Exhibit No.:	
Issues:	Clearing and Construction Practices; Accommodations
Witness:	David W. DeWeese
Sponsoring Party:	Union Electric Company
Type of Exhibit:	Surrebuttal Testimony
Case No.:	EO-2002-351
Date Testimony Prepared:	September 4, 2002

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. EO-2002-351

SURREBUTTAL TESTIMONY

OF

DAVID W. DEWEESE

ON

BEHALF OF

UNION ELECTRIC COMPANY
d/b/a AmerenUE

St. Louis, Missouri
September, 2002

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

Application of Union Electric Company for Permission and Authority to Construct, Operate, Own and Maintain a 345 kilovolt Transmission Line in Maries, Osage and Pulaski Counties, Missouri ("Callaway-Franks Line")	))))))	Case No. EO-2002-351

AFFIDAVIT OF DAVID W. DEWEESE

STATE OF MISSOURI)
) ss
COUNTY OF ST. LOUIS)

David W. DeWeese, being first duly sworn on his oath, states:

1. My name is David W. DeWeese. I work in St. Louis, Missouri and I am employed by Ameren Services Company as Supervising Engineer of Transmission Design in the Energy Delivery Technical Services Group.

2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of Union Electric Company d/b/a AmerenUE consisting of 10 pages, which has been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

David W. DeWeese

Subscribed and sworn to before me this 4th day of September, 2002.

Mary Hoyt
Notary Public

My commission expires: 4-1-2006

MARY HOYT
Notary Public - Notary Seal
STATE OF MISSOURI
Jefferson County
My Commission Expires: April 1, 2006

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SURREBUTTAL TESTIMONY

OF

DAVID W. DEWEESE

CASE NO. EO-2002-351

Q. Please state your name and business address.

A. My name is David W. DeWeese. My business address is One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63166-6149.

Q. Are you the same David W. DeWeese that filed Direct Testimony in this proceeding?

A. Yes, I am.

Q. What is the purpose of your Surrebuttal Testimony in this proceeding?

A. I will respond to the testimony submitted by the Concerned Citizens of Family Farms and Heritage. In particular, I will respond to questions and concerns expressed by the property owners relating to the clearing of the right of way and construction of the proposed line. I will also address certain other property owner concerns relating to the presence of the line.

I. NATURE OF CONSTRUCTION AND CLEARING ACTIVITIES.

Q. Some of the Intervenors (for example, see the Rebuttal Testimony of Ms. Mary Lois Arbes at page 4) expressed concerns about what AmerenUE would do on their properties to clear the right of way to construct the line. Please describe what a property owner can expect from the construction activities associated with clearing the right of way for the proposed line.

A. The existing route will allow sharing of the right of way for approximately 43 of the 54 miles of the proposed line. This will minimize the impact of the new line because it allows us to share 25 feet of right of way so that only 125 feet will be necessary on the parallel portion of the route. This effectively reduces the width of the cleared corridor by 25 feet. AmerenUE's preferred method of clearing for line construction is to clear-cut the right of way by hand and dispose of the brush either by windrowing, burning, and/or chipping. Hand clearing minimizes disturbance to the ground, which reduces possible concerns relating to erosion. With regard to brush disposal, we will make every reasonable effort to use a method that suits the landowner at issue, but there could be circumstances when a particular method as applied to a particular property becomes unreasonable or cost prohibitive under the circumstances, or is prohibited by law (for example, burning could be banned by local law or if there is a State fire hazard emergency at the time). One option for handling the logs is to cut logs over 12" in diameter into 10 to 20-foot lengths and stack them along the edge of the right of way. Often property owners will ask us to do this so they can use the timber.

Q. Some of the Intervenors expressed concerns about crews behaving on their property in an irresponsible manner or contrary to the wishes of the owner. For example, please see the Rebuttal Testimony of David and Donna Hackmann at pages 5-6. Please explain how the clearing activities are overseen.

A. We simply do not and will not tolerate the kind of behavior described by Mr. and Mrs. Hackmann, either by our clearing and construction crews or, as Mr. Thomas Beerman addresses in his Surrebuttal Testimony, by our right of way maintenance crews.

With regard to clearing and construction, AmerenUE has very comprehensive specifications that address the various aspects of right of way clearing and contractor responsibilities and we strictly enforce those specifications. Whenever feasible and permitted, we will also honor any existing arrangements that property owners had with AECI. AmerenUE's Construction Supervisor will be on the job to monitor the clearing contractor's work and adherence to the requirements of the specifications. The Supervisor will also be available prior to and during the clearing operation to address property owners' questions, concerns and complaints.

Q. A number of the Intervenors complained about the impact of stumps (for example, see the Rebuttal Testimony of Mr. Francis A. Platt at page 4) or possible erosion (for example, see the Rebuttal Testimony of Mr. Edward Schaefer, Jr. at page 4). What steps are taken to minimize the impact of stumps or possible erosion?

