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Witness:	**Patrick A. Seamands**
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LACLEDE GAS COMPANY

GC-2006-0390

REBUTTAL TESTIMONY

OF

PATRICK A. SEAMANDS

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REBUTTAL TESTIMONY OF PATRICK A. SEAMANDS

Q. What is your name and address?

A. My name is Patrick A. Seamands, and my business address is 3950 Forest Park Avenue, St. Louis, Missouri 63108.

Q. By whom are you employed and in what capacity?

A. I am employed by Laclede Gas Company ("Laclede" or "Company") as Chief Engineer.

Q. How long have you been at Laclede?

A. I joined Laclede in 1999 as Chief Engineer.

Q. Please describe your career and educational background.

A. Prior to joining Laclede, I was Vice-President of Engineering and Chief Engineer for Southern Union Company, the parent company of Missouri Gas Energy. I joined Southern Union in 1996, after serving as a Senior Process Engineer for Roddey Engineering Services from 1993-96. Before starting with Roddey, I worked for Arkla Pipeline Group (now known as CenterPoint) from 1986 to 1993 as its Director of Operations and Planning. I have earned four degrees from Louisiana Tech. I received a Bachelor's degree in Chemical Engineering in 1971, a master's degree in that same field in 1978. I earned an MBA in 1980, and was awarded a Doctorate in Engineering in 1993.

PURPOSE OF TESTIMONY

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to respond to the unsupported assertions made on behalf of USW Local 11-6 (the "Union") regarding the safety of Laclede's Automated Meter Reading ("AMR") project.

BACKGROUND ON AMR

Q. What is the AMR project?

A. In March 2005, Laclede signed a long-term contract with CellNet Technology, Inc. ("CellNet") to automate the reading of all of its meters in both its Laclede and Missouri Natural ("MoNat") service territories, a total of more than 650,000 meters. Deployment of AMR modules began in July 2005. As of November 6, 2006, about 600,000 new AMR modules have been installed. Laclede expects this project to be substantially completed by early 2007, at which time the vast majority of Laclede's meter reading function will be automated.

Q. Why has Laclede chosen to implement AMR?

A. AMR will improve customer service and reduce the cost of service. Customer service will be improved by making meter reading more convenient for customers, while at the same time greatly reducing estimated bills and reconciliations. In addition, Laclede has arranged with CellNet, a company with broad experience in utility meter reading, to provide Laclede these meter readings at rates that will cap the cost of this function during the 15-year term of the contract. Finally, when Laclede customers transfer service at a location where the flow of gas has not been interrupted, they will no longer have to wait for, or pay a service initiation charge for, a Laclede representative to come out and read the meter.

Q. How will AMR reduce estimated bills and reconciliations?

A. Laclede has approximately 250,000 inside meters in its system. Reading those meters on a regular monthly basis has become increasingly difficult for customers to accommodate and difficult for Laclede to achieve. When Laclede fails to get a meter reading, it must estimate the customer's bill, subject to a later reconciliation when Laclede obtains an actual reading. If a billing estimate has been inaccurate, for example, if it was too low, the reconciliation will mean that the customer must make up for the undercharge in addition to paying the current bill. AMR will greatly improve the likelihood that each month's billing is accurate, and virtually eliminate the instances where the inability to gain access to a customer's home to read the meter over an extended period of time results in a significant adjustment.

Q. The advantages that AMR will bring to customers with inside meters are obvious. What benefits does AMR provide to customers with outdoor meters?

A. There are several benefits. First, even customers with outdoor meters are expected to experience the benefits of more consistent actual meter readings. Although meter readers have been successful in obtaining regular reads on most outdoor meters, some have proved difficult either because of fences, bushes, dogs or other obstructions. Also, outdoor meters are sometimes inaccessible in inclement weather such as when there is ice or mud. Finally, meter reader vacations have historically resulted in most bills being estimated each year in August. While AMR cannot be expected to provide a reading 100% of the time, we do expect to receive reliable monthly meter readings close to 100% of the

time, in part because AMR will not be subject to these impediments to reading outdoor meters.

