

EDO Principal Correspondence Control

FROM: DUE: 09/20/11 EDO CONTROL: G20110648  
DOC DT: 08/25/11  
FINAL REPLY:

State Representative Jeanette Mott Oxford  
State of Missouri

TO:

Chairman Jaczko

FOR SIGNATURE OF : \*\* PRI \*\* CRC NO: 11-0512

Chairman Jaczko

DESC:

ROUTING:

Followup to the October 2003 Incident at Callaway  
Nuclear Plant (EDATS: SECY-2011-0495)

Borchardt  
Weber  
Virgilio  
Ash  
Mamish  
OGC/GC  
Leeds, NRR  
Wiggins, NSIR  
Burns, OGC  
McHale, OEDO

DATE: 08/31/11

ASSIGNED TO:

CONTACT:

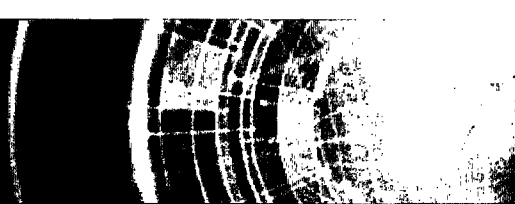
RIV

Collins

SPECIAL INSTRUCTIONS OR REMARKS:

Template: SECY-017

ERIDS: SECY-01



**EDATS Number:** SECY-2011-0495

**Source:** SECY

## General Information

**Assigned To:** RegionIV

**OEDO Due Date:** 9/20/2011 11:00 PM

**Other Assignees:**

**SECY Due Date:** 9/22/2011 11:00 PM

**Subject:** Followup to the October 2003 Incident at Callaway Nuclear Plant

**Description:**

**CC Routing:** NRR; NSIR; OGC; OCA

**ADAMS Accession Numbers - Incoming:** NONE

**Response/Package:** NONE

## Other Information

**Cross Reference Number:** G20110648, LTR-11-0512

**Staff Initiated:** NO

**Related Task:**

**Recurring Item:** NO

**File Routing:** EDATS

**Agency Lesson Learned:** NO

**OEDO Monthly Report Item:** NO

## Process Information

**Action Type:** Letter

**Priority:** Medium

**Signature Level:** Chairman Jaczko

**Sensitivity:** None

**Urgency:** NO

**Approval Level:** No Approval Required

**OEDO Concurrence:** YES

**OCM Concurrence:** NO

**OCA Concurrence:** NO

**Special Instructions:**

## Document Information

**Originator Name:** Jeanette Mott Oxford

**Date of Incoming:** 8/25/2011

**Originating Organization:** Citizens

**Document Received by SECY Date:** 8/31/2011

**Addressee:** Chairman Jaczko

**Date Response Requested by Originator:** NONE

**Incoming Task Received:** Letter

OFFICE OF THE SECRETARY  
CORRESPONDENCE CONTROL TICKET

*Date Printed: Aug 31, 2011 11:46*

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**PAPER NUMBER:** LTR-11-0512 **LOGGING DATE:** 08/31/2011  
**ACTION OFFICE:** EDO  
  
**AUTHOR:** Jeanette Oxford  
**AFFILIATION:** MO  
**ADDRESSEE:** Gregory Jaczko  
**SUBJECT:** Followup to the October 2003 incident at the Callaway Nuclear Plant  
  
**ACTION:** Signature of Chairman  
**DISTRIBUTION:** RF, SECY to Ack  
  
**LETTER DATE:** 08/24/2011  
**ACKNOWLEDGED** No  
**SPECIAL HANDLING:** Chairman Correspondence  
  
**NOTES:**  
  
**FILE LOCATION:** ADAMS  
  
**DATE DUE:** 09/22/2011 **DATE SIGNED:**

EDO --G20110648

August 25, 2011

Dr. Gregory B. Jaczko, Chairman  
United States Nuclear Regulatory Commission  
Washington, DC 20555-0001

Dear Dr. Jaczko:

On March 31, 2011 I sent you a letter in which I requested answers to ten questions concerning an event which occurred at Ameren's nuclear power plant in Callaway County, MO on October 21, 2003. The questions had been provided to me by a nuclear engineer (Lawrence Criscione) who once worked at the plant and now works for the US Nuclear Regulatory Commission. Mr. Criscione informs me that he has spoken with you about the incident on several occasions so you should be somewhat familiar with it.

In my letter I requested that answers be provided to me in language that a member of the public might reasonably understand and that each answer begin with a "yes" or "no" so it is transparently obvious to me what the US NRC's position is. In response to my request, I received a letter from Elmo Collins (the Regional Administrator of the NRC region which regulates Callaway Plant) dated July 8, 2011 (the letter is contained in the NRC's Agencywide Documents Access and Management System as ML1118905720). In Mr. Collin's response, none of the answers contain a "yes" or a "no" and only three of the questions (Questions 8, 9 and 10) contain answers which are written in a manner which I can readily understand.

To me, the questions for which Mr. Criscione is seeking answers are relevant to both confirming that Ameren is competently managing its Callaway County nuclear plant and confirming that the Nuclear Regulatory Commission is capable of adequately ensuring utilities investigate and report incidents. I would like answers to Mr. Criscione's questions. Please have the NRC provide me answers in language that a member of the public might reasonably understand and please begin

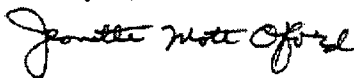
each answer with a "yes" or a "no" so it is transparently obvious to me what the NRC's position is. I have included the questions from my March 31, 2011 letter as an enclosure to this letter.

