Exhibit No.: 03
Issue(s): Utility Waste Landfill Issues Raised by Charles H. Norris
Witness: Craig J. Giesmann
Sponsoring Party: Union Electric Company
Type of Exhibit: Sur-Surrebuttal Testimony
Case No.: EA-2012-0281
Date Testimony Prepared: October 11, 2013

MISSOURI PUBLIC SERVICE COMMISSION

Case No. EA-2012-0281

SUR-SURREBUTTAL TESTIMONY

OF

CRAIG J. GIESMANN

ON

BEHALF OF

UNION ELECTRIC COMPANY
d/b/a AMEREN MISSOURI

St. Louis, Missouri
October 11, 2013

SUR-SURREBUTTAL TESTIMONY

OF

CRAIG J. GIESMANN

CASE NO. EA-2012-0281

Q. Please state your name and business address.

A. Craig J. Giesmann, Union Electric Company Power Operation Services, 3700 South Lindbergh, Sunset Hills, Missouri 63127.

Q. What is your position with Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company")?

A. I am the Managing Supervisor of Hydro Engineering.

Q. Are you the same Craig J. Giesmann who filed direct testimony in this case on April 26, 2013 and Surrebuttal Testimony on September 13, 2013?

A. Yes.

Q. What is the purpose of your sur-surrebuttal testimony in this proceeding?

A. The purpose of my sur-surrebuttal testimony is to respond to certain portions of the cross-surrebuttal testimony of Intervenors' witness Charles H. Norris.

Q. Mr. Norris claims that Ameren Missouri has not accounted for all of the capital and operating costs associated with the proposed utility waste landfill ("UWL") and he generally points to three categories – construction, operations and closure, and post-closure. Is he correct?

A. No, he is not.

Q. Please explain why he is not correct when he contends that we have not adequately accounted for construction costs.

A. He claims that we have not adequately accounted for the cost of importing clay to the site, but his claim is untrue. As the data request response he references indicates, it is our expectation that we will obtain clay from a location that is in relatively close proximity to the proposed UWL site, and on that basis we have used a $10 per cubic yard cost estimate (which includes excavation and delivery to the site), which was provided by the engineers who designed the UWL for the clay that will be needed. Even if we had to obtain clay from farther away and thus incur some additional costs, the additional costs would be lost in the rounding of the costs of constructing the UWL given that the estimated cost for clay is just $183,000 – or about 6 tenths of 1 percent of the total cost. It is our experience that contractors (who have not been chosen yet, but will be) typically are aware of and have access to local clay sources, but they will not disclose them prior to being awarded the bid so as to preserve their competitive advantage.

Q. Mr. Norris also claims that you have not properly estimated the costs of other soils needed for the project. Please respond.

A. As was the case with his claims about the clay, Mr. Norris is similarly uninformed on this issue. Once again, we have included realistic estimates of the delivered costs of all of the soils that we will need in the detailed cost estimates supplied to the Staff in response to Staff's data requests. I am unaware of Mr. Norris having any experience with or knowledge of local earthwork unit costs. Nor does he appear to be aware that the fill we will need is widely available throughout the Missouri River bottoms, or that subgrade and berm fill – which he references – cost essentially the same. The fact that Mr. Norris does not calculate or estimate any of the costs he says that we haven't accounted for demonstrates his lack of familiarity with our proposal and general construction practice. It is simply not true that we have not adequately accounted for these costs.

Q. Mr. Norris next claims that you have not accounted for future costs that he suggests would be incurred from floods and seismic events. How do you respond?

A. The underlying premise of his contention is that there will be material repair costs necessitated by such events because the design and construction of the UWL will be susceptible to damage that would cause us to incur such costs. His premise is false.