A. We make every attempt to leave the stumps so that they are as close to flush with the ground as is practical, and in no event would they be more than four inches above the ground. Most will be substantially less than four inches but there are cases, due to the lay of the land, or how the tree has grown, where we cannot get the stump any shorter than four inches. We do our best to do so, however. After the stumps are cut as low as possible, we treat them to prevent regrowth from the stumps. Leaving the stumps has benefits because it reduces issues relating to erosion which can be created if stumps are removed from the ground. This is because stump removal disturbs and loosens the soil and may leave depressions where the stump used to be. With regard to erosion concerns, we reseed and straw the disturbed areas using a mixture of Kentucky 31 fescue, perennial rye, and wheat (previously wooded areas) along with fertilizer and straw mulch. We also follow best

management practices with regard to erosion control and use different measures depending on the slope at issue to minimize erosion.

Q. Another concern mentioned dealt with gates (for example, see the Rebuttal Testimony of Victor and Mabel Renkemeyer at page 4 and Mary C. Bexten at pages 4-5). Please respond.

A. The Construction Supervisor, along with the clearing contractor's foreman, will ensure that all gates installed by an owner remain closed. As Mr. Beerman indicates in his Surrebuttal Testimony, AmerenUE or its vegetation management contractor will do the same with regard to right of way maintenance access. New gates will be installed as required by the clearing contractor and AmerenUE. Existing landowner gates may be used during construction or maintenance and if AmerenUE or its contractors were to accidentally damage such gates we will properly repair or replace them. With respect to gates that AmerenUE may install in connection with construction, AmerenUE is committed to maintaining those gates as required for AmerenUE's use or, in some cases, AmerenUE may elect to remove a gate that we installed in which case we would properly repair the fence.

Q. Nearly all of the Intervenors referred to "constant commercial activity" on their property if the line is built. Is that a fair characterization of the level of activity they can expect?

A. No. Depending on the size of the property, the clearing contractor would generally be on the property from one to five days. Unless weather causes significant delays, the actual time line construction personnel are present on any one property generally takes 1 to 10 days, spread over the construction period of the line. After the initial clearing, the

construction during this period is in three basic phases as follows: erection of the structures (poles), installation of the conductors and final clean-up. After initial construction and cleanup, we would generally be on the right of way only in emergencies or for periodic maintenance, which is needed infrequently. As Mr. Beerman testifies in his Surrebuttal Testimony, access to the property for right of way maintenance is also rather infrequent and becomes even less frequent after brush is initially brought under control. In summary, our access to the property falls far short of being "constant commercial activity" as alleged by the Intervenors.

II. RESPONSE TO OTHER INTERVENOR CONCERNS.

Q. Mr. McDaniel contends that UE should have examined an alternative of putting this line underground (see Mr. McDaniel's Rebuttal Testimony at page 9). Why didn't AmerenUE place the line underground?

A. AmerenUE considers various construction types during the preliminary design phase of a project. However, placing a transmission-voltage circuit underground is, generally, reserved for congested urban areas where the right of way for an overhead circuit is unavailable and no other alternative for routing the line is possible. This is due to excavation and backfill requirements, circuit reliability and outage restoration concerns, and construction and maintenance costs.

Depending on the type of underground system used, an excavation to accommodate a 345 kV transmission circuit could be quite large and would require a significant land disturbance. Large quantities of thermal backfill (required to dissipate the heat produced from the cables) would have to be hauled in and the excavated material hauled out. Once

installed and if a fault occurs, the circuit would be out of service for an extended period while special crews are called in to locate the fault, dig up the failed cable, and install and splice-in new cable. This process can take several weeks to even months depending on crew availability, difficulty in locating the fault, extent of damage, and the availability of new cable. During this period of time, the circuit is unavailable for use which can adversely affect system reliability. Also, with underground construction or maintenance of underground lines, the level and duration of activity on the property and the degree to which the land has to be disturbed is much greater than with overhead construction.

The cost to install such an underground circuit is, generally, 5 to 7 times more than the cost of the proposed overhead construction and, depending on circuit reliability, maintenance costs can be extensive. Considering that the current estimate for line construction (excluding substation work) is approximately $20 million, this would mean that the projected cost for an underground circuit would be in the range of $100 million to $140 million.

In addition, the special skills required to install and maintain these cables are currently unavailable at Ameren and would have to be brought in each time maintenance or a repair is required.

Therefore, installing this circuit underground was not considered a practical or viable alternative.

Q. In his Rebuttal Testimony at page 20, Mr. McDaniel makes reference to the Central Electric's existing 161 kV line and alleges that UE has not given "any reason" that it cannot be taken out of service in "stages," which apparently

Mr. McDaniel's believes would allow a double circuit 161 kV/345 kV line to be built within a smaller corridor. Is it feasible to construct a double circuit 161/345 kV line using the existing 161 kV line right of way of Central Electric? If not, why not?

