

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of Union Electric Company d/b/a )  
AmerenUE's Tariffs to Increase its Annual ) Case No. ER-2008-0318  
Revenues for Electric Service )

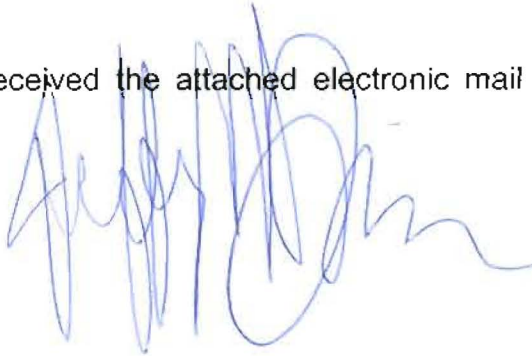
In the Matter of Public Counsel's Petition to )  
Open a Case to Investigate AmerenUE's Plan ) Case No. EO-2009-0126  
to Construct and Finance a Second Unit at the )  
Callaway Nuclear Plant Site )

In Re: Union Electric Company's 2008 Utility )  
Resource Filing pursuant to 4 CSR 240 - ) Case No. EO-2007-0409  
Chapter 22. )

**NOTICE REGARDING EXTERNAL COMMUNICATIONS**

Issue Date: January 23, 2009

On January 22, 2009, I received the attached electronic mail messages from  
Lawrence S. Criscione.



Dated at Jefferson City, Missouri,  
on this 23<sup>rd</sup> day of January, 2009.  
Davis, Commissioner

**Gregory, Sheryl**

**From:** Lawrence Criscione [lscriscione@hotmail.com]  
**Sent:** Thursday, January 22, 2009 10:39 PM  
**To:** Jeanette Oxford; Will Kraus  
**Cc:** Davis, Jeff; Jeanette Oxford; Casey Exendine; Gregory, Sheryl; Taylor, Michael; William Jones; Marty Gelfand; Houlihan Bill; Llona Weiss; Henderson, Wess  
**Subject:** Ameren's Stewardship of Its Assets and Missouri's Environment  
**Attachments:** acid.pdf; email to KMB Acid Leaks - CAR 200609296 and 200609328.PDF

Dear Representatives Oxford and Kraus,

The email trail below demonstrates the difficulty operators and supervisor at Callaway Plant have in getting Ameren management to spend money on work that does not produce a financial return.

It is common practice for utilities and industrial companies to "retire-in-place" old equipment. There is usually nothing wrong with this basic practice; there is no sense spending money and disrupting operations to remove equipment just because it is no longer needed. However, when the system being retired contains hazardous chemicals, then it cannot simply be "retired-in-place". The hazards must be removed. Had Ameren simply flushed the acid out of the old tanks and piping prior to decommissioning the system (i.e. prior to disconnecting the electrical power to the pumps), then the system could have been retired-in-place without any problems.

The acid system was originally shut down in 2002. By 2003, it was obvious to the operators and chemistry technicians that the system had not been properly decommissioned; acid had been left in the piping and tanks. The answer to this problem was simple - flush the acid out of the system. Since this solution required spending money but did not provide a financial pay back, upper management at Ameren refused to provide the resources to do the work.

The email trail below started when an Equipment Operator (Dave Miller) complained to the Work Control Center Shift Manager (JR Weekley) that the deteriorating conditions at the Circ & Service building needed to be corrected - they had been allowed to exist for too long. As can be seen from the email trail, the operators, engineers, first line supervisors and managers all understood what the right answer was, yet no one could get the funding to properly flush the acid from the system.

I had a vague knowledge of this problem from hearing complaints from equipment operators and a few operating supervisors when, on November 7, 2006 I was the Shift Technical Advisor in the Control Room when an unisolable acid leak was discovered from the old Acid Day Tank. On November 8, 2006 I attended the Screening Committee meeting to ensure the issue was properly addressed. As was typical, the Screening Committee failed to see the significance of the issue. Despite documentation that sulfuric acid was leaking from the bottom of a retired tank, the consensus was to close the Callaway Action Request documenting the issue. I argued against this. I was confrontational - in a professional manner - with those who disagreed with me. I insisted that the Callaway Action Request remain open until the acid in the tank had been properly neutralized. After the meeting several members of the Screening Committee thanked me for standing up for the right thing to do. Because of my stance, however, I received a rating of "Needs Improvement" on my 2006 Performance Appraisal in the area of "Customer Focus"; my performance at the November 8, 2006 CAR Screening Committee Meeting was specifically used as justification for this rating.

