect our health and the quality of our lakes. Please do your job!

RESPONSE TO SCOTT WILLIS:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based

on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

100(a). Billy Wilson:

Dear Mr. Szenher,

More information is needed before the Arkansas Pollution Control and Ecology Commission (PC&E) should vote on changing the water quality standards of Wilson Creek as requested by UMETCO. The discharge by UMETCO into Wilson Creek has been in violation of the Ouachita Ecoregion standards for many years. It is time to make sure the water coming from the UMETCO land will not harm the environment, which includes the drinking water withdrawals downstream. Below are questions that should be answered so PC&E and Arkansas citizens can understand the situation and make an informed decision.

When the sulfates, chlorides and total dissolved solids (TDS) are increased, what are the other elements that will increase in the water flow? I realize that the sulfate, chloride, and TDS values requested in the rule making process have been going down the creek for some time (and probably more than those numbers) but if the discharge values were corrected to meet the Ouachita standards, would the amount of heavy metals transported be reduced? Testing the area for heavy metals and the minerals noted should be done for a period of not less than two years so, hopefully, all storm events can be sampled.

What is the heavy metal content of the soil in the cove in Lake Catherine where Wilson Creek empties into? This information would indicate past discharges and would help understand the potential of contamination. The cove has been dredged in the past (maybe several times). Has that material been place in the Wilson Creek watershed? How is it adversely affecting the Wilson Creek watershed?

Why does the request for increasing the sulfates, chlorides, and TDS include the 0.8 mile upstream of the 001 Outfall? If that area has an increase of the above, why does it not have its own treatment facility? The rocks in the creek just below the drainage of the Spaulding area are all wiped clean. That indicates there is very low pH water coming from that drainage. Have tests been done to know what is coming from the Spaulding area? It is imperative that this drainage is tested and understood so proper remediation can be conducted and the water quality of Wilson Creek can be better understood. Does this 0.8 mile need an individual NPDES permit? The creek terrain in this area has been severely altered. How is that affecting the environment? Are the items in question simply seeping into the water table and getting into the groundwater?

RESPONSE TO BILLY WILSON (100A):

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

As a point of clarification, the requested change is for minerals (sulfate, chloride, and TDS) in Wilson Creek. The rulemaking is not directly related to Lake Catherine or to sediment. In addition, UMETCO is not requesting any changes to standards for other parameters, including metals. UMETCO treats surface water, seeps, and stormwater from the site to adjust for pH and remove metals. Reducing sulfates and chlorides in the water would not impact the levels of metals, which are already treated.

Water quality data from Outfall 001 (after water treatment) are provided to ADEQ every month in accordance with UMETCO's current NPDES permit. In addition, as a normal part of their permit renewal request, UMETCO analyzed for an extensive list of

chemicals that includes heavy metals, called a Priority Pollutant Scan, and these data were included in the permit renewal request to ADEQ for their consideration of which parameters need to be included in the permit. UMETCO also collects monthly data in Wilson Creek near their southern property line to evaluate water quality in the creek at a location that includes all inputs from the site (including the NDPES outfall). These data cover a wide range of seasonal conditions and are submitted to ADEQ monthly, thus making the data public record.

Ongoing reclamation at the site is proceeding cooperatively with the ADEQ and will address the presence of metals in upper Wilson Creek that result from the low pH seep/inflow from the Spaulding area. As a point of clarification, the entire flow of upper Wilson Creek is diverted for treatment to adjust pH and remove metals prior to being discharged through the NPDES outfall into lower Wilson Creek.

The proposed rulemaking includes upper Wilson Creek simply because the dissolved minerals in Wilson Creek will remain somewhat elevated, yet at protective levels, after the reclamation to address low pH and metals from the Spaulding seep/inflow is completed.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of

swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

100(b). Billy Wilson:

What is in the TDS? Total dissolved solids could be just about anything. Is it heavy metals? Is it just dirt?

Has the Wilson Creek water ever been tested for ammonia nitrogen? Could that be a problem? Please test and, if found, advise everyone where it is coming from and what should be done about it.