Q. Why?

A. As I have already testified, detailed evaluations of the nature and extent of potential site-specific hazards have been completed and have been provided to the Missouri Department of Natural Resources ("MDNR") as part of the Construction Permit Application ("CPA"). The UWL was specifically designed to mitigate such hazards *without* any material repair costs. Indeed, the proposed UWL – due to an additional Franklin County requirement – contains design features that engineering analysis would indicate are not needed. For example, Franklin County requires that the exterior slopes be armored with concrete. Consequently, we added a fabric-formed concrete mat as additional, redundant protection against floods. We accounted for settlement in the design, and in fact, we used long-held civil engineering calculations that tend to yield conservative (over-estimate) settlement. In terms of seismic hazard potential, we designed the facility to withstand higher peak horizontal ground acceleration (i.e., a stronger seismic event) that is more conservative than required by current regulation or standard practice. It is very improbable that the UWL will sustain damage that would require the kind of repair costs that Mr. Norris claims we would have to incur.

Q. Does Mr. Norris quantify in any way the potential for these events (flood and seismic) to occur or the anticipated associated cost of repair?

A. Not at all. Although he makes the claim that both the potential for these events and the cost of repair is quantifiable, Mr. Norris speaks only in speculative generalities and offers no calculations or any rationale for his opinion.

Q. Do you agree that "meaningful comparisons among potential sites" cannot be made without accounting for the "risk-adjusted cost of statistical events" referenced by Mr. Norris on page 6 of his testimony?

A. No, I do not. We did perform detailed statistical analyses relating to recurrences of floods and seismic events, and they were accounted for in the engineering calculations used to design the UWL. Any non-negligible damage was predicted and then accounted for in the design. This is not a case where the cost of constructing and operating the UWL adjacent to the Labadie site presents a "close call" in terms of cost comparisons to other alternatives. Even if we were to be forced to take the step of sending 160 to 200 trucks *every single working day* away from the plant (doing so would present its own set of hazards and would also expose Ameren Missouri to escalating transportation costs over the coming decades), we are still talking about approximately $100 million or more of additional costs at another UWL site. These speculative, additional costs suggested by Mr. Norris would never be high enough to come close to bridging the gap between the cost of the proposed UWL versus the costs of other alternatives.

Q. Mr. Norris next claims that you have not sufficiently accounted for closure and post-closure costs. Please address these claims.

A. Mr. Norris makes several statements with which I take issue. First, he implies that there are closure- or post-closure costs associated with a UWL that one would otherwise not see for, as an example, a municipal waste landfill. His point is apparently that while one might not need to account for as many costs for a municipal waste landfill, one must do so for a UWL. I disagree.

Q. Why do you disagree?

A. Coal Combustion Products ("CCPs") like those to be deposited in the UWL are inherently more stable than municipal wastes due to the fact that they set-up like concrete. They are less permeable and therefore produce much less leachate, and they are inorganic in nature, which means the wastes do not decay and create methane gas like municipal wastes. As a result, a UWL actually becomes more stable over time. Mr. Norris's claim that the danger associated with a municipal landfill declines over time is also incorrect. The *volume* of waste in a municipal landfill may decline over time as the organics decay, but much of the contents (e.g., plastics, metals, household chemicals, to name a few) remain. Dangers associated with municipal landfills may increase with time, such as underground fires caused by the heat of decay (fueled by methane produced by the landfill) or differential settlement of the cover (because the volume does decline). A UWL has none of those hazards.

Q. But isn't Mr. Norris correct in suggesting that you have not sufficiently accounted for closure and post-closure costs?

A. He is not correct with respect to the closure and 20-year regulatory post-closure period costs that we have properly accounted for. He presents no support for any claim that our estimates are incorrect. The estimates are site-specific based upon engineering analyses. He is literally "correct" that we have not included cost estimates after the 20-year regulatory post-closure period, but his claim creates the misleading impression that this somehow establishes that the proposed UWL is not the least–cost option. The 20-year period is a regulatory requirement that would apply equally to any other site, thereby making the comparison a moot point.

Q. Mr. Norris also says that there are other "waste-related costs associated with the proposed UWL that are not included in the documents provided with the CCN application" (page 6, l. 21-23). Is that true?

A. No, it is false. His testimony makes clear that he is making the claim that costs to close the existing ash ponds are costs "associated with" the proposed UWL. Nothing could be further from the truth. Whether we build a UWL adjacent to the existing Labadie Energy Center, use thousands of trucks per year to haul CCPs to another Ameren Missouri-owned UWL, or use thousands of trucks per year to haul CCPs to a third-party landfill, we will still have to take whatever steps our environmental regulators require (and to incur related costs) with respect to the existing ash ponds. Ameren Missouri will, of course, comply with whatever regulatory requirements apply to the ultimate closure of the existing ash impoundments, and it has the financial wherewithal to do so.