Q. Please proceed.

A. Second, when questions about billing accuracy do arise, Laclede can retrieve AMR information on a *daily* basis, as opposed to one reading per month. Finally, the cost savings that will result from automated meter reading and the virtual elimination of billing adjustments will be passed through to customers.

CELLNET AND SAFETY

Q. Please provide background on CellNet, the party you have contracted with to implement AMR within your service area.

A. Laclede spent a great deal of time researching the operational requirements of a universal AMR system, and negotiating AMR terms and performance measures to obtain the best deal for the Company and its customers. CellNet has a wealth of experience in this field. Over the past decade, they have installed, and are obtaining daily meter readings on, roughly 13 million AMR devices on utility meters, including about 3.5 million on gas meters. Further, CellNet is already providing AMR service in Missouri, and in fact, in the St. Louis area, as they are the AMR provider for both AmerenUE's electric and gas utilities.

Q. Of all of these gas meters with CellNet modules, are you aware of any explosions or fires that caused personal injury or property damage, that were attributable to an AMR-equipped meter?

A. During my career in this industry, I don't know of even one incident that has occurred as a result of the installation of an AMR device on a meter.

Q. Of the roughly 600,000 AMR installations in Laclede service territory, how many explosions or fires have occurred that caused personal injury or property damage, attributable to an AMR-equipped meter?

A. None.

ADDRESSING UNION MEMBER CLAIMS

Q. Two Laclede employee Union members stated that any leak is dangerous. Is this true?

A. No. While we always advocate exercising caution around natural gas, certain conditions must be met before it presents a hazard. Meter manufacturers are very cognizant of these conditions, and they construct meters such that any leaks that may occur tend to be tiny, slow leaks that squeeze out of a worn gasket or seal. They are so small that they dissipate in the atmosphere before they can ever present a hazard.

Q. During your career in this industry, are you aware of any incidents in which there was an explosion or a fire that caused personal injury or property damage, attributable to a leak from a meter?

A. No.

Q. Can an AMR installation cause a leak, as indicated by a number of Union members who are Laclede employees?

A. No. As correctly stated by Mr. Meuting, the former AMR installer, installation of the AMR module does not access the inside of the meter, where gas is flowing. Instead, the AMR module is designed to be screwed into a frame on the outside of the meter and connects to a drive arm outside of the meter. The drive arm is part

of an axle that is inside the meter, and extends through a gasket or rubber seal, that is also inside the meter, to the outside of the meter where, as I stated, it connects to the AMR module. As the drive axle turns the corresponding part on the module, the module records usage, which is transmitted to CellNet's network and delivered to Laclede. Connecting this module to the end of the drive axle on the outside of the meter cannot cause gas to leak out from inside the meter.

Q. Can an AMR device leak at the faceplate, as indicated by a number of Union members?

A. The AMR modules do not leak. Neither AMR modules nor the standard indexes that preceded them, are conduits for gas to pass through. Further, they are not designed to be airtight to completely trap gas, but have vented index covers. First, the AMR module and its faceplate, or index cover, sit on the ***outside*** of the meter, at a spot known as the center box, while the gas is on the ***inside*** of the meter. A meter is made up of a number of parts that are each attached together around a gasket to form tight seals and keep the gas inside. So if there is a leak on the meter, it usually results from wear on one of these gaskets or seals that *is* designed to keep the gas in the meter. As stated above, one of these seals inside the meter is attached to the drive axle, which extends outside the meter into the center box. If this seal becomes worn, a very small amount of gas may pass out of the meter along the drive axle and into the center box. Second, meter index covers, including AMR index covers, are vented on the bottom, so they are not meant to be completely airtight. The index covers do have a gasket where they sit against the center box, which provides the index with protection from outside

elements, such as rain and snow. At the same time, if there is a leak at the seal behind the center box, the small amount of gas that escapes through that seal and into the center box can build up in the index cover before it may eventually seep out of the index cover vents, where it would dissipate in the atmosphere. Again, this is a leak on the seal behind the center box, and not a leak on the index cover. Regardless, as stated above, these situations are non-hazardous.