Malvern Draw, a tributary of Wilson Creek, flows into the stream just downstream of AR Highway 270. Since this drainage has UMETCO land in the watershed and since the UMETCO land probably has contaminated storage areas (refer to aerial photo), this is probably contributing to the pollution of Wilson Creek. Malvern Draw should be tested for all minerals, elements, and heavy metals known to be in the area. This should include, but not be limited to: nickel, zinc, cadmium, vanadium, and other cancer causing elements.

Why would PC&E and Arkansas Department of Environmental Quality (ADEQ) want to raise the limits allowed to be discharged simply because the requesting company says it will cost too much to correct the problem? PC&E and ADEQ are charged to protect Arkansas' environment. It's mission and goal statements indicate this but if this request is approved, especially without more information, apparently those statements are just "window dressing."

The Use Attainability Analysis (UAA) makes reference to a seep near Wilson Creek where low pH water is entering the creek. What is in this seep? Are there heavy metals present? Is the water coming from this seep included in the permit? If so, why is there no contaminant information?

Why are the two actions (changes in steam standards and renewal of the permit for Outfall 001) requested by UMETCO separated? They should be reviewed and considered together to evaluate potential impact to the local aquatic systems and to not confuse the public anymore than this subject does already.

Why is the polluted water from Indian Springs being pumped to the Wilson Creek watershed for treatment? When that water is transferred to another watershed, it reduces the flow of Indian Springs Creek which kills the aquatic environment due to lack of water. The Indian Springs water certainly needs to be treated but why is there not a treatment facility on Indian Springs that would clean the water and allow for an adequate aquatic environment flowing to Lake Catherine? Presently Indian Springs Creek receives water from the upper watershed when a flood condition exists and when the pump is not working. This water has to be extremely polluted. Have there been tests conducted on the water and the soil below the two dams (rock and concrete) on Indian Springs? Again, if this water is so bad that it has to be pumped to the Wilson Creek watershed, why doesn't it have its own treatment facility? Certainly the aquatic environment of lower Indian Springs Creek would benefit.

RESPONSE TO BILLY WILSON (100B):

Total dissolved solids are those solids, including minerals and metals, that are small enough to be called "dissolved" in a water sample. Total dissolved solids values are determined by analyzing water that has been passed through a filter. The principal components of the TDS at the UMETCO site are calcium and sulfate.

Regarding the comment pertaining to Malvern Draw, as a point of clarification to the commenter, mining activities at the former UMETCO mine site occurred outside of the Malvern Draw watershed. The proposed rulemaking pertains to Wilson Creek down to its confluence with Wilson Cove of Lake Catherine. Malvern Draw is not associated with

this proposed rulemaking nor are any of the metals listed by the commenter. Also, Indian Springs Creek is not the subject of this proposed rulemaking, although it is the subject of ongoing reclamation. Currently, water is collected and pumped from the Indian Springs Creek area and treated prior to discharge through the NPDES outfall to Wilson Creek as the commenter mentioned. This system is in place to protect Indian Springs Creek. Once UMETCO has authorization from ADEQ to release clean stormwater from the reclaimed areas that drain to Indian Springs Creek, they will do so.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy

ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

100(c). Billy Wilson:

What are the contaminant levels in the fish in the study area? Various species of fish, including fish not meant for human consumption, need to be tested for heavy metals.

The water quality permit change requested by UMETCO should be put on hold until a comprehensive analysis can be completed. During that time, UMETCO should be required to continue the present treatment of the water in an effort to alleviate the problems. The detailed study should include more information about minerals and metals (metals included because there are likely more transported by larger amounts of TDS) in the complete areas of Wilson Creek, Malvern Draw, and Indian Springs. That would include testing the water in the complete creek areas and testing the watersheds to identify potential entry contaminants. Also, information should be researched and included on other pollution sources in the area so PC&E and the public understands the complete picture. These sources should include adjacent industries, discharge NPDES permits, and non-point source pollution. One of the objectives of the study should be to identify cumulative effects of the various incoming pollution from Blakely Mountain Dam to just below Arkadelphia so future requests for NPDES permits can be evaluated with total information.