Q. Mr. Norris also discusses the proposed UWL's liner and its proximity to groundwater and suggests there could be unaccounted-for costs related to this issue. Do you have response?

A. Yes, I do. Ameren Missouri witness Steven Putrich, in his sur-surrebuttal testimony, will address Mr. Norris's claims about whether the liner is appropriately designed and the relationship of that issue to proposed USEPA regulations. As Mr. Putrich testifies, Mr. Norris's claim that the proposed design does not meet the proposed regulation is false. And thus Mr. Norris's claim that additional fill might have to be brought in (at additional cost) is also false. However, even if additional fill did have to be brought in, the cost would be very minimal in relation to the overall costs of the option of building the proposed UWL versus other options.

Q. But doesn't Mr. Norris claim some tie between the existing ash ponds and the groundwater monitoring related to the proposed UWL?

A. Yes, he does. As discussed in the sur-surrebuttal testimony of Ameren Missouri witness Tyler Gass, Mr. Norris's claims have no basis in facts or data, and are in fact refuted by the actual groundwater monitoring data from wells that are down gradient of the existing ash

ponds. As prior testimony submitted in this docket also indicates, the existing groundwater monitoring network, approved by MDNR, is robust and sufficient to protect groundwater in the area. There are both upgradient and downgradient wells that ring the site. The background monitoring results (two rounds of which were discussed in the surrebuttal testimony of Ameren Missouri witness Lisa J.N. Bradley) show no impact from the existing ash ponds despite 40-plus years of operation. We will complete six more quarterly rounds of monitoring to fully characterize the ambient conditions both up and down gradient from the site. We will then regularly monitor groundwater quality using the 28 wells, including testing for CCP constituents. We have accounted for these costs, and there simply are no unaccounted-for costs as Mr. Norris – without support – claims.

Intra-well and inter-well data evaluations will be utilized as required. Data collection techniques, which are standard for the industry, will provide a robust amount of data for evaluation of the UWL's performance. Because of their proximity to the existing ash impoundments, these wells will also enable early detection of contamination from the existing ash ponds, should it occur. As Mr. Gass points out in his testimony, the horizontal flow of groundwater in this area is orders of magnitude greater than the vertical flow – which confirms that the 28 wells will pick up any potential contamination from the existing impoundments.

Q. Mr. Norris next claims that Ameren Missouri is not qualified to operate the landfill because of his claims about management of existing CCPs, his criticism of Ameren Missouri's groundwater monitoring plan, and criticisms of management of CCPs by affiliates of Ameren in Illinois. Please respond.

A. I have addressed the incorrect claim of groundwater contamination of the proposed UWL site from the existing ash ponds above, as does Mr. Gass in his sur-surrebuttal testimony. Both Mr. Gass and I have also addressed the adequacy of the MNDR-approved

groundwater monitoring system that we have in place. The monitoring system is required by regulation to utilize adaptive management, and will be monitored by the MDNR. In addition, Ameren Missouri witness Gary King already addressed the misinformation that Intervenors – and now Mr. Norris – have disseminated regarding coal ash impoundments operated by Ameren affiliates (and in one case, Ameren Missouri) in Illinois.

Q. Is there other evidence that Ameren Missouri is qualified to operate the proposed UWL?

A. MDNR has already determined that Ameren Missouri is qualified to operate a UWL that is essentially the same as the one proposed here – the UWL that is currently in operation at our Sioux Energy Center. Moreover, Ameren Missouri has extensive experience with large earth moving operations, and those earth moving operations are similar to the operation of dry UWL cells. Finally, even Mr. Norris acknowledges that Ameren Missouri's past practices in managing CCPs are consistent with those used in the industry. The fact that ash ponds have been used in the past does not diminish Ameren Missouri's qualifications to manage a UWL in the future.