At the end of his July 8, 2011 letter to me, Mr. Collins states:

*If you would like to meet personally to further discuss the October 21, 2003 reactor shutdown, and the NRC's actions to address Mr. Criscione's concerns, Mr. Anton Vogel, Director, Division of Reactor Safety of my staff is willing to meet with you at your office.*

I intend to take Mr. Collins up on his offer to send Mr. Vogel to Missouri for a meeting. However, from his offer it is not clear if this is intended to be a public or a private meeting. I am not the only one in Missouri who is concerned about this incident. I would have to insist that any meeting I have with Mr. Vogel should be open to the public. I believe that what is needed to finally put this issue to rest is for the NRC to come to Missouri and explain to the concerned members of the public, of the press and of the legislature why Mr. Criscione's remaining questions do not need to be definitely answered. This would probably not be a large meeting, but it would likely have more interested persons than could fit in my office. I will be glad to make arrangements for a larger space.

Thank you,



Jeanette Mott Oxford

Enclosure (1)

Cc: Elmo Collins, Regional Administrator, US NRC Region IV  
Russ Carnahan, United States Congress  
Dennis Kucinich, United States Congress  
Lewis Mills, Missouri Public Counsel  
Tom Voss, Ameren  
David Lochbaum, Union of Concerned Scientists  
Kay Drey, Beyond Nuclear  
Louis Clark, Government Accountability Project  
Kathleen Logan Smith, Missouri Coalition for the Environment  
Michael Berg, Sierra Club  
Henry Robertson, Great Rivers Environmental Law Center  
Janet Saidi, University of Missouri

## Questions from March 31, 2011 letter and Comments Regarding the NRC's Response

In my March 31, 2011 letter, I asked that you please provide me answers to the following questions in language that a member of the public might reasonably understand, and to please begin each answer with a "yes" or a "no" so it is transparently obvious to me what your position is:

1. Is it the NRC's opinion that on October 21, 2003 the reactor at Callaway Plant shut down due a combination of the passive buildup of radioactive Xenon-135 and a 4°F passive rise in average reactor coolant temperature?
2. Is it the NRC's opinion that, prior to manually tripping the main turbine around 10:13 am on October 21, 2003, the NRC licensed operators at Callaway Plant recognized the reactor was going to subsequently passively shut itself down due to a lack of steam demand and the buildup of Xenon-135?
3. Is it the NRC's opinion that, as reactor power lowered from the power range to the source range on October 21, 2003, the NRC licensed operators at Callaway Plant were aware the reactor had passively shut down?
4. Is it the NRC's opinion that, during the 45 minutes (from 10:39 to 11:25 am) the reactor was in the source range with the control rods at their last critical rod heights and with no Source Range Nuclear Instruments energized, the NRC licensed operators at Callaway Plant were aware the reactor was no longer critical?
5. Is it the NRC's opinion that it is not relevant whether or not from 10:18 to 11:25 am the NRC licensed operators were aware of the status of the nuclear fission reaction of the reactor they were monitoring?
6. Is it the NRC's opinion that upper management of Callaway Plant was, on October 21, 2003, aware that the reactor had passively shut down around 10:18 am?
7. Is it the NRC's opinion that Dave Neterer, the Operations Manager, was not in the Control Room when the first channel of Source Range Nuclear Instruments energized at 11:25 am?
8. Did the NRC interview Dave Neterer as part of its investigation of the October 21, 2003 passive reactor shutdown?
9. According to Mr. Criscione, Shutdown Margin calculations at Callaway Plant are Quality Assurance records which must be stored for decades. Mr. Criscione claims that no Shutdown Margin calculation was performed "*just prior to tripping the main turbine*" on October 21, 2003 whereas the NRC claims that one was performed. Is the NRC willing to request a copy of the Shutdown Margin calculation that was in effect at Callaway Plant during the 106 minute delay and provide me a copy of that calculation?

10. Did Nick Taylor of the US NRC investigate any of Mr. Criscione's allegations? If so, did Nick Taylor interview Lawrence Criscione as part of his investigation?

In his reply to me, Mr. Collins avoided directly answering Question 1. His response consisted of technical definitions of how Ameren's procedure defines "Mode 3 (shutdown)" but did not address whether or not it is the NRC's opinion that "on October 21, 2003 the reactor at Callaway Plant shut down due a combination of the passive buildup of radioactive Xenon-135 and a 4°F passive rise in average reactor coolant temperature." He does however, state: *it is the NRC's conclusion that the reactor became subcritical due to a rise in reactor coolant temperature and the buildup of Xenon, both of which contributed negative reactivity.* From this answer I am still unable to determine whether or not the NRC concurs with Mr. Criscione that the reactor unexpectedly passively shut down. If the NRC does not concur with Mr. Criscione, then please provide me an answer which transparently includes a phrase like "the reactor did not passively shut down".