Q. If an AMR installation cannot cause a leak, then why are there so many leaks reported after installations take place?

A. The Union's implication that large numbers of meters leak after AMR modules are installed is simply not true. The fact is that minor leaks from behind the center box occur on occasion as a result of normal wear and tear on the meters, and have always existed. As I have noted, the tiny amount of gas that can escape as a result of such a leak is not hazardous.

Q. What support do you have for the conclusion that there are not excessive leaks on AMR-equipped meters?

A. In 2005, we became aware that the Union was likely to contest the AMR installation in some manner. During October 2005, we began to keep track of the number of meters with AMR modules that were brought into Laclede's meter shop. We found that for the ten month period November 2005 through August 2006, there were a total of **_____** with AMR devices brought into the meter shop due to a reported leak, out of a weighted average of approximate 285,000 meters with AMR modules in existence during that period. This equates

to a leak rate of about **_____** for the meters on which an AMR module is installed.

Q. How do these figures equate to the experience of leaks on meters that do not have AMR devices?

A. In addition to the AMR meters, we also know how many meters without AMR devices were brought into the meter shop for leaks during the same time period. For this period, November 2005 – August 2006, there were a total of **___** meters brought into the meter shop also due to a reported leak. During this period the weighted average of non-AMR meters was roughly 365,000. This equates to a leak rate of about **_____** for the meters which did not have an AMR module. I can conclude that the number of leaks reported on meters without an AMR module was actually proportionally greater than the number of leaks reported on meters with an AMR module.

Q. What does that indicate?

A. That indicates that the installation of AMR modules certainly did not increase the frequency of meter leaks. All of this information is summarized in Schedule 1, which is attached to this testimony.

Q. When the AMR module is installed, if the gasket is not set properly on the center box frame, is it more likely that there will be a leak?

A. No. Simply mounting the AMR module on the center box does not and cannot cause a leak, so an improper setting would not affect the likelihood of a leak. If there is a tiny leak at the seal behind the center box, then a small amount of gas may seep into the area surrounded by the index cover. Mounting the AMR

module gasket improperly will not affect such a leak, which as stated above, is not hazardous. As has always been Laclede's practice, the meter would nevertheless be replaced upon discovery of such a leak.

Q. Union witnesses have alleged that AMR installers have drilled through meters causing gas leaks, and Laclede has attempted to cover up this damage? Is that true?

A. To my knowledge, one meter was damaged in that manner, and Laclede made no attempt to hide it.

Q. Please explain.

A. In installing an AMR module, the installer must first remove the original index by unscrewing it from the index frame. On occasion, these screws will not turn easily, and the screw threads break or become stripped. With Laclede's concurrence, CellNet contractors formed a team specializing in removal of these stripped screws by drilling into them to "catch" the screw, and then backing it out. This practice has been used by at least one other utility. In January 2006, there was one occurrence where a meter was damaged through this process. There was no other damage to persons or property from this event. Upon further review, we decided to discontinue this practice, and it has not been used since. Regarding the damage report, the document referred to by the Union witness is a third-party damage report, which is used for the purpose of billing a third-party for the damage caused. Since CellNet is performing these installations on Laclede's behalf, as contractors of Laclede, there is no reason to fill out a "third-party"

damage report. For the same reasons, we do not fill out a third-party damage report when our own employees damage a meter in the course of their duties.

Q. Two Union members in Laclede's Construction and Maintenance Department claim that an AMR installer failed to notice a badly rotting pipe when installing an AMR module at 203 Woodland. How do you respond?

A. First, we do not have an address of 203 Woodland in our system, so I have not yet been able to identify it. Regardless, it is not the job of the AMR installer to inspect Laclede facilities. Instead, this is the purview of Laclede through its leak and corrosion inspection programs. These programs require Laclede to perform leak surveys and corrosion inspections at least once every three years. These programs are required by Commission rules, which are already more strict than their federal counterparts. As such, these programs are unaffected by the AMR installation project. Rather than criticize a worker trained to install AMR modules for not identifying a corroded pipe, I am much more interested in determining how the pipe got to be in that condition, and ensuring that Union workers who are trained to perform corrosion inspections are properly doing their jobs.