Q. Starting on page 9, line 11 and continuing to page 10, line 16, Mr. Norris makes a number of claims regarding groundwater monitoring data from Labadie. Are the "facts" he recites accurate?

A. No, they are not. As referenced above, the only groundwater monitoring results from the Labadie plant, which are discussed in detail in Ms. Bradley's surrebuttal testimony, reflect no CCP contamination. I will address his reference to a report about the Meramec Energy Center below.

Q. Before you do that, would you please comment on his claims about your response to Staff DR No. 14 and wells associated with the construction of the fly ash pond at Labadie in 1992?

A. Mr. Norris is mistaken when he claims that there were groundwater quality monitoring wells installed at Labadie prior to the 1992 construction permit for the newer ash pond. There were *piezometers* installed soon after the plant's original construction to determine groundwater *elevations*. Those piezometers were installed to monitor groundwater elevation to ensure that the existing ponds were not contributing to residual high groundwater following a flood event. They were not installed as groundwater quality monitoring devices, and no groundwater quality information was obtained. The wells were eventually abandoned. Mr. Norris's reference to Staff DR 14 is apparently an attempt to suggest that Ameren Missouri has somehow withheld groundwater monitoring information. As already explained, there was no such information, and the information we do have was presented and discussed in Ameren Missouri's surrebuttal testimony – it shows no contamination. Moreover, the reason the 1992 document referenced by Mr. Norris was "not provided to MPSC Staff in response to DR 14," was because it has nothing to do with the question asked by the Staff in DR 14. That DR simply requested "a description of the existing Labadie waste impoundments including acreage, capacity, liner system (if applicable), and permitting status." We provided that information.

Q. Why does Mr. Norris include a 1997 hydrogeological assessment from Ameren Missouri's Meramec Energy Center as part of his testimony?

A. Apparently, Mr. Norris is attempting to take isolated sections of the Meramec study and suggest that groundwater quality at Meramec has been negatively affected by the presence of the ash ponds there – and then thereby falsely conclude that the situation at the Labadie Plant is similar. Upon a full review of the CH2M Hill study of the Meramec

groundwater included by Mr. Norris as an exhibit to his testimony, one can readily see that it fails to support Mr. Norris's hypothesis. In fact, the report makes two important conclusions when taken in context of the entire report, which are as follows: (1) "Based on the data made available to CH2M Hill and summarized in the above tables, it appears that the ash ponds do not have a significant influence on local groundwater quality." (2) "In conclusion, based upon the data provided by UE, there appears to be no significant health or environmental risks associated with potential exposure to groundwater or surface water affected by ash pond operations at the UE Meramec site." These conclusions directly contradict Mr. Norris's proposition.

Q. Mr. Norris references "lateral leakage' from the existing ash ponds and claims that all Ameren Missouri did was "bury" a seep, which, he dramatically concludes, "does not remediate it; it merely hides it from sight" (page 11, line 1). Did Ameren Missouri "bury" a seep?

A. No, it did not. I already addressed this issue at page 13, lines 7-18, of my surrebuttal testimony. We stopped seepage from the existing ash impoundments by installing two underground slurry walls (essentially retaining walls), each of them over 600' long and over 30' deep. These underground walls act as a physical barrier to any seepage in the area. As has already been addressed, there is no evidence (and, in fact, there is evidence to the contrary) that any past seeps have resulted in contamination downgradient or upgradient of the existing ash ponds.

Q. Mr. Norris says that he disagrees with Staff witness Claire Eubank's testimony that the proposed UWL promotes the public interest, essentially arguing that it should be put somewhere else. Why does the proposed landfill promote the public interest?