Billy Wilson

Billy Wilson
653 Lafayette County Road #5
Lewisville, AR 71845
phone-501-622-8003

RESPONSE TO BILLY WILSON (100C):

The minerals at issue in this rulemaking – sulfate, chloride and TDS – do not accumulate in fish tissues and do not affect the suitability of fish for eating. Metals that are referred to by the commenter are not involved in the proposed rulemaking and are regulated individually by ADEQ through its NPDES permitting program as well as by APCEC's Regulation No. 2. In addition, Malvern Draw, Indian Spring Creek, and other waterbodies are not the subject of this rulemaking.

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

101. Renita Wingo:

I am very concerned about the request that is being made by UMETCO Minerals Corporation. I am an avid outdoors person, and a very conservative person. My husband and I having spent many hours on Lake Catherine over the past 21 years; fishing and waterskiing with our daughter (who is now 21), and watching beautiful sunsets.

We have owned property on Lake Catherine (which is currently our biggest asset in our financial portfolio) and the Ouachita River for the past 12 years. We have seen the water quality improve over the years. The overall general public have great respect for this great resource, and continue to do their part in keeping it clean and improving the water quality.

The City of Malvern (who also supplies water to the Hwy. 9 Water Association), Kimzey Rural Water, and the City of Arkadelphia; and I am sure many more further down stream, pull water from the Ouachita River below Remmel Dam which creates Lake Catherine, for their municipal water source.

If I were to personally discharge anything into the lake or river, ADEQ would hold me accountable. I know of instances where projects were shut down just because silt fences were not in place, or proper permits were not obtained. While I do not wish for anyone to loose their job, I feel that UMETCO should be held accountable for the Natural State of Arkansas.

We are a natural state, blessed with an abundance of water resources! We, meaning me & you (ADEQ) must do all that we can to protect them! Please take a stand against this request. Why must the citizens who own property along the shore lines of Lake Catherine and the Ouachita River; and the citizens of those cities who pull their public water source from the river, be responsible for paying the cost of cleaning the water that UMETCO is currently and has been polluting?

I trust that the commission will make the right decision on this request, by denying it.

Thank you for your time and consideration.

Renita Wingo
523 Rocker Road
Malvern, AR 72104

746 Couchwood Road
Hot Spring, AR 71901

RESPONSE TO RENITA WINGO:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other

recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

102. Helen Woodward:

Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8-16-10 Verbal Comment ☒ Speaker # Written Comment ☒ (Attached or back of card)

Hearing Location Lakeside School

Name Helen Woodward

Address 167 Stanage Terr

City Hot Spring State AR Zip Code 71901

E-mail Address heavenheir@cablelynx.com

ADEQ ARKANSAS Department of Environmental Quality www.adeq.state.ar.us

RESPONSE TO HELEN WOODWARD:

Thank you for taking the opportunity to provide comments on this rulemaking.

103. Kenny Wright:

Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8-16-10 Verbal Comment ☒ Speaker # Written Comment ☐ (Attached or back of card)

Hearing Location LAKESIDE School

Name KENNY WRIGHT

Address 150 Boone Trail

City Hot Springs State AR Zip Code 71901

E-mail Address

ADEQ ARKANSAS

RESPONSE TO KENNY WRIGHT:

Thank you for the opportunity to provide comments on this rulemaking.

104. Ray Brown:

----- Original Message -----
**From:** Ray Brown
**To:** comment@adeq.state.ar.us
**Sent:** Monday, September 20, 2010 1:51 PM
**Subject:** UMETCO - Objection

As residents of Lake Catherine, we do not understand how an organization charged with protecting the waters of our lakes can allow a company who is already contaminating our lake to increase the amount of unsafe discharge from their plant. We definitely object to this and hope that you will re-consider approving UMETCO's permit.

We live on Hideaway Hills Drive and will be in the direct path of outflow from Wilson's Creek.