Following the CAR Screening Committee meeting on November 8, 2006, I wrote CAR 200609296 which documented the five year history of failures with regard to the Corrective Action Program and the acid problems at the Circ and Service building. The conclusion of my analysis was that the

reason the Corrective Action Program had failed to correct the problem of recurring acid leaks was the practice of closing Callaway Action Requests prior to the corrective action being implemented. Ironically, at the November 9, 2006 CAR Screening Committee meeting the Operations Representative (George Belchik) wanted to close CAR 200609296 to Job C713235 - an unplanned job to neutralize the acid in the old Acid Day tank. Not only did the Screening Committee miss the big picture (CAR 200609296 was not really about acid problems - it was about the Corrective Action Program and it merely used the acid problems as an example), but they were specifically attempting to do to CAR 200609296 what had caused all their problems so far - closing a CAR to a job which was not yet complete.

In an email to the Assistant Operations Manager (Bob Barton) I challenged the organization to get the Acid Day tank flushed by the end of the year and I volunteered to lead the endeavor. Instead of assigning me the project, it was given to my immediate supervisor (Jim Milligan).

After ten days, acid was still leaking from the tank and the management of Callaway Plant still did not "get it". An equipment operator (Jeff Wallendorf), who was assigned to the team to address the acid problem, sent an email to the Operations Department informing us that management required specific justification for why neutralizing the acid in the old Acid Day tank needed to occur - TEN DAYS OF ACID LEAKING INTO THE ENVIRONMENT WAS NOT JUSTIFICATION ENOUGH. Upon receiving Jeff's email, I forwarded it to the Plant Manager and the three nuclear vice presidents with my own message critiquing their lack of leadership on this issue. This email was used by Operations to justify a rating of "Needs Improvement" on my 2006 Performance Appraisal in the area of "Commitment to People".

I believe there are several lessons to be learned from the acid problems at Callaway Plant:

1. The craft (operators, chemistry technicians, etc.) at Callaway Plant recognize the proper standards which management professes to have, however the craft is ignored when they point out to management that management is not following their own standards.
2. Engineers, supervisors and managers recognize the proper standards but yield to their superiors when told there is no financial payback for doing the right thing.
3. Financial concerns take precedence over worker safety and environmental stewardship.
4. The Corrective Action Program focuses more on following a bureaucratic process than on improving plant performance.
5. Individuals who confront their superiors in an attempt to hold them to their professed standards are retaliated against by receiving poor Performance Appraisal marks.

These issues were brought to the attention of the US NRC and were investigated as part of Allegation RIV-2007-A-0130 and were "not substantiated". The US NRC refused to look at CAR 200609296 and 200609328 (concerning the acid systems) during their investigation because the sulfuric acid systems are not "safety-related" systems.

CAR 200609296 and 200609328 may be difficult for an outsider to understand because they are written in the jargon of Callaway Plant. However, unlike the October 21, 2003 incident, these issues have nothing to do with reactor dynamics - you do not need a nuclear engineering background to read and understand CAR 200609296 or 200609328. If possible, I would like the Public Service Commission (or whatever state agency is appropriate) to look into the details of CAR 200609296 and CAR 200609328 to determine if any of the five items above are substantiated AND whether or not there is anything the State of Missouri can do to ensure Ameren improves its stewardship of the assets it controls.

Very respectfully,

Larry

Lawrence S. Criscione  
(573) 230-3959

**From:** Keyes, James L.  
**Sent:** Tuesday, November 14, 2006 11:10 AM  
**To:** Criscione, Larry S.  
**Subject:** FW: CWCCS acid system  
Larry,

These are the only pictures I have. And by the way great CARS on the acid leaks.  
Jim

**From:** Keyes, James L.  
**Sent:** Saturday, October 07, 2006 2:06  
**To:** Neterer, David W.  
**Cc:** Thibault, Ludwig E.; Fugate, Thomas G.; Heflin, Adam C.  
**Subject:** FW: CWCCS acid system  
Dave,