A. Ameren Missouri's attorneys will also address this issue in briefing in this case given, as I understand it, that the primary public interest at issue in a case involving a certificate

of convenience and necessity application is the interest of the utility's customers in continuing to receive safe and adequate service at the lowest reasonable cost. The bottom line is that the Labadie Energy Center is an integral part of Ameren Missouri's power generation system, and is indeed the Company's most-economical coal-fired base load plant and the second lowest cost base load plant (behind the Callaway Energy Center) in our fleet. Like any other coal-fired plant, it produces CCPs, and they must be disposed of to the extent we cannot beneficially reuse them. The proposed UWL is the lowest-cost option for our customers by a large margin. It is not in the interest of anyone to force 160 to 200 trucks every working day for the next approximately 25 years to traverse the roads leaving the plant to wherever the CCPs would have to be transported at a substantially higher cost, when we have a properly engineered solution right next to the plant. If the MDNR approves the CPA, as we expect, it will establish that the agency with the responsibility of protecting human health and the environment – and the expertise in doing so – has determined that the proposed UWL is appropriate for this location and is protective of human health and the environment. Ameren Missouri and our consultants have already arrived at this conclusion, based upon the vast amounts of site reconnaissance, data collection, and engineering analyses already performed and submitted to MDNR.

Q. Mr. Norris next claims that the CCPs are "reactive," suggesting a hazard. Is his claim true?

A. No, it is not. His statement appears to be an attempt to generate an emotional reaction or decision by the Commission, rather than one based upon the facts. As Ameren Missouri witness Lisa J.N. Bradley discusses in her surrebuttal testimony, CCPs consist mostly of inorganic minerals, and they will set-up like concrete in the UWL.

Q. Mr. Norris seems to criticize Ms. Eubanks for noting that the proposed UWL is an improvement over the existing ash ponds. Do the existing ash ponds have anything to

do with whether the plant's CCN should be amended to encompass the area of the proposed UWL?

A. No, they do not. All of Mr. Norris's claims about risks from the existing ash ponds would apply equally whether Ameren Missouri builds the proposed UWL, builds a UWL elsewhere, or trucks CCPs to a third-party landfill. Nor does Mr. Norris's bare statement that the UWL will add to risks withstand scrutiny. We have addressed all of his so-called "risks" in this and other testimony. Mr. Norris is a geologist; he is not a degreed, licensed and experienced engineer. All of the risks he mentions were extensively evaluated as part of the PSI, DSI and CPA processes, and we have addressed them appropriately in the design and engineering of the UWL. MDNR will be the final judge regarding these issues, but based upon MDNR's comments to-date, I have every expectation that MDNR will conclude that we have properly evaluated such risks, and have properly designed and engineered the proposed UWL.

Q. Mr. Norris next criticizes Staff witness John Cassidy, claiming that his conclusions that the proposed UWL at the Labadie site is the lowest cost option is "without support and is in error." Did Mr. Cassidy reach the wrong conclusion?

A. No, he did not. Mr. Cassidy testified to the same thing that I testified to in my direct testimony and later in my surrebuttal testimony based upon actual data as opposed to bare allegations. I explained the data that Mr. Cassidy relied upon in detail at pages 13 to 16 of my surrebuttal testimony. I also presented an updated, Labadie-specific revenue requirement study in my surrebuttal testimony that confirmed what we have said all along, and what Mr. Cassidy testified to in his rebuttal testimony.

Q. But Mr. Norris claims things like tipping fees in 2010 are "generally consistent" with the 2003-2004 rates initially used and claims that rail transportation is substantially cheaper than by truck. How do you respond?

A. His reference to rail rates was taken from an e-mail from the then-operator of what was then the Fred Weber landfill. The numbers provided by Mr. Doug Weible of Fred Weber were estimates, and most certainly did not include the necessary – and substantial -- infrastructure that would be required to load, move and unload large amounts of ash from Labadie to their landfill. Infrastructure required to perform rail movement of ash would include loading and unloading facilities (both at Labadie and the landfill – neither site has these facilities today), rail sidings, and agreements with rail lines to provide dedicated enclosed tank-type rail cars. There would also be significant operations and maintenance costs, such as for licensed locomotive engineer companies to take the trains from the loading facility to the mainline and from the mainline to the landfill's unloading facilities. Although detailed estimates on these infrastructure costs and other costs have not been performed, based upon my experience in engineering and constructing facilities of this type, I would conservatively estimate that the costs of such facilities would likely be in the tens of millions of dollars, even approaching $100 million or more (again, not counting annual operations and maintenance costs). We also obtained 2013 data on tipping fees at area landfills, and these fees have increased by approximately 200-300 percent since the earlier studies were done, and those estimates also do not include the cost of additional loading and unloading facilities that would be needed both at Labadie and at the third-party landfill plus these higher operations and maintenance costs. As one might expect, transportation costs have also escalated significantly, and by similar percentages. These figures were presented previously in the revenue requirement study submitted as part of my surrebuttal and support the decision to utilize the proposed UWL site.