We have also been asked to include the names of Steve and Geneva Boston who can be reached at bostonmarine@live.com. They also own property effected by this and also object to this permit.

We can be reached at 501/262-0056 if necessary.

RESPONSE TO RAY BROWN:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO remains committed to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the

existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

105. Cheryl Slavant:

The Arkansas Pollution Control and Ecology Commission and the Arkansas Department of Environmental Quality have a tremendous job in trying to control the various pollution problems in the state. I'm sure that having adequate data on which to make a decision is sometimes a real problem, especially when considering past actions and potential future ones. Possibly UMETCO has "jumped through the required hoops" to get to the third-party rule making process, but what is going to happen when another industry, municipality, or other group in the Ouachita River area from Blakely Mountain Dam to Arkadelphia requests a change in water quality standards? One of these days, that type of request will be the "straw that breaks the camel's back" and someone will finally realize that we've allowed too many changes and we've fouled our water to the point of no return.

I believe that before any water quality standard changes are granted in the area mentioned above, there should be a comprehensive "look" at all the changes that have been granted to date, the cumulative effects of all the pollution (point and non-point) "allowed" in the area, and the possible future inputs. Of course, no one knows the exact future but we should try to minimize the pollution going down the creek.

Have all the solutions been addressed to better the water quality going down Wilson Creek? Maybe so, but when the water quality standards are changed, that means that we cannot go back and try to make it better. We (the State of Arkansas and all the residents) should strive to make things better, not allow more harmful chemicals and such to get into our lakes and streams. For sure the "pollution control" groups should try everything before sending known polluted water downstream to the drinking water intakes. I'd hate to think that I'd have to drink the water going down Wilson Creek at this time.

I know the saying that "the solution to pollution is dilution" is used a lot but without knowing the full consequences before allowing another polluting discharge is not correct. Please conduct the comprehensive study before allowing another change in Regulation 2 in the Ouachita River area from Blakely Mountain Dam to Arkadelphia.

Sincerely,

Cheryl Slavant
Ouachita Riverkeeper for AR & LA
2610 Washington St
Monroe, LA 71201

RESPONSE TO CHERYL SLAVANT:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation

No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River. UMETCO is continuing its reclamation efforts and anticipates that the water quality will continue to improve in Wilson Creek.

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

106. Larry Talley:

Larry J. Talley
P.O. Box 447
Homer. LA 71040
(318)927-3601

Doug Szemher
Arkansan DEQ
5301 Northshore Drive
N. Little Rock, AR

Dear Mr. Szenher:

Thank you for taking time to speak with me yesterday regarding the UMETCO/Wilson Creek matter.

Please note that I **adamantly** oppose allowing this change in regulation.

There are too many variables, such as which forms of chloride and sulfate are to be released. Total dissolved solids may encompass several undesirable areas and by-products.

Hopefully my opposition will be heard and contribute in defeating this matter

Thank you,

Larry J. Talley.

RESPONSE TO LARRY TALLEY:

Thank you for taking the opportunity to provide comments on this rulemaking. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses chloride, sulfate, and TDS. Total dissolved solids are those solids, including minerals and metals, that are small enough to be called "dissolved" in a water

sample. TDS values are determined by analyzing water that has been passed through a filter. The principal components of the TDS at the UMETCO site are calcium and sulfate.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

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107. Byron Eubanks:

RE: UMETCO request

As a citizen who depends on the Ouachita River for treated water provided by the city of Arkadelphia I am concerned about UMETCO's request to raise the permitted levels of total dissolved solids discharged into Wilson Creek. Though Wilson Creek may not be a direct source of drinking water, it obviously drains into Lake Catherine and the downstream Ouachita River. The bottom line here is that UMETCO is asking for ADEQ to force the citizens who live downstream to subsidize this company. Allowing them to externalize the cost of treating the water contaminated through their past mining practices is, in effect, a tax on the public that benefits only this one company. That is blatantly unjust. UMETCO's contribution to the economy of this part of Arkansas is long past. Now they want us to pick up the tab for their short-sighted exploitation of our natural resources.