In his response for Questions 2 through 6, Mr. Collins made no attempt to directly answer any of these questions. Instead he copied some wording from Information Notice 2011-02 which broadly discusses errors made by the operators yet avoids any discussion as to WHY those errors were made. At the end of his response, Mr. Collins states: *operators were likely to have been alerted to the fact that reactor power had dropped into the source range when the source range energized at 11:34 am as documented in the reactor operator logs.* According to Mr. Criscione, this statement is inaccurate in that:

No Source Range Nuclear Instruments energized at 11:34 am – the channel 2 SRNI energized at 11:25 and the channel 1 energized at 11:38. The 11:34 log entry was made sometime after 11:42 as evident by the fact that in the hand written log it follows an entry for 11:42. Whether or not the instruments energized at 11:34 or 11:25 is of little consequence, other than the fact that the NRC is allowing Ameren to use the reactor operator's erroneous log entry to confuse the issue. It is also evidence that instead of doing their own review of the data the NRC is merely accepting what Ameren provides them as facts.

I would like the NRC to specifically and transparently address Questions 2 through 6 and I would also like an answer to Mr. Criscione's allegation that instead of doing their own review of the data the NRC merely accepted what the utility provided them at face value.

From the answer for Questions 7 and 8 it is evident that the NRC never interviewed Dave Neterer (the Plant Director for Callaway Plant) to determine whether or not he was – as Mr. Criscione asserts – "in the Main Control Room at 11:25 on October 21, 2003 when the operators first became aware the reactor had unexpectedly entered the source range and failed to document

this fact in the plant's Corrective Action Program." It is also clear from Mr. Collins' answer that the NRC does not believe it is necessary to interview Mr. Neterer, however no justification for this decision has been given. Mr. Criscione believes that Mr. Neterer – who was then the Operations Manager and is now the Plant Director – was fully aware on October 21, 2003 that the reactor had passively shut down and that the NRC licensed operators had failed to recognize it for over an hour. Mr. Criscione also believes that Mr. Neterer knew the incident should be reported in the plant's Corrective Action Program but failed to ensure that occurred because he did not wish to draw adverse attention to the Operations Department. To me, this seems like a serious accusation against the most senior Ameren employee at Callaway Plant. Please explain to me why Mr. Criscione's allegation regarding Mr. Neterer does not warrant investigation.

Mr. Criscione has informed me that Question 9 has been settled in that the NRC Inspector General determined that "no formal Shutdown Margin calculation was in effect during the 110 minute period that the reactor was shutdown with the control rods still at their Critical Rod Heights." Please inform me whether you agree or disagree with Mr. Criscione's characterization of the Inspector General's findings.

From the answer for Question 10 it is evident that NRC inspector Nick Taylor never contacted Mr. Criscione during the NRC's initial investigation of the incident but instead based his assessment wholly on information provided to him by Ameren. In my opinion, Question 10 is the only question which, so far, has been transparently addressed.



August 25, 2011

The Honorable Russ Carnahan  
United States House of Representatives  
8764 Manchester Road, Suite 203  
St. Louis, Missouri 63144

Dear Representative Carnahan:

Please see the enclosed letter to Chairman Jaczko.

On October 21, 2003 (nearly 8 years ago), Ameren's nuclear reactor plant in Callaway County, Missouri was shutting down for a forced outage (due to a broken piece of electrical equipment) when, around 10:18 am, the operators failed to notice the nuclear fission reaction passively shut down. This incident was brought to my attention in late 2008 by a former Ameren employee named Lawrence Criscione.

According to Mr. Criscione, what happened at 10:18 am on October 21, 2003 was not really anything to be greatly concerned about. The unexpected shutdown of the nuclear reaction at Callaway Plant was a result of a spike in reactor temperature caused by the operators. Operating a nuclear reactor plant is complex business and it is not wholly unexpected that operators will on occasion make errors. Reactor plants in the United States are designed such that the nuclear reaction will passively cease when a sharp spike in temperature is experienced so, in one sense, the passive reactor shutdown on October 21, 2003 was a "non-event"; what concerns Mr. Criscione is the way the operators responded to it.

For a professional reactor operator, being able to maintain control of the nuclear fission reaction is understandably a "point of pride"; it is what they are paid and trained to do. Mr. Criscione believes that, to protect their reputations, the operators intentionally covered up the incident from Ameren's upper management.

To be sure, the shutdown of Ameren's largest electrical generating asset is nothing which can be covered up. On October 21, 2003, Ameren was well aware that its sole nuclear power plant was coming off line for repairs. The shutdown of the plant began at 1:00 am and proceeded until nearly 1:00 pm. The shutdown of the power station was not what was covered up; what was covered up was the fact that the operators inadvertently allowed the nuclear fission reaction to cease about 2 hours earlier than expected.

The shutdown on October 21, 2003 was required because of a broken electrical inverter. The plant's federal licensing basis allowed for it to operate with a broken inverter for 24 hours. At the end of this 24 hours, either the inverter needed to be back in service or the plant needed to begin to shut down and to complete its shutdown within 6 hours. Since the inverter broke at 7:21 am the day before, on October 21, 2003 the plant needed to begin to shut down by 7:21 am (the shutdown actually began more than 6 hours earlier at 1:00 am) and to be completely shut down by 1:21 pm. The plant disconnected from the electric grid around 10:13 am and reactor power lowered to its start up mode. With the reactor at very low power and the steam plant no longer producing electricity, there was no reason for anyone outside of the reactor plant's Main Control Room to detect the reactor fission reaction shutting down.