Please view the attachment.  
WPA 44704 is currently placed at CWCCS and has been hanging since 12/9/04. It replaced WPA from our old CPROD System so this system has been tagged for at least 4 years.  
How can we get the resources to get this safety concern corrected?  
Jim

-----Original Message-----

**From:** Bradley, Evelyn H.  
**Sent:** Sunday, April 02, 2006 13:35  
**To:** Holtmeyer, Gerald W.; Keyes, James L.  
**Subject:** FW: CWCCS acid system

-----Original Message-----

**From:** Bianco, Frederick J.  
**Sent:** Sunday, April 02, 2006 12:39 PM  
**To:** Bradley, Evelyn H.; Small, James F.  
**Cc:** Baldi, Eugene J.; Barton, Robert G.; Hermann, Tim D.  
**Subject:** RE: CWCCS acid system

Tim, Jim, and Bob,  
Crew 1 EO's have been the main ones with the concern. The system is in such a bad state of corrosion that it will probably need to be repaired before we could ever do any flushing. Definite hazards are all around in the two enclosures. (see attached pictures).  
What we need is a plan to get this whole mess cleaned up  
We have had WPA hanging since the system was retired. So we need to enter these areas for WPA audits.  
In some areas the piping is corroded thru wall  
Fred

-----Original Message-----

**From:** Bradley, Evelyn H.  
**Sent:** Sunday, April 02, 2006 7:46 AM  
**To:** Schultz, Gary L.; Bianco, Frederick J.  
**Subject:** FW: CWCCS acid system  
Please check with the Eos on this. Thanks Hope

-----Original Message-----

**From:** Barton, Robert G.  
**Sent:** Sunday, March 26, 2006 10:45 AM  
**To:** DL CAL Ops Shift Manager  
**Subject:** FW: CWCCS acid system  
Please talk to your EO's and provide Jim with some feedback.  
Thanks,

Bob

-----Original Message-----

**From:** Small, James F.

**Sent:** Sunday, March 26, 2006 9:50 AM

**To:** Barton, Robert G.

**Subject:** RE: CWCCS acid system

Bob, we will need to poll your EO's on the safety significance I have gotten only a couple of comments (negative). Are the EO's routinely exposed to the hazard, or do they just not like have it out there in the current condition? It is very important we identify the specific hazard and then get the appropriate response.

James F. Small

Superintendent, Chemistry and Radwaste

Callaway Nuclear Plant

573-676-8267

573-676-4484 fax

jfsmall@cal.ameren.com

-----Original Message-----

**From:** Barton, Robert G.

**Sent:** Wednesday, March 22, 2006 8:39 AM

**To:** Small, James F.

**Subject:** RE: CWCCS acid system

Jim,

Please continue to push, we can talk if you like, but it seems obvious. Based on your level of concern, we can elevate this as a safety concern.

Bob

-----Original Message-----

**From:** Small, James F.

**Sent:** Tuesday, March 21, 2006 5:56 PM

**To:** Barton, Robert G.

**Cc:** Neterer, David W.

**Subject:** FW: CWCCS acid system

Bob, we need to discuss this I believe this is too long and is presenting a hazard to our operators

James F. Small

Superintendent, Chemistry and Radwaste

Callaway Nuclear Plant

573-676-8267

573-676-4484 fax

jfsmall@cal.ameren.com

-----Original Message-----

**From:** Hermann, Tim D.

**Sent:** Monday, March 20, 2006 2:30 PM

**To:** Small, James F.

**Cc:** Neterer, David W.; Fuhlage, Clark H.; Weekley, John R.

**Subject:** FW: CWCCS acid system

Jim,

Hope this answers your question.

Tim

-----Original Message-----

**From:** Dowling, John W.

**Sent:** Monday, March 20, 2006 12:48 PM

**To:** Hermann, Tim D.

**Subject:** RE: CWCCS acid system

Electrical design work is scheduled to complete 6-27-07. This is on the CY15 design schedule. Resources are pushing this date.

-----Original Message-----

**From:** Hermann, Tim D.  
**Sent:** Monday, March 20, 2006 12:45 PM  
**To:** Lutz, Mark A.  
**Cc:** Dowling, John W.  
**Subject:** RE: CWCCS acid system  
 Thanks for the update Mark

John,

Do you know when MP 98-1007 FCN 2 (or 3) is currently scheduled?