The greater problem is that there is insufficient data to determine the broader effect that runoff from this site and adjacent industrial sites has had in past decades and will continue to have into the future. Depending on data supplied by the company and naively accepting their assurances that no adverse environmental impacts are at stake is simply unacceptable. What we need from ADEQ is to require an independently conducted comprehensive survey of the whole area historically associated with the mining activities of Union Carbide, UMTECO, etc., that discharge into Lake Catherine. I cannot see how ADEQ's mission and responsibility to the people of Arkansas would allow anything less.

So, I oppose granting UMETCO's request and urge ADEQ to initiate a comprehensive survey of all discharges from these mining and industrial activities that affect the water quality of Lake Catherine and the Ouachita River. Clean water is essential to our future. We depend on it for economic growth and our general health. Please, do what's right for the citizens of Arkansas and not merely what's economically beneficial to a few.

Byron Eubanks
Caddo Valley, AR

RESPONSE TO BYRON EUBANKS:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

UMETCO is continuing its reclamation efforts and anticipates that the water quality will continue to improve in Wilson Creek.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010,

after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).

101. Renita Wingo:

I am very concerned about the request that is being made by UMETCO Minerals Corporation. I am an avid outdoors person, and a very conservative person. My husband and I having spent many hours on Lake Catherine over the past 21 years; fishing and waterskiing with our daughter (who is now 21), and watching beautiful sunsets.

We have owned property on Lake Catherine (which is currently our biggest asset in our financial portfolio) and the Ouachita River for the past 12 years. We have seen the water quality improve over the years. The overall general public have great respect for this great resource, and continue to do their part in keeping it clean and improving the water quality.

The City of Malvern (who also supplies water to the Hwy. 9 Water Association), Kimzey Rural Water, and the City of Arkadelphia; and I am sure many more further down stream, pull water from the Ouachita River below Remmel Dam which creates Lake Catherine, for their municipal water source.

If I were to personally discharge anything into the lake or river, ADEQ would hold me accountable. I know of instances where projects were shut down just because silt fences were not in place, or proper permits were not obtained. While I do not wish for anyone to loose their job, I feel that UMETCO should be held accountable for the Natural State of Arkansas.

We are a natural state, blessed with an abundance of water resources! We, meaning me & you (ADEQ) must do all that we can to protect them! Please take a stand against this request. Why must the citizens who own property along the shore lines of Lake Catherine and the Ouachita River; and the citizens of those cities who pull their public water source from the river, be responsible for paying the cost of cleaning the water that UMETCO is currently and has been polluting?

I trust that the commission will make the right decision on this request, by denying it.

Thank you for your time and consideration.

Renita Wingo
523 Rocker Road
Malvern, AR 72104

746 Couchwood Road
Hot Spring, AR 71901

RESPONSE TO RENITA WINGO:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other

recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation No. 2 to request a change in the water quality criteria for sulfate, chloride, and TDS in Wilson Creek in conjunction with its commitment to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

102. Helen Woodward:

Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8-16-10 Verbal Comment ☒ Speaker # Written Comment ☒ (Attached or back of card)

Hearing Location Lakeside School

Name Helen Woodward

Address 167 Stanage Terr

City Hot Springs State AR Zip Code 71901

E-mail Address heavenheir@cablelynx.com

ADEQ ARKANSAS Department of Environmental Quality www.adeq.state.ar.us

RESPONSE TO HELEN WOODWARD:

Thank you for taking the opportunity to provide comments on this rulemaking.

103. Kenny Wright:

Public Comment Registration Card

PLEASE PRINT LEGIBLY

Date 8-12-10 Verbal Comment ☒ Speaker # Written Comment ☐ (Attached or back of card)

Hearing Location LAKESIDE School

Name KENNY WRIGHT

Address 150 DOWNE TRAIL

City HOT SPRINGS State AR Zip Code 71901

E-mail Address

ADEQ ARKANSAS

RESPONSE TO KENNY WRIGHT:

Thank you for the opportunity to provide comments on this rulemaking.