The shutdown of the nuclear fission reaction has consequences for the utility. At the time (the 10 o'clock hour) the plant's electricians were actively trying to repair the failed piece of electrical equipment. As long as the nuclear fission reaction was "critical" (that is, occurring at a self-sustaining rate), if the electricians were able to repair the failed inverter then the reactor would not need to be shut down. That is, had the reactor remained "critical" and had the electricians succeeded in fixing the failed inverter before 1:21 pm, the reactor could have been returned to power without shutting down.

So, during the 10 o'clock hour, when the inadvertent reactor shutdown occurred, the operators were attempting to maintain the reactor critical and at a low power level while repairs were being attempted to the failed inverter. It was during this time that the nuclear fission reaction inadvertently shut down and the operators failed to notice it.

One reason nuclear reactors are so dangerous is because of the nuclear waste which builds up in the reactor core. This nuclear waste is radioactive and produces a great amount of heat; so great that were the reactor to lose all cooling for a sustained period of time (a fractional part of a day) the fuel could heat up to the point that it melts (as occurred at Three Mile Island and Fukushima). On October 21, 2003 the heat from this nuclear waste was great enough to cause the reactor to produce steam equivalent to approximately 2% of rated reactor power. For over an hour, the reactor operators mistook this 2% steam demand as an indication that the reactor was still critical.

The reactor at Callaway Plant is normally shut down by inserting the reactor control rods. The reactor control rods are made of a material that absorbs neutrons. By controlling the amount of neutrons in the core, the control rods dampen the nuclear fission reaction. They are analogous to the disc brakes and the parking brakes on your car in that the fission reaction can be slowed by slightly inserting the control rods and it can be definitively stopped and prevented from restarting by fully inserting the control rods. On October 21, 2003 the reactor operators did not insert the control rods for nearly two hours following the passive reactor shutdown.

There are other things which can cause a nuclear reactor to shut down. One of them is a radioactive gas called Xenon-135. Xenon-135 has a tendency to build up in the core when power is lowered. The passive build up of Xenon-135 can be great enough to cause the nuclear fission reaction to cease and to prevent it from restarting. This is what occurred on October 21, 2003 at Callaway Plant: while the control rods were fully withdrawn, Xenon-135 was passively preventing the reactor from inadvertently restarting.

Since Xenon-135 is radioactive, it will eventually decay to the point that it can no longer keep the reactor from restarting. For this reason, if Xenon-135 is being relied upon to maintain the reactor shutdown (something that is never done without fully inserting at least some of the control rods) the operators perform a calculation known as a Shutdown Margin. On October 21, 2003 no Shutdown Margin calculation was completed during the time frame in which the control rods were left withdrawn and the operators were relying on radioactive Xenon-135 to prevent the reactor from restarting.

The reactor at Callaway Plant has instrumentation for measuring low levels of neutrons for use when the reactor is in the "source range" (the state when there are relatively few nuclear fission reactions and neutrons from other sources are a significant part of the neutron population of the reactor core). This instrumentation is very sensitive and would electrically burn out if it were to be left on when the reactor is in its power range; so these "source range instruments" are interlocked such that they automatically shut down as the reactor leaves the "source range" and automatically re-energize as the reactor returns to the "source range". The first one of these instruments re-energized at 11:25 am on October 21, 2003 and it was the first indication which caused the Reactor Operators to notice that the reactor was no longer critical.

Standard practice would dictate that once an operator recognizes the reactor has passively shut down, they are to expeditiously insert some of the control rods to ensure the reactor remains shutdown. This did not occur on October 21, 2003. It is also standard practice that the inadvertent passive shutdown of a reactor is documented in the plant's Corrective Action Program with a condition report. This also did not occur on October 21, 2003. Mr. Criscione and Gary Olmstead (a former Shift Manager at Callaway Plant) have both told me that they

believe the reason the control rods were not inserted and a condition report was not written is because the operators tried to cover up the inadvertent shutdown from Callaway Plant's upper management. The incentive the operator had for doing this was to merely prevent themselves from looking bad – as mentioned above, being able to maintain control of the nuclear fission reaction is an important “point of pride” for a professional Reactor Operator.

Once the operators recognized, at 11:25 am, that the reactor had passively shutdown over an hour earlier and had gone unnoticed, they did not alert the plant's upper management. Instead, they informed the plant's upper management that since the electrical repairs were not progressing they were going to shut down the reactor at noon – the time which upper management expected it to be shut down as long as it was unlikely to meet the 1:21 pm deadline for repairing the broken inverter. For the next 40 minutes, the operators dragged their feet by performing ancillary tasks in the Reactor Shutdown procedure (that is, necessary tasks but not necessary for inserting the control rods which could have been manually inserted at any time). Then, shortly after noon, the operators inserted the control rods. When the plant upper management were informed at 12:05 that the control rods were being inserted, they had no reason to suspect that, instead of being used to shut down the reactor, they were instead being inserted into a reactor core that had been shutdown for nearly two hours.

According to both Mr. Criscione and Mr. Olmstead, the Operations Manager (Dave Neterer, who is now the Plant Director) was in the Main Control Room at 11:25 am when the first Source Range Nuclear Instrument energized and the operators first became aware that the reactor was no longer critical. Mr. Neterer had an obligation to ensure plant upper management was informed of the incident and to ensure it was documented in a condition report, but, because he was concerned it would make his Operations Department look bad, he failed to do anything.