Tim

-----Original Message-----

**From:** Lutz, Mark A.  
**Sent:** Monday, March 20, 2006 12:34 PM  
**To:** Hermann, Tim D.  
**Subject:** RE: CWCCS acid system

It is one and the same, FCN 2 or 3 for MP 98-1007. The Electrical needs to be completed before we can retire (neutralize) the old system. I (and the system engineer) agree with Ops and Chemistry that this needs to be completed ASAP that is why I have been pushing for this for at least a year but the response is always the same; no electrical design resources can be spared for this

Mark

-----Original Message-----

**From:** Hermann, Tim D.  
**Sent:** Monday, March 20, 2006 12:25 PM  
**To:** Lutz, Mark A.  
**Subject:** FW: CWCCS acid system

Mark,

Do we have a mod or mod request for what Jim is asking about? I remember there being an FCN for the electrical retirement but this sounds more involved.

Thanks,

Tim

-----Original Message-----

**From:** Small, James F.  
**Sent:** Monday, March 20, 2006 10:33 AM  
**To:** Hermann, Tim D.; Fuhlage, Clark H.  
**Cc:** Weekley, John R.; Neterer, David W.  
**Subject:** FW: CWCCS acid system

Gentlemen, the retirement of the CWCCS acid addition equipment was to have occurred as part of the outside chemical addition modification. Operations is reporting there is serious degradation of the piping and would like to get this issue resolved. Can you point me to the individual that has the action to retire this system? I would like to get a target date I believe we need to resolve this issue prior to INPO.

James F. Small  
 Superintendent, Chemistry and Radwaste  
 Callaway Nuclear Plant  
 573-676-8267  
 573-676-4484 fax  
 jfsmall@cal.ameren.com