104. Ray Brown:

----- Original Message -----
**From:** Ray Brown
**To:** comment@adeq.state.ar.us
**Sent:** Monday, September 20, 2010 1:51 PM
**Subject:** UMETCO - Objection

As residents of Lake Catherine, we do not understand how an organization charged with protecting the waters of our lakes can allow a company who is already contaminating our lake to increase the amount of unsafe discharge from their plant. We definitely object to this and hope that you will re-consider approving UMETCO's permit.

We live on Hideaway Hills Drive and will be in the direct path of outflow from Wilson's Creek.

We have also been asked to include the names of Steve and Geneva Boston who can be reached at bostonmarine@live.com. They also own property effected by this and also object to this permit.

We can be reached at 501/262-0056 if necessary.

RESPONSE TO RAY BROWN:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO remains committed to long-term site reclamation and protectiveness in Wilson Creek and downstream waterbodies, including Lake Catherine and the Ouachita River.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

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These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the

existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010, after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

105. Cheryl Slavant:

The Arkansas Pollution Control and Ecology Commission and the Arkansas Department of Environmental Quality have a tremendous job in trying to control the various pollution problems in the state. I'm sure that having adequate data on which to make a decision is sometimes a real problem, especially when considering past actions and potential future ones. Possibly UMETCO has "jumped through the required hoops" to get to the third-party rule making process, but what is going to happen when another industry, municipality, or other group in the Ouachita River area from Blakely Mountain Dam to Arkadelphia requests a change in water quality standards? One of these days, that type of request will be the "straw that breaks the camel's back" and someone will finally realize that we've allowed too many changes and we've fouled our water to the point of no return.

I believe that before any water quality standard changes are granted in the area mentioned above, there should be a comprehensive "look" at all the changes that have been granted to date, the cumulative effects of all the pollution (point and non-point) "allowed" in the area, and the possible future inputs. Of course, no one knows the exact future but we should try to minimize the pollution going down the creek.

Have all the solutions been addressed to better the water quality going down Wilson Creek? Maybe so, but when the water quality standards are changed, that means that we cannot go back and try to make it better. We (the State of Arkansas and all the residents) should strive to make things better, not allow more harmful chemicals and such to get into our lakes and streams. For sure the "pollution control" groups should try everything before sending known polluted water downstream to the drinking water intakes. I'd hate to think that I'd have to drink the water going down Wilson Creek at this time.

I know the saying that "the solution to pollution is dilution" is used a lot but without knowing the full consequences before allowing another polluting discharge is not correct. Please conduct the comprehensive study before allowing another change in Regulation 2 in the Ouachita River area from Blakely Mountain Dam to Arkadelphia.

Sincerely,

Cheryl Slavant
Ouachita Riverkeeper for Ar & LA
2610 Washington St
Monroe, LA 71201

RESPONSE TO CHERYL SLAVANT:

Thank you for taking the opportunity to provide comments on this rulemaking. It is important to understand that the site-specific criteria we are requesting are consistent with current conditions, which have been found to be protective, and will not affect swimming, fishing, or other recreation in Lake Catherine. There will be no cost impact to downstream water users because the current levels of sulfate, chloride, and TDS in Wilson Creek are the basis of the proposed site-specific criteria. UMETCO is following the appropriate steps under APCEC Regulation

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Larry J. Talley
P.O. Box 447
Homer. LA 71040
(318)927-3601

Doug Szemher
Arkansan DEQ
5301 Northshore Drive
N. Little Rock, AR

Dear Mr. Szenher:

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There are too many variables, such as which forms of chloride and sulfate are to be released. Total dissolved solids may encompass several undesirable areas and by-products.

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The greater problem is that there is insufficient data to determine the broader effect that runoff from this site and adjacent industrial sites has had in past decades and will continue to have into the future. Depending on data supplied by the company and naively accepting their assurances that no adverse environmental impacts are at stake is simply unacceptable. What we need from ADEQ is to require an independently conducted comprehensive survey of the whole area historically associated with the mining activities of Union Carbide, UMTECO, etc., that discharge into Lake Catherine. I cannot see how ADEQ's mission and responsibility to the people of Arkansas would allow anything less.