For nearly 3½ years the October 21, 2003 passive reactor shutdown was successfully covered up. Then, in 2007, Mr. Criscione accidentally discovered the incident while reviewing data from some past reactor shutdowns to support a revision to the Reactor Shutdown procedure. Mr. Criscione documented the incident as Callaway Action Request 200701278 on February 10, 2007. At the insistence of the Operations Department, this Action Request was originally screened as having low significance and not requiring an investigation. Mr. Criscione first brought CAR 200701278 to Adam Heflin's attention in an email on February 13, 2007 and personally met with Mr. Heflin to discuss his concerns on February 22, 2007.

In late February, Mr. Criscione had two shifts of paid overtime cancelled and was ordered to work a day of unpaid overtime on one of his days off to make up for the time he spent investigating and writing CAR 200701278.

By March 1, 2007, Mr. Criscione had informed his entire chain of command up through Adam Heflin (the then Site Vice President at Callaway Plant) about his concerns regarding the October 21, 2003 shutdown. Since Ameren was refusing to investigate his concerns and since he believed he was being retaliated against by the Operations Department by having his paid overtime cancelled and being ordered to work unpaid on a day off, Mr. Criscione brought his concerns to Michael Peck, the NRC's Senior Resident Inspector at Callaway Plant. Mr. Peck forwarded Criscione's concerns to his superiors in Region IV who captured them as Allegation RIV-2007-A-0028.

Allegation RIV-2007-A-0028 was investigated by an inspector named Nick Taylor. Mr. Taylor never met or contacted Mr. Criscione during his investigation. In an August 7, 2007 letter to Mr. Criscione, the NRC informed him that his concern (that the operators intentionally delayed inserting the control rods) could not be substantiated because "*The inspector's review of operating procedures did not find any timeliness guidance on performing the steps to insert the control rods.*" Both Mr. Criscione and Mr. Olmstead find this logic nonsensical. According to them, since, per the Reactor Shutdown Procedure at Callaway Plant, the only way to shut down the reactor was to actively insert the control rods and since the procedure inherently assumes that it is followed, it would not make any sense for the procedure to contain "*timeliness guidance on performing the steps to insert the control rods.*" Neither Mr. Criscione nor Mr. Olmstead understand why the NRC inspector would expect to find such guidance and why the absence of such guidance justifies the operators delaying 40 minutes to insert the control rods after becoming aware that the reactor was in the source range with its control rods still at their last critical rod heights.

Unhappy with the NRC's response to Allegation RIV-2007-A-0028, Mr. Criscione wrote his US Senator (Richard Durbin). As a courtesy, he provided a copy of his letter to Senator Durbin to David Dumbacher, a Resident Inspector at Callaway Plant. Mr. Dumbacher forwarded the letter to his superiors in Region IV and they re-opened Mr. Criscione's concerns as Allegation RIV-2007-A-0096. However, it is Mr. Criscione's opinion that this new allegation was doomed from the start since in order to find in Mr. Criscione's favor, Region IV would have to admit that their earlier investigation (under Allegation RIV-2007-A-0028) had not been adequate.

On November 19, 2007 Mr. Criscione resigned from Callaway Plant after Ameren agreed to pay a settlement to himself and his attorneys worth a combined \$550,000. The entire amount of this settlement was passed along to the Ameren rate payers; that is, for their retaliation against Mr. Criscione it was you and I (Ameren's rate payers) who paid and not Ameren's shareholders or executives.

On March 31 and April 1, 2008 badged investigators from the NRC's Office of Investigation came to Callaway Plant to conduct transcribed interviews of the operators under oath. Mr.

Criscione obtained copies of those interviews in January 2009 through the Freedom of Information Act. According to Mr. Criscione, the interview transcripts contain numerous examples of the operators successfully misleading the NRC investigators and practically no examples of the NRC asking follow through questions when provided answers which, to licensed Senior Reactor Operators like Mr. Criscione and Mr. Olmstead, do not make sense. It should be noted that the primary investigators during these interviews were NRC employees with law enforcement (that is, non-technical) backgrounds. A resident inspector (either David Dumbacher or Jeremy Groom) was in each of the interviews to provide technical assistance but according to both Criscione and Olmstead it is obvious from statements made by the inspectors that they had not prepared for the interviews.

On September 17, 2010 Mr. Criscione submitted a petition under 10CFR2.206 requesting that the NRC issue a Demand for Information (per 10CFR2.204) to Ameren to resolve specific discrepancies from the April 1, 2008 interview of David Lantz, the Shift Manager who was in charge during the October 21, 2003 passive reactor shutdown. The NRC bureaucratically denied Mr. Criscione's petition, claiming that it did not contain any evidence already provided to the NRC. Although it is true that all the information in the petition had been provided to the NRC by Mr. Criscione in the spring of 2009 (following his January 2009 review of the interview transcripts) it is Mr. Criscione's contention that they refused to specifically address his concerns at the time and thus, although not new, his concerns had not yet been adequately evaluated and investigated.