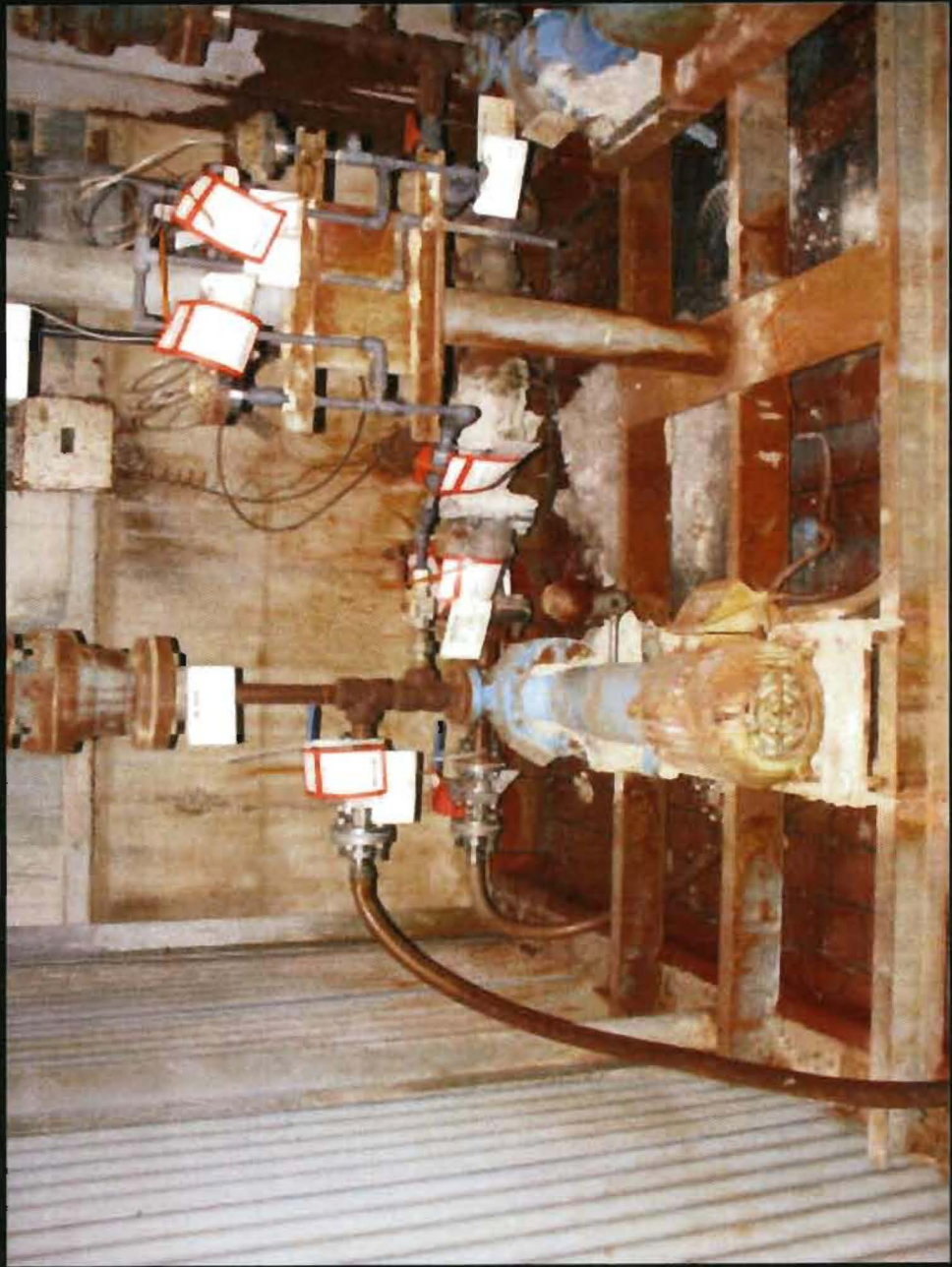
-----Original Message-----

**From:** Weekley, John R.  
**Sent:** Monday, March 06, 2006 3:40 PM  
**To:** Small, James F.

**Cc:** Miller, David D.

**Subject:** CWCCS acid system

Jim what is the plan to deal with the remains of the acid tank, sludge, day tank, and deteriorated piping at CWCCS and the Circ water Pump house?



















CAUTION

TANK CONTENTS

LEAKING

CONTACT. FIELD SUPERVISOR

68507

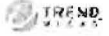


## Acid Leaks - CAR 200609296 and 200609328

From: **Lawrence Criscione** (lcriscione@hotmail.com)

Sent: Sat 10/06/07 12:59 AM

To: Lisa Banks (banks@kmblegal.com); Debra Katz (katz@kmblegal.com); Maura Dundon (dundon@kmblegal.com)

Attachments: CAR 200609296.pdf (90.8 KB), CAR 200609328.pdf (55.1 KB), Jobs associated with Acid Cleanup.pdf (680.9 KB), Group D Augmented Definition.pdf (15.2 KB), CAR 200609296 - attachment.pdf (11.3 KB), Re: Circ Serv acid day tank leak.mso (33.0 KB)  By late autumn

2006 I was no longer regularly covering the Main Control Room. On Wednesday, November 7 I believe I was the STA in the Control Room so that Gary Schultz (the STA qualified CRS on crew 3) could attend some type of training. On this day, a small acid leak developed from the bottom of the Retired-in-Place Acid Day Tank (TDD1101) at the Circ and Service Building. Mark Green (I believe he was the Field Supervisor that day but he may have been the CRS) documented the leak in CAR 200609278, *Acid leak discovered at Circ and Serv Acid Day Tank (TDD1101)*.

Earlier in the year, Pat Shannon had shown me some pictures of the Retired-in-Place acid piping at the Circ Water Chemical Control Skid (CWCCS) and in the adjacent Circ & Service building basement. These acid systems are used to maintain the water chemistry in the Cooling Tower (Circ & Service is the building adjacent to the Cooling Tower). When the acid leak occurred on November 7, I was reminded of my earlier conversation with Pat Shannon in which he informed me we had acid piping at Circ & Service which we had improperly retired and some of the pipes had literally corroded away into ionic salt complexes.

Nov. 7 was crew 3's last dayshift of the week. On Nov. 8 they were off work and would be returning at 1830 on Nov. 9 to start their night shifts. I attended the CAR Screening Committee meeting on November 8th to ensure CAR 200609278 was properly screened.

At the CAR Screening Committee meeting a recommendation was made to close CAR 200609278 at screening to CAR 200605860, which itself was currently closed. After push back from me, a decision was made to leave CARS 200609278 open as a Sig 3 (meaning an Apparent Cause Evaluation must be performed).