So, I oppose granting UMETCO's request and urge ADEQ to initiate a comprehensive survey of all discharges from these mining and industrial activities that affect the water quality of Lake Catherine and the Ouachita River. Clean water is essential to our future. We depend on it for economic growth and our general health. Please, do what's right for the citizens of Arkansas and not merely what's economically beneficial to a few.

Byron Eubanks
Caddo Valley, AR

RESPONSE TO BYRON EUBANKS:

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UMETCO is continuing its reclamation efforts and anticipates that the water quality will continue to improve in Wilson Creek.

The proposed rulemaking addresses only sulfate, chloride, and total dissolved solids (TDS) in Wilson Creek. The proposed rulemaking does not request increases in the amount of sulfate, chloride, or TDS beyond existing or historical levels (i.e., following major reclamation) in Wilson Creek. The proposed rulemaking does not seek modified criteria or removal of drinking water use classifications for Lake Catherine or the Ouachita River (see General Response No. 1).

UMETCO has met the requirements for a third-party rulemaking as required by Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 and the State of Arkansas Continuing Planning Process (CPP) to ADEQ's satisfaction (see General Response No. 2).

These proposed criteria do not represent an increase in the amount of sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. Lake Catherine has historically been a high-quality resource and is expected to continue to be a high-quality resource after the proposed criteria change for Wilson Creek (see General Response No. 4.a).

UMETCO has conducted water quality and biological studies to support this rulemaking. Additional, wider-ranging studies are not required or necessary because aquatic life present in Wilson Creek and the Lake Catherine cove into which Wilson Creek flows has been shown to meet expectations (e.g., number of fish, variety of species, and size) based on the habitat in Wilson Creek and the Lake Catherine cove (see General Response No. 4.b).

The proposed rulemaking does not request an increase in the existing amount of sulfate, chloride, or TDS in Wilson Creek, Lake Catherine, or the Ouachita River, and therefore has no effect on water treatment costs downstream. Therefore, in addition to not increasing treatment costs, the existing discharge does not significantly contribute to existing costs (see General Response No. 4.c).

The proposed rulemaking will not increase sulfate, chloride, and TDS in Wilson Creek, Lake Catherine, or the Ouachita River. These minerals do not influence the safety of swimming waters nor do they affect the suitability of fish for consumption. Additionally, the proposed rulemaking does not exempt UMETCO from meeting other applicable state and federal water quality criteria that apply to its discharge, including any criteria related to maintaining "fishable and swimmable" waters, as well as any component of TDS besides chloride and sulfate (e.g., metals). The Arkansas Department of Health indicated that it does not have concerns regarding the effects of the proposed rulemaking on the integrity of drinking water sources (see General Response No. 5.a).

Studies indicate that existing conditions in Wilson Creek (i.e., existing sulfate, chloride, and TDS concentrations) are protective of aquatic life in Wilson Creek and Lake Catherine; thus the existing conditions are an appropriate benchmark for a healthy ecosystem. Therefore, criteria based on maintaining existing conditions can be expected to maintain the already abundant and diverse fish population. ADEQ concurred with this conclusion in a letter dated March 5, 2010,

after reviewing the studies and documentation submitted as part of this rulemaking request (see General Response No. 5.b).

Extensive reclamation efforts at UMETCO have decreased sulfate, chloride, and TDS in Wilson Creek. The UAA study showed that existing conditions in Wilson Creek are protective of aquatic life. Additionally, even if sulfate, chloride, and TDS concentrations were further reduced in Wilson Creek, it would not improve the abundance and diversity of aquatic life present. Therefore, regardless of the cost involved, treating the discharge to meet the ecoregion sulfate, chloride, and TDS criteria would result in little, if any, benefit to aquatic life and human health in Wilson Creek or Lake Catherine. In fact, available treatment options have other adverse impacts that have not been considered by commenters. Accordingly, UMETCO is proposing site-specific criteria as allowed by APCEC Regulation No. 2 (see General Response No. 6).