Q. Union President Pat White opined that Laclede's policy of replacing leaking meters deprives overbilled customers of the evidence of overbilling. Do you agree?

A. No. It is an utterly ridiculous statement. First, there is no link between a meter leak and an overbilled customer. Second, although meter leaks are not hazardous, any meter that is found to be leaking is, and has always been, replaced. A meter

read is taken and recorded at the time of replacement. If the meter has an AMR device, those readings are also available, and in fact, with AMR, more information will be available to Laclede than ever before. In addition, removed meters are tested in the meter shop and the results recorded. So there is plenty of evidence to ensure that customers are correctly billed.

Q. A few of the Union members also claimed that AMR dials move erratically, such as jumping or stalling, and that they sometimes click. Is this true, and does it affect safety?

A. First, there is no issue of safety associated with the movement of dials. Second, a clicking sound can occur if the AMR module is not properly aligned with the end of the drive axle. In these situations, our policy is to replace the module, even though there may be nothing wrong with it.

Q. Why is the module being replaced if the problem could be rectified without replacing the module?

A. In order to minimize customer inconvenience, we have chosen to not try to repair or re-install the same module. If we did try to repair it, and it turns out that the repair failed to remedy the issue, we must visit the home again. Rather than repeatedly inconvenience customers, we have chosen to simply replace modules in these cases.

Q. How often are you replacing AMR modules that aren't performing properly?

A. Through October 2006, the module replacement rate is just under 2%, including such replacements made simply as a matter of customer convenience. We

understand that this is in line with the 1-3% error rate experienced by other Missouri utilities in previous AMR installations.

Q. Please address the Union's allegations, as represented in the testimony of Dean Carlton, that dials are moving erratically, affecting meter reading, billing and leak detection.

A. Mr. Carlton knows, or should know, that his allegations are not true. First, Mr. Carlton is wrong when he attempts to portray this issue as an AMR issue. In fact, it has been several years since meter manufacturers made a design change to meter indexes that reduced the friction on the drive axle and allowed the test dial to turn more freely. Long before this AMR project even began, we reviewed this matter and found that it has absolutely no effect on the accuracy of either measuring or billing. Second, Laclede also addressed the leak testing issue long before Mr. Carlton filed his testimony, so again he has reason to know his testimony is not true. Specifically, as a precautionary measure, service technicians are told to watch the half-foot and two-foot meter test hands until both are on the upswing in order to determine if gas is passing through a meter. This approach may require the technician to wait several extra seconds, but it is worthwhile to obtain an accurate result.

ADDRESSING THE AMENDED COMPLAINT

Q. Attached to the Union's First Amended Complaint is an exhibit that included numerous addresses purporting to show various problems relating to AMR installations. Has Laclede reviewed these addresses?

A. Yes.

Q. What did Laclede find?

A. Laclede's findings are attached hereto in a document marked Schedule 2. There were more than 300 locations included in the Union's complaint exhibit. Laclede found and included in Schedule 2 about 220 addresses where entries were made in Laclede records for the location indicating a problem due to a leak-related issue, or an equipment issue, such as damage to a CellNet AMR module or faulty AMR installation. Of the 220 meters at these locations, it appears that 18 of them were not even equipped with AMR modules at the time a leak or other matter was reported. Another 60 meters were not changed but left in place, for various reasons. These reasons included instances such as a minor leak that was repairable on site, a leak or problem on a facility other than the meter, or no leak at all. Of the 160 meters that were removed by Union members and brought to Laclede's meter shop, roughly 22 of these meters were found to have no leak.

Q. Who made these findings?

A. These meters, along with other meters not listed in the Union's complaint exhibit, were examined and tested by other members of the Union working in Laclede's meter shop. These employees input the results of these tests onto a form, which is summarized on the document attached hereto as Schedule 1. In effect, Schedule 1 is a more complete version of the information submitted by Union members in support of the Union's case.