After the Screening Committee meeting I wrote CAR 200609296, *Closing CARS Prior to Completion of Work Causes Recurring Acid Leaks*, to document the five year history of recurring acid leaks from the retired in place piping. Due to the corroding underground pipes containing residual acid, at one time in 2004 the ground was so polluted with residual acid that acid of pH = 1 was leaking into the basement of the Circ and Service when it rained.

On November 8, I had a discussion with Jim Otten (an Operating Supervisor in the Work Control Center who was previously a supervise in Rad Waste) concerning the acid system at Circ & Service. He told me a similar acid tank had corroded away in Radwaste in 2004. After receiving this information I wrote CAR 200609328, *Learn from Internal OP - Do Not Allow RIP Acid System to Run to Fail*, to further my cause to get the Circ & Service system properly retired by documenting the unsavory history of a similar acid system which had also been improperly retired in place. The through wall leaks on the acid tank in Rad Waste which were discovered and documented in 2004. However, the leaks were not addressed until in 2005, after the residual acid had ate its way through the pipe and tank walls, it ate its way through a floor penetration inside the collection berm and then was dripping through a ceiling tile in the Radwaste Control Room. The dripping acid was being collected by the Radwaste operators in a bucket and it was creating a noxious odor.

CAR 200609296 and 200609328 were not well received by Operations Management. When I was told by George Belchik that CAR 200609296 would probably be closed at Screening to the job to flush the acid tank (which had been rescheduled 12 times and was still not planned) I informed Mr. Barton I would be attending the Leadership meeting to bring up the issue when the screening report was discussed. I received feedback from Mr. Barton that I should not attend this meeting. CAR 200609296 was screened as a sig 3 (Apparent Cause required) so I did not attend the Leadership meeting.

On November 17, 2006 after receiving an email from Jeff Wallendorf (an Equipment Operator upgraded to Working Foremen in the Work Control Center) requesting information from the rest of the Operations

Department in order to justify flushing the Circ and Service piping, I sent a sternly worded email to the Plant Manager and the Vice Presidents. Operations has portrayed this email as an example of me going around my chain of command. I disagree with this portrayal. Although I did not immediately discuss this issue with my "chain of command" prior to sending the email, over the preceding week I had discussed the issue with every level of my chain of command in Operations.

The saga of the acid leaks continues. Although the acid tanks at the CWCCS and Circ and Service were neutralize last winter, I am not certain of the condition of the rest of the system (such as underground piping which has corroded to the point it cannot be flush so the acid can no longer be prevented from leaching into the soil). A job to clean the acid corroded instrument air lines in the Rad Waste Control Room ceiling is not scheduled until next week (more than two years after the problem was identified).

The NRC Region IV has refused to investigate the circumstances of CAR 200609296 based on the fact that none of the equipment supporting the Cooling Tower is safety related. I have not really pushed the CAR 200609328 on the NRC; until I read a Quality Assurance report today, I had thought the acid issues in Rad Waste had been addressed following the 2005 leak in the Rad Waste Control room. Although none of the systems in Rad Waste are safety related, they are "Group D Augmented". This designation is for non-safety related systems which must still be siesmically qualified because they contain radioactive material.

I do not know if the NRC Region IV will consider my pursuit of CAR 200609296 a safety concern. I believe this CAR is significant because it demonstrates the failure of the Corrective Action Program to adequately address minor problems before they escalate.

Lawrence S. Criscione

I do not have a home computer and do not regularly check this email account. If you send me something needing my attention, please call me at (573) 230-3959 and leave me a message to check my account. My primary email is through my employer.

---

Windows Live Hotmail and Microsoft Office Outlook – together at last. Get it now!

**Gregory, Sheryl**

**From:** Lawrence Criscione [lcriscione@hotmail.com]  
**Sent:** Thursday, January 22, 2009 10:51 PM  
**To:** Will Kraus; Jeanette Oxford  
**Cc:** Davis, Jeff; Jeanette Oxford; Casey Exendine; Gregory, Sheryl; Taylor, Michael; William Jones; Marty Gelfand; Houlihan Bill; Llona Weiss; Henderson, Wess  
**Subject:** FW: Circ/Serv acid day tank leak

Representative Kraus and Oxford,

Below is some additional information on the acid control issues at Callaway Plant.