In early November 2010 the Union of Concerned Scientists documented the October 21, 2003 passive reactor shutdown and the NRC's investigation of it in an Issue Brief. This prompted the NRC to include the October 21, 2003 incident in an Information Notice it was already preparing on Reactivity Management incidents at Region IV reactor plants. Mr. Criscione was given the chance to review a draft of the Information Notice and submitted concerns he had regarding it through the NRC's Non-Concurrence Process. The NRC closed his Non-Concurrence form without specifically answering his concerns and issued the Information Notice on January 31, 2011 as IN 2011-02.

Dissatisfied with the way the NRC was dodging his concerns, Mr. Criscione approached me with the request that I write to NRC Chairman Gregory Jaczko to request a public meeting regarding the October 21, 2003 shutdown, Ameren's handling of it, and the NRC's investigation of it. In the letter I asked 10 questions which had been provided to me by Mr. Criscione. The questions were all straight forward and in the letter I requested that I be provided answers which began with either a "yes" or a "no" so that it was transparently evident to me what the NRC's position was.

In late April 2011 the NRC held a public meeting in Fulton to discuss the performance at Callaway Plant. I attended that meeting. At the meeting they refused to answer any questions regarding the October 21, 2003 shutdown.

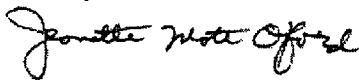
In a July 8, 2011 letter to me, Elmo Collins, the Regional Administrator for the NRC's Region IV, provided me evasive answers to my questions. None of the answers began with a "yes" or a "no" and in every answer the NRC avoided directly responding to the question. To most of the questions, the NRC merely provided wording they had already used in earlier correspondence (e.g. letters to Mr. Criscione, Information Notice 2011-02, or response to Mr. Criscione's Non-Concurrence form) which vaguely related to the question being asked.

After attempting to assist Mr. Criscione for over 2½ years, it is my opinion that the NRC is intentionally evading addressing his concerns and is intentionally not conforming to its professed goal of transparently answering to the American public.

Mr. Criscione now works in Rockville, MD. He would like to meet with your staff to discuss this issue. Please feel free to contact me if you have any questions regarding this matter, but Mr. Criscione (cell 573-230-3959) is better versed in the specifics of this issue than I and can likely better address any questions you have. Our (mine and his) goal is for the NRC to transparently explain what they believed happen on October 21, 2003. Our concern is that the NRC's lack of transparency is permitting dishonest people to remain in charge at Ameren's Callaway County nuclear plant. Missourians need to be assured that the operators at Callaway Plant are individuals of the highest integrity who honestly confess mistakes and professionally address issues. We also need to be assured that honest and thoughtful workers are not systematically driven away from Callaway Plant by a work environment that is hostile to differing professional opinions. Any assistance you or your staff can provide in getting the NRC to arrange a public meeting in Missouri concerning the October 21, 2003 shutdown would be greatly appreciated.

Copied on this letter are some of the Missouri citizens who have been actively following this issue for the past several years.

Thank you,



Jeanette Mott Oxford

Cc: Kay Drey, Beyond Nuclear  
Louis Clark, Government Accountability Project  
Kathleen Logan Smith, Missouri Coalition for the Environment  
Michael Berg, Sierra Club  
Henry Robertson, Great Rivers Environmental Law Center  
Janet Saidi, University of Missouri

August 25, 2011

Mr. Elmo Collins  
United States Nuclear Regulatory Commission  
Region IV  
612 East Lamar Blvd, Suite 400  
Arlington, Texas 76011-4125

Dear Mr. Collins:

Please see the enclosed letter to Chairman Jaczko.

I believe that Region IV is intentionally avoiding answering the questions which I submitted to Dr. Jaczko in my March 31, 2011 letter. I believe that you are intentionally conducting business in a non-transparent manner to avoid public scrutiny of Ameren's handling of the October 21, 2003 shutdown and of Region IV's investigation of it.

We, the public in Missouri, expect that incidents at Ameren's nuclear reactor plant in Callaway County be professionally handled both internally by the utility and externally by the federal regulator. Mr. Criscione has made some serious allegations:

1. For over an hour, the operators at Callaway Plant failed to recognize that the nuclear fission reaction on the 3565 MW reactor which they were monitoring had inadvertently ceased.
2. Once alerted to item 1 by an alarm on the reactor plant's Main Control Board, the operators failed to take any action to place the plant in a known safe condition for an additional 40 minutes.
3. The 40 minute delay in item 2 was effected by the operators in order to cover up from Ameren upper management the fact that the operators had inadvertently allowed the reactor to passively shut down.



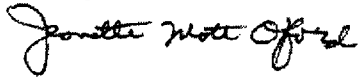
4. The Operations Manager was aware of the cover up mentioned in item 3 and failed to take any action to prevent it.
5. The Shift Manager who covered up the incident is now the Operations Training Manager and the Operations Manager who allowed the cover up to occur is now the Plant Director at Callaway Plant. The most senior leadership at Callaway Plant has a propensity to dishonestly cover up mistakes.
6. After the incident was accidentally uncovered by Mr. Criscione in February 2007, he brought it to the attention of all levels of Ameren management including: Tom Voss (the current CEO of Ameren and the then CEO of AmerenUE), Adam Heflin (the current Chief Nuclear Office and the then Site Vice President), Fadi Diya (the current Site Vice President and the then Plant Director) and Ellis Merschhoff (the Chairman of Ameren's Nuclear Safety Review Board and a predecessor of yours as Regional Administrator at NRC Region IV). Despite the seriousness of the charges, Ameren failed to thoroughly look into the incident. Additionally, the promotions alluded to in item 5 occurred after the incident was brought to the attention of Ameren upper management and after Ameren rate payers paid Mr. Criscione and his attorneys a combined settlement of \$550,000.
7. During its initial investigation, the NRC inspector assigned to investigate the incident (Nick Taylor) failed to even contact Mr. Criscione to get his explanation of the incident and data.
8. During its subsequent investigation of the incident, the NRC failed to pursue glaring discrepancies made during the sworn and transcribed interviews of the operators on March 31 and April 1, 2008 (see Mr. Criscione's September 17, 2010 10CFR2.206 Petition for the discrepancies).