Q. Mr. Norris next criticizes Ameren Missouri's consideration of alternative sites, the suggestion being that the proposed site at Labadie is inferior to other possible sites. How do you respond?

A. When Ameren Missouri first recognized that it would need to find alternatives to dispose of coal combustion products ("CCPs") from its coal-fired plants, including specifically Meramec, Rush Island and Labadie, it first considered the possibility of constructing one, large regional UWL to serve all three plants. However, as that effort progressed, Ameren Missouri also continued to look for other, more superior options based upon considerations of cost, operations, and safety. After further study, it became apparent that there was land available adjacent to the existing Labadie plant site. If this land could be purchased and if further study determined that it was appropriate for construction of a UWL, it could satisfy these considerations of cost, operations, and safety. In particular to cost considerations, Ameren Missouri relied upon the study of 22 alternate sites performed to evaluate the potential cost of transporting CCPs off-site as opposed to the cost of constructing and operating a UWL at the facility itself. We were able to purchase the land at a reasonable cost and, as I and other Ameren Missouri witnesses have addressed in detail in our earlier testimonies, the site indeed is appropriate, as evidenced by the Preliminary and Detailed Site Investigations submitted to and approved by MDNR.

Q. But isn't it possible that there could have been other appropriate sites in the vicinity of Labadie?

A. Anything is possible, but the proposed site has significant advantages that no other site can match. Keep in mind that we would have had to incur essentially all of the same permitting and engineering costs to develop a UWL elsewhere. We would have had to go through the same permitting process and same CCN process. We would have had to construct – at a minimum --essentially the same facility at, again at a minimum, a similar cost. The problem with other sites, however, is that there would have been significant operational, cost and safety implications not present at the Labadie site. As discussed in my surrebuttal testimony and to

some extent above, we would have had to incur significant transportation costs to truck the CCPs to the offsite facility. We would have had to incur tens of millions of dollars, or more, in additional loading and unloading facilities – and operations and maintenance costs to operate them – in order to load and unload the trucks. And we would have had to send 160 to 200 trucks per working day from the Labadie Energy Center to this offsite UWL. The question we asked ourselves was then "Why?" Why would we very significantly raise costs for customers and create the significant hazards posed by such heavy truck traffic when we had a suitable and much more cost-effective site literally right next door?

In addition, finding an area suited for construction of a new UWL is a much more daunting task than Mr. Norris suggests. When looking for such an area, there is a substantial amount of pre-screening criteria necessary to review for each potential site. Mr. Norris fails to point out that evaluation of alternative sites must include potential zoning changes, proximity to residential areas, and land availability, in addition to all of the other factors (geology, seismicity, etc.) discussed above. The complexity of locating potential sites is made even more obvious in Mr. Norris's failure to identify any specific alternative site, let alone one that meets all of these requirements.

Q. Finally, Mr. Norris notes that he "qualitatively" examined the possibility of using an alternative site which it appears he contends should have been chosen farther west of the Labadie facility. He suggests that finding such a site would not be difficult. Do you agree?

A. No, I do not agree. First, he completely ignores the significant disadvantages of an offsite facility, which I summarized in my answer to the prior question. In fact, based upon the maps he included as his Exhibits 4, 5 and 6, his suggestion appears to be that we select a site a considerable distance from the plant to the West. The farther away we go, the higher the

transportation costs and the greater the hazards from such a high number of trucks traversing the roads each day. Second, his contention is based upon the underlying false premise of his entire testimony; that is, that the proposed site is unsuitable, despite overwhelming evidence to the contrary (a determination already refuted by MDNR's approval of the Detailed Site Investigation), that there currently exist groundwater contamination concerns, and that there will be groundwater contamination concerns. We've demonstrated, through evidence and not speculation, that these premises are false. Could one literally build the UWL elsewhere? Anything is possible. Should it be built elsewhere? The evidence establishes that the answer to that question is "no." We shouldn't burden customers with significantly higher costs, create greater hazards, and create greater operational challenges when we have a suitable site right next to the plant.