A. No. Central Electric's operating constraints which I discussed at pages 5-6 of my Direct Testimony and which were also discussed by Mr. Mitchell at pages 25-26 of his Direct Testimony preclude such extended or 'staged' outages. Furthermore, Central Electric's Manager of Engineering and Operations, Mr. Ralph Schulte, has specifically advised me that even if a double circuit 161 kV/345 kV line were built adjacent to the existing 161 kV line, Central Electric would not release the existing 161 kV easement or remove its existing 161 kV line because, as I understand it, the easement could still be used to accommodate future system load growth and the line would continue to provide back-up reliability for Central Electric's system. Therefore, building a double circuit line would still require the same clearing and same total corridor that is required to simply build the proposed 345 kV Callaway-Franks line.

Q. A number of the Intervenors (for example, see Rebuttal Testimony of Victor and Mabel Renkemeyer at page 2) mentioned humming on the lines. Please respond.

A. A transmission line may produce some level of audible noise while in operation. Audible noise, in the form of crackling or humming, is produced by corona on the transmission line conductors (wires). It is most perceptible during periods of foul weather. Corona is caused by the ionization of the air at the surface of the line conductors and hardware. The electric field at the surface of the conductors ionizes the air where water

condenses on the conductors. This is normal and does not signify any problem or danger other than the normal danger inherent in high voltage lines. Although difficult to eliminate entirely, AmerenUE takes steps in our designs to minimize corona such as optimally spacing the conductors on the structures and utilizing two conductors per phase instead of just one on 345 kV construction.

Prediction models exist to estimate what the sound level would be at varying distances from the line during various weather conditions. According to AmerenUE's calculations, a maximum sound level at the edge of the right of way should be no greater than the sound level experienced in a typical living room. This level decreases with distance from the line. I, personally, have stood under several of Ameren's 345 kV transmission lines and would characterize the audible noise as "background" noise which does not interfere with normal conversation.

Q. A few Intervenors (for example, see Rebuttal Testimony of Mary Lois Arbes at page 2) mentioned possible interference from guy wires. Please comment on that concern.

A. **W**e would not expect to have guy wires on most of the structures and they are generally only needed where the line turns. In those cases we clearly mark the guy wires so that they are visible to all. They are necessary in certain places, and the right to place them was included in the payments made for the existing easements or will be taken into account in payments made by purchase or condemnation for new easements.

Q. Are there any other main contentions made by the Intervenors that fall within your area of responsibility and to which you would like to respond?

A. Yes, I would like to respond to the Intervenors' comments about notice of our access to the right of way and issues raised about radio or TV interference.

Q. Please discuss your comments about notice.

A. Before construction begins, UE will send a letter to each property owner that contains the name and telephone number of UE's Construction Supervisor, and will indicate when clearing and construction is expected to commence. The Construction Supervisor will also be contacting the property owners personally to discuss how access will be gained to the right of way and to take any special requests or considerations into account. The Construction Supervisor is available to the property owners by phone or in-person on the job site, and it is quite common for the property owner to come out and talk to the Construction Supervisor to gain additional information or to discuss concerns. If requested, the Construction Supervisor will come see the property owner again to discuss any such issues. After construction is complete, the property owner will be contacted personally to see if there are any concerns left from clearing or construction and to take care of any damages. On those infrequent occasions when line maintenance or repair is later needed, we make reasonable efforts to contact the property owner before coming onto the right of way, particularly if we will be accessing the right of way near the residence, if applicable. Our maintenance department also maintains property information which includes special requirements or restrictions applicable to a particular piece of property to help ensure we observe those requirements. With regard to future right of way maintenance, as Mr. Beerman testified in his Direct Testimony at page 6, our right of way maintenance group

will also meet personally with each property owner to discuss vegetation management prior to instituting a vegetation management program on their property.

Q. Please discuss the issues relating to radio or TV interference.

A. Under normal conditions, interference should not be an issue. If problems are experienced, the property owner can contact us and we will work with them in good faith to solve the problem. If the problem is related to our line we are, with limited exceptions, usually able to solve the problem.

III. CONCLUSION.

Q. Please summarize your Surrebuttal Testimony.

A. We take numerous steps to try to minimize the impact of clearing and constructing the line on the properties, and the use of the existing easements allows us to further minimize that impact on the public as a whole both by reducing the total width of the cleared corridor along most of the route and by locating the line in its long-planned location. We use clearing methods designed to minimize disturbance of the land, including erosion, and we try to work with landowners on disposal methods where possible. We strictly supervise all of our crews and do not tolerate inappropriate behavior. The actual time that we will be on a given property, even during initial clearing and construction and later for maintenance, is minimal, as is the ongoing impact of the line.

Q. Does this conclude your Surrebuttal Testimony?

A. Yes, it does.