People make mistakes. What defines our character is not how close to perfection we are, but how we address and manage our flaws and errors. As a member of the public and as an elected representative of the public, I can accept that operators at nuclear reactor plants will occasionally make errors in both action and judgment. However I cannot accept that either those operators or their management will cover up those errors; I expect the people, whom the public has entrusted with the immense responsibility of safely operating a large commercial reactor plant, to honestly admit to errors and to professionally address shortcomings.

Similarly, as a member of the public and as an elected representative of the public, I can accept that federal regulators will at times make errors. However I cannot accept that our regulators will nefariously attempt to hide those errors from the public; I expect transparency from my federal regulatory bodies. I expect that questions be transparently and openly addressed. I, and the public whom I was elected to represent, expect you to meet with us and transparently and openly address the 10 questions from my March 31, 2011 letter to Chairman Jaczko; occasionally meeting with the public to transparently address our concerns is one of the things we, the federal tax payers and nuclear rate payers, pay you to do.

Copied on this letter are some of the Missouri citizens who have been actively following this issue for the past several years. If you are not the one who can arrange a public meeting to answer my questions concerning the October 21, 2003 shutdown at Callaway Plant, then please provide me with the contact information of the individual who can arrange it.

Thank you,

A handwritten signature in cursive script that reads "Jeanette Mott Oxford".

Jeanette Mott Oxford

Enclosure (1)

Cc: Kay Drey, Beyond Nuclear  
Louis Clark, Government Accountability Project  
Kathleen Logan Smith, Missouri Coalition for the Environment  
Michael Berg, Sierra Club  
Henry Robertson, Great Rivers Environmental Law Center  
Janet Saidi, University of Missouri

August 25, 2011

Mr. Tom Voss  
Chief Executive Officer  
Ameren Corporation  
1901 Chouteau Avenue  
St. Louis, Missouri 63103

Dear Mr. Voss:

Please see the enclosed letter to Chairman Jaczko concerning an incident at your nuclear reactor plant in Callaway County, Missouri.

Over the preceding 2½ years I have had multiple employees from Callaway Plant contact me regarding concerns they have about the work environment at the plant. They have portrayed to me an environment in which concerned workers who voice a differing professional opinion are retaliated against. Although I have no evidence that this retaliation is systemic to Ameren, it is nonetheless Ameren's responsibility to aggressively address incidents of retaliation.

In February 2007 Lawrence Criscione, a then Senior Reactor Operator at Callaway Plant who now works for the US Nuclear Regulatory Commission, accidentally uncovered what appeared to him to be an incident of the reactor inadvertently shutting down and going unnoticed for nearly two hours.

The incident occurred during an October 21, 2003 forced reactor shutdown. On that day, the plant was shutting down due to a failed electrical inverter which could not be repaired within its allowed outage window. At 9:35 am the reactor operators attempted to hold the reactor at 10% power to provide the electricians some additional time to repair the inverter. According to Mr. Criscione, the operators failed to recognize the buildup of Xenon-135 which caused an uncontrolled cooldown of 9°F in 25 minutes. In response to this loss of control of reactor

coolant temperature, the operators divorced from the electrical grid and tripped the turbine generator at 10:13 am. Upon tripping the turbine a 4°F spike in reactor coolant temperature occurred which caused the plant to passively shut down around 10:18 am. For the next 106 minutes the reactor's control rods remained at their last critical rod heights while the passive buildup of Xenon-135 kept the reactor from inadvertently restarting.

Mr. Criscione, as well as another former Callaway Plant Senior Reactor Operator (Gary Olmstead), has told me that the 10:18 am passive reactor shutdown went unnoticed by the operators for 67 minutes – until the first Source Range Nuclear Instrument energized at 11:25 am. Once recognizing the reactor was unexpectedly in the source range, instead of immediately inserting the control rods the operators instead dragged their feet until 12:05 pm. By waiting until shortly after noon to insert the control rods, the operators successfully covered up the incident from the plant's upper management. That is, when the Outage Control Center was told at 12:05 pm that the reactor control rods were being inserted, they assumed that the control rods were being used to shut down the reactor. They had no reason to suspect that the control rods were actually being inserted on a reactor which had passively shut down over an hour earlier.

This incident was never documented in 2003. It is both Mr. Criscione's and Mr. Olmstead's contention that the Operations Manager (Dave Neterer) was in the reactor's control room when the first Source Range Nuclear Instrument energized at 11:25 am and did nothing to ensure that upper management was made aware of the incident or that the incident was documented and investigated.

A similar passive reactor shutdown occurred on June 17, 2005 which cost your utility 31 hours of lost generation (see Callaway Action Request 200701278). It is Mr. Criscione's contention that the June 17, 2005 passive reactor shutdown would likely never had occurred had the October 21, 2003 inadvertent passive shutdown been properly reported and investigated.