Q. Aside from cost considerations, which you've testified overwhelmingly favor constructing the proposed UWL onsite, could you avoid the safety issues associated with such a large number of trucks by using rail transportation?

A. This, too, falls in the "anything is possible" category, but there are several problems with this idea. Reading Mr. Norris's testimony, one can see that he focuses on rail lines leading west from the plant, with the idea apparently being that we could just use the rail cars that brought the coal to the plant to carry the ash to some unspecified, hypothetical site to the west. I've already explained in my surrebuttal testimony why this is not possible. Similarly, such a solution apparently assumes that the infrastructure is in place to load the ash and unload it. Again, I have explained why that is not true either, and have explained the very high costs such an option would pose. Consider the fact that the entire UWL, after all four phases are built, is estimated to cost approximately $85 million, which I am confident is less than the cost of rail infrastructure that would have to be put into place. I cannot envision a scenario where it would

make sense to make an upfront investment in rail infrastructure that exceeds the investment needed for the facility that the rail infrastructure is designed to support.

Q. Why wouldn't the Company be indifferent to building such infrastructure given that the Company could earn a return on that investment for the next approximately 25 years?

A. While it is true that if we were forced to make that investment we could earn a return on it, the Company doesn't view its role as a regulated public utility to be to propose projects that have a significantly higher cost to customers simply because the Company could increase its earnings by building more expensive projects. It makes no more sense to substantially increase customers' rates by pursuing a rail option than it does to substantially increase customers' rates by trucking ash away from the plant for the next 25 years when we have an appropriate, cost-effective solution onsite.

Q. Do you have any other comments on Mr. Norris's Exhibits 4, 5 and 6?

A. Exhibits 4, 5, and 6 show diagrams of the state of Missouri with certain features overlaid on them. These features are seismic hazard areas, railroads, and geological concerns (sinkholes, etc.). The Labadie Power Plant is shown on the maps, as well as a site shown relatively close to Kansas City, MO, at 165 miles from the plant. Mr. Norris seems to imply that the area shown on these diagrams near Kansas City may be a better choice for the UWL, whether or not they are in Ameren Missouri's service territory. While there is no specific site described, it can be easily concluded that such a site, even if it would meet all other siting criteria, would be uneconomical. Assuming loading/unloading infrastructure is already in place, it is generally true that the variable cost of rail transportation is less than truck transportation. However, that infrastructure is not in place as I've discussed above. Even if one did not go 165 miles to the west to find a site, according to Mr. Norris's diagrams, one would have to get a substantial

distance from Labadie to avoid many of the "problems" he claims exist at the proposed UWL site. Either way, we are talking about a far more costly option than the one we have proposed. Because Mr. Norris does not identify any specific potential site that meets all the requirements and does not provide any related calculation as to the cost of an alternate site, his claim that his firm "looked at places" means nothing in terms of a true comparison and evaluation of sites alternate to Labadie.

Q. Does this conclude your sur-surrebuttal testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Permission and Approval and a Certificate of Public Convenience and Necessity Authorizing it to Construct, Install, Own, Operate, Maintain, and Otherwise Control and Manage A Utility Waste Landfill and Related Facilities at its Labadie Energy Center.	)	File No. EA-2012-0281

AFFIDAVIT OF CRAIG J. GIESMANN

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

Craig J. Giesmann, being first duly sworn on his oath, states:

1. My name is Craig J. Giesmann. I am employed by Union Electric Company Power Operation Services, 3700 South Lindbergh, Sunset Hills, Missouri, as Managing Supervisor of Hydro Engineering.

2. Attached hereto and made a part hereof for all purposes is my Sur-Surrebuttal Testimony on behalf of Union Electric Company d/b/a Ameren Missouri consisting of 19 pages, all of which have 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.

Craig J. Giesmann

Subscribed and sworn to before me this 11th day of October, 2013.

Susan Westermeyer
Notary Public

My commission expires: 4/19/17