Q. Did the Union's information also show that meters were leaking as a result of improper AMR installations?

A. No. As stated above, meters do not, and cannot, leak as a result of an AMR installation. In addition, we looked at the dates when leaks were reported and found them to be relatively remote and unrelated to when the AMR installations were posted. For example, the 220 addresses included in Schedule 2 included 78 instances of a meter leak, either from a seal behind the center box, from somewhere other than behind the center box, or from multiple locations on the meter. Of these 78 occurrences, 63, or more than 80%, were reported more than 30 days after the installation was posted in Laclede's records.

Q. What does this mean?

A. I conclude that, just as before the existence of AMR, there is a small percentage of non-hazardous leaks that develop on meters, and these leaks occur and are ultimately discovered without regard to whether a meter is equipped with an AMR module.

Q. Are you surprised at the number of meters equipped with AMR devices that are leaking, based on either the Union's complaint exhibit, or Laclede's own Schedule 1?

A. As stated above, the figures on Schedule 1 demonstrate that the frequency of leaks on AMR-equipped meters is actually less than the frequency of leaks on meters not equipped with AMR devices.

Q. Do you have any comments on specific examples mentioned in the Union's amended complaint?

A. Yes, I do. In paragraph 10 of the amended complaint, the service meter at 3918 Walsh is referred to at bates no. 1 as having a leak on the face plate, whereas the

meter shop found no leak at all. The next location in paragraph 10 is a list of four meters in the basement of an apartment building at 12 Honey Locust in St. Charles. AMR installations were performed there in August 2005. A Union member performed an inspection of Laclede's piping and equipment there in November 2005, and found no leaks or other problems. The leaks were reported in January 2006, *after* that inspection by Union personnel. It defies logic for the Union to suggest that AMR installations caused leaks when an inspection performed three months after the installations failed to detect any leaks. Nor can the extensive corroded piping described by Ms. Wilson on bates 3-4 attached to the amended complaint be attributed to the installation of an AMR module on the meter.

Q. Do you have any other examples in the amended complaint you would like to address?

A. Yes. I am appalled by the Unions' approach to the matter described in paragraph 11 of the amended complaint at 3228 Taft. The meter serving the second floor of 3228 Taft was in place for 18 years without incident when it was replaced by a Union gas worker in January 2005. The installation was apparently substandard in that it left the meter in contact with the stone wall, where it was exposed to corrosion. The corrosion appears to have been so extensive as to have undermined the integrity of the meter in less than 11 months. Rather than express regret for the poor quality of the work performed, the Union has the audacity to not only parade the misinformed customer around in its anti-AMR publications, but to also lay the blame for this performance at the feet of an innocent AMR

installer, who just happened to be doing his job at around the same time the results of the Union's poor work came to fruition.

ADDRESSING CUSTOMER CLAIMS

Q. The Union has filed testimony on behalf of several Laclede customers, who have stated that they believe that Laclede Union gasworkers are better trained than AMR installers, and they believe that an AMR installation by the gasworkers would be safer. Do you agree?

A. No. I do not know the background or training of these customers, or what basis they have to make these statements. The AMR installers are appropriately trained to perform their jobs. Deployment of AMR in Laclede's service territory is being conducted in the same manner as that which has been successfully used by CellNet in other deployments in Missouri and other areas of the country. There is no added safety benefit from having gasworkers do the installations. This has been proven in Laclede service territory by the fact that 600,000 installations have been performed without one incident.

Q. Should customers be able to demand that Laclede use a Union worker?

A. Laclede believes in accommodating its customers where possible, and the Company understands the loyalty that Union supporters wish to show Laclede's Union workers. However, Laclede has already contracted with CellNet to perform AMR installations. Laclede has worked with CellNet to plan and produce extensive training materials for the installers, which is attached to the deposition of Ms. Deb Redepenning, and incorporated herein. Laclede cannot efficiently and cost-effectively perform its business serving over 600,000

customers, and at the same time permit individual customers to dictate which workers will perform which tasks. Further, Laclede's existing work force could not have adequately performed these installations and their other duties and responsibilities, and it made no sense to hire additional employees for the relatively short duration of the deployment project.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

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