Mr. Criscione first brought his concerns to your attention in a May 30, 2007 email to Chuck Naslund (the then Chief Nuclear Officer) which you were copied on. Also copied on that email were Mr. Neterer (your current Plant Director at Callaway Plant), Mr. Diya (your current Site Vice President) and Mr. Heflin (your current Chief Nuclear Officer). A week after sending that email, Mr. Criscione was placed on a Performance Improvement Plan by the Operations Department and told he needed to work on being "non-confrontational".

In October 2007 you were again informed of Mr. Criscione's concerns when he copied you on emails to John Franz and Ellis Merschhoff of Ameren's Nuclear Safety Review Board.

In November 2007 Mr. Criscione resigned from Ameren in exchange for a payment of \$333,333 around November 19, 2007 and a promise of a future payment of \$33,300 on April 1, 2008. In

addition to these two payments, you promised to pay Mr. Criscione's lawyers payments of \$166,667 around November 19, 2007 and \$16,700 on April 1, 2008. The net total of these payments was \$550,000 which was passed along to myself and the other Ameren rate payers in Missouri (including Mr. Criscione himself as well as his parents, friends and relatives).

After paying over half a million dollars of rate payer money to Mr. Criscione and his attorneys, within a year you promoted Mr. Heflin from Site Vice President at Callaway Plant to Chief Nuclear Officer. You also promoted Mr. Diya from Plant Director to Site Vice President and Mr. Neterer from Operations Manager to Plant Director. This was done despite Mr. Criscione's claims that Dave Neterer was in the reactor plant's control room when the October 21, 2003 passive reactor shutdown was covered up, that Mr. Neterer retaliated against Mr. Criscione for documenting the incident after he uncovered it in 2007, and that Mr. Diya and Mr. Heflin did nothing to address either the passive reactor shutdown or the retaliation against Mr. Criscione. I recognize that it is Ameren's contention that Mr. Criscione's claims are not valid, but, given the money you paid to Mr. Criscione and his attorneys, I have to assume that someone at Ameren recognized the validity of Mr. Criscione's concerns.

Given the fact that you yourself are involved in this mess, I do not expect a complete change of course in Ameren's handling of this matter. I am sending you this letter as a courtesy and with the hope that you recognize this issue will not merely go away because you spent \$550,000 of the Missouri rate payers' money to buy Mr. Criscione out of his job.

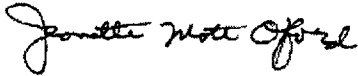
All Mr. Criscione is seeking is admission by Ameren about what occurred on October 21, 2003. He would never have taken his concerns to the Nuclear Regulatory Commission in the first place had you internally investigated and dealt with the incident (he personally met with Adam Heflin on February 22, 2007 – five days prior to taking his concerns to the NRC – and only went to the NRC because Mr. Heflin did not assist him in getting CAR 200701278 addressed and Mr. Neterer accused him of insubordination when he refused to work unpaid overtime to make up for the time he had spent writing CAR 200701278 to formally document the discrepancies concerning the October 21, 2003 shutdown (which it was his job to do not only as a licensed Professional Engineer and a licensed Senior Reactor Operator, but also as an Ameren employee).

In January 2009 I informed Admiral Ellis of the Institute of Nuclear Power Operations (INPO) about Mr. Criscione's concerns. INPO declined to assist me since they are not a regulatory body and do not investigate concerns of the public. This is unfortunate, as Mr. Criscione has frequently stated he will consider his concerns resolved once Ameren reports the October 21, 2003 passive reactor shutdown to INPO in the form of a Significant Event Report.

Ironically, Mr. Criscione's restrictive settlement agreement with Ameren prevents him from directly contacting you to discuss his concerns. If, however, you would be willing to meet with

him he has informed me he would be more than willing to take the time to meet with you to discuss his concerns. You were paid over \$4.7 million in 2010 for your work at Ameren Corporation. (The digits I rounded down are more than most of my constituents make in a year.) For that amount of money, surely you take your job seriously. Mr. Criscione and Mr. Olmstead have expressed serious concerns to me regarding the integrity of the most senior management of Callaway Plant. I take their concerns seriously, and I hope you do too. And, since your Chief Nuclear Officer (Adam Heflin) was deeply involved in the failure to adequately address Criscione's concerns in 2007 and promoted Mr. Neterer in 2008, there is a conflict of interest in delegating this matter to Mr. Heflin to address.

Thank you,

A handwritten signature in cursive script that reads "Jeanette Mott Oxford".

Jeanette Mott Oxford

Enclosure (1)

## **Jaegers, Cathy**

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**From:** Champ, Billie  
**Sent:** Wednesday, August 31, 2011 2:00 PM  
**To:** Jaegers, Cathy  
**Subject:** RE: Need Address for Jeanette Mott Oxford (LTR-11-0512), please

Jeanette M. Oxford  
State Representative 59<sup>th</sup> District  
2910 Lemp Avenue  
St. Louis, MO 63118

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**From:** Jaegers, Cathy  
**Sent:** Wednesday, August 31, 2011 1:52 PM  
**To:** Champ, Billie  
**Subject:** Need Address for Jeanette Mott Oxford (LTR-11-0512), please