My email to the plant leadership may seem harsh, but for over a year (since February 2005) we had been encouraged by plant management to "be brutally honest" and to hold our peers, subordinates and superiors to high standards of accountability. Unfortunately, the talk of high standards was nothing more than a "show" that management needed to perform for the US NRC and the Institute of Nuclear Power Operations - deep down plant leadership did not want to address any problems unless it benefited the show they were performing for the regulators.

Larry

Lawrence S. Criscione  
(573) 230-3959

> -----Original Message-----

> From: Thibault, Ludwig E.

> Sent: Friday, November 17, 2006 6:51 PM

> To: Criscione, Larry S.; Barton, Robert G.; Milligan, James W.

> Cc: Naslund, Charles D.; Heflin, Adam C.; Herrmann, Timothy E.

> Subject: Re: Circ/Serv acid day tank leak

>

> Larry,

> I suggest that you talk to Jim Milligan about the actions that have been taken and will be taken. I am sure he will tell you all about leadership and our efforts to drain/neutralize the acid.

>

> I also suggest that you do a little more research within your chain of command before sounding the alarm.

> L. E. (T-Bow) Thibault

> Callaway Plant

**From:** Criscione, Larry S.

**Sent:** Friday, November 17, 2006 6:39 PM

**To:** Thibault, Ludwig E.; Heflin, Adam C.; Naslund, Charles D.; Herrmann, Timothy E.

**Subject:** FW: Circ/Serv acid day tank leak

Gentlemen,

Where is the Leadership on this issue?

Why must an Equipment Operator poll the department for justification for neutralizing these tanks and piping?

Is an acid leak that "cannot be isolated" not justification enough for prioritizing this work?

Is the documentation provided in CARS 200609328 of the consequences of ignoring a similar problem in a similar system not justification enough for proactively addressing this problem?

Is the documentation provided in CARS 200609296 of the lack of success of addressing this problem over the past four years not justification enough for taking ownership of this problem at the Plant Manager level?

Over the past three years, competent individuals have taken ownership of this problem of residual acid turning the retired piping containing it into salt complexes and have attempted to lead the plant to a

proper resolution. They have all failed because the upper levels of management have not considered this an important enough issue on which to spend a little money.

Would you want to show INPO our CWCCS area? Did you take Admiral Ellis there on his tour? There are photo's attached to CARS 200609328 if you have not yet personally put your eyes on the problem.

Equipment Operators and Shift Engineers may display leadership and may take ownership, but they do not have the authority to set the priorities of this plant. We have provided you with enough information already. Please use your authority and do the right thing. We may not be violating any EPA, OSHA or NRC requirements, but we know we are not doing the right thing.

Very respectfully,

Larry Criscione

**From:** Wallendorf, Jeffrey S

**Sent:** Friday, November 17, 2006 3:48 PM

**To:** DL CAL Ops Operating Supervisor; DL CAL Ops Reactor Operator; DL CAL Ops RO License Class; DL CAL Ops Equipment Operator; DL CAL Ops Asst Equipment Operator; DL CAL Ops Shift Manager

**Subject:** Circ/Serv acid day tank leak

Hello Everyone,

As everyone probably knows, we continue to have acid leaking from the old Circ/Serv day tank. This leak cannot be isolated. A team has been formed to address this situation. I have been tasked with getting Operation's input as to how we want the system to be left. The plan right now is to flush the tanks at Circ/Serv and CWCCS and flush all piping associated with the old system. We plan on doing this by the end of the year. Next June or July we plan on removing the entire system. The plan to remove this system has been in the works for over two years now. What I need to take back to the team are reasons why we need to push this to get done. The two reasons I have so far are, safety concerns and overall housekeeping. EOs have to audit wpa hanging in the CWCCS acid booth and INPO 1 plants don't let acid leak to the ground. I need your input by Tuesday (11-21-06). I know some of you won't get this in time to respond.

Thanks

Jeff Wallendorff

**Gregory, Sheryl**

**From:** Davis, Jeff  
**Sent:** Friday, January 23, 2009 7:11 AM  
**To:** Gregory, Sheryl  
**Subject:** Cancelling Trip to Minneapolis...

I've got too much work to do. Remind me to e-mail Lauren Azar shortly and then we'll cancel.

Thanks,

JND