

**MISSOURI  
BASIN  
POWER  
PROJECT**

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**LARAMIE RIVER STATION**

**Operating Agent  
Basin Electric Power Cooperative**

**Phone: 307-322-9601**

**P.O. Box 489  
Wheatland, Wyoming 82201-0489**

September 22, 2010

Mr. Roy P. Zimmerman  
Director, Office of Enforcement  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852-2738

Dear Mr. Zimmerman:

Enclosed is Basin Electric Power Cooperative's response to Notice of Violation EA-09-258.

Please contact me if you have any questions.

Sincerely,

David Cummings  
Radiation Safety Officer  
Laramie River Station

DC/paj  
ENCLOSURE

cc: B. Larson w/enclosure  
B. Eriksen w/enclosure  
lf w/o enclosure

Roy P. Zimmerman  
Director, Office of Enforcement  
United States Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852-2738

Re: REPLY TO A NOTICE OF VIOLATION: EA-09-258

Dear Mr. Zimmerman:

In reference to NOV EA-09-258, four violations were cited to Basin Electric as a result of NRC Inspection Report 030-14682/2009-001, dated May 27, 2010, and information provided by Basin. Per the instructions on page 3 of Enclosure 1, following is Basin's response as ordered by the NRC. In addition to the information provided below, Basin incorporates by reference information and correspondence previously provided to the NRC, including (1) Basin's Revised Supplemental Report on the Unit 3 Feeder Deck Incident, dated January 22, 2010; (2) Basin's PowerPoint presentation provided to the NRC on July 14, 2010 at the Pre-decisional Enforcement Conference; and (3) Basin's Supplemental Report Following the PEC, dated July 27, 2010.

**Violation I.A:** Failure to limit radiation exposure to members of the public to less than 100 millirem in a year.

Basin Electric admits this violation<sup>1</sup>.

This violation occurred in the course of performing the unusual task of installing a bypass to a coal chute where SeCoal gauges are in use for process control. In the thirty years of history of

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<sup>1</sup> Basin notes that although the 100 millirem member of the public exposure limit was exceeded, with the highest dose calculated at 647 millirem for one welder, the NRC has established an extremely low and conservative member of the public limit. According to the Health Physics Society, "[t]he likelihood of radiation-induced disease below this level [of 10,000 millirem], if it exists at all, is so small that it is not measurable, it is not a matter of scientific fact, and it can only be estimated utilizing hypothetical mathematical dose-response models." HEALTH PHYSICS SOC'Y, COMPENSATION FOR DISEASES THAT COULD BE CAUSED BY RADIATION MUST CONSIDER THE DOSE, POSITION STATEMENT OF THE HEALTH PHYSICS SOCIETY (Adopted March 2000, Reaffirmed March, 2001) at 2, <http://hps.org/documents/Compensation.pdf>. Understanding the NRC's concern about higher doses if welders had worked for longer periods in the vicinity of nuclear gauges which did not happen (NOV at 2), Basin notes the above to place this violation into its appropriate context in terms of lack of risk or injury to the workers involved in this short-term low-level exposure.

the Laramie River Station, this job had never been previously done.<sup>2</sup> The combined result of inadequate pre-job analysis, mistaken belief that shutters “automatically close”, inadequate signage, improper procedure and failure to close and lock the shutter mechanism prior to employees working in the path of the beam resulted in employees being exposed to radiation at levels above 100 millirem for a year set by the NRC for members of the public.

Corrective actions that have been taken include improved pre-job safety analysis, proper sign installation, an improved procedure which mandates shutter closures of affected gauges during extended outages, and an exhaustive re-training program for all employees to correct misconceptions regarding proper gauge operation. Additionally, the employees involved in the incident have been added to the list of radiation workers for the purpose of lifelong exposure tracking. Finally, the affected employees have been provided with information regarding the effects of the exposure, as presented by members of the Wyoming Department of Health. They will also have the opportunity for continued consultation with the company physician regarding their exposure, for as long as they continue their employment with Basin Electric.

All of these actions have been fully implemented. Basin Electric believes that with ongoing vigilance, these actions will be adequate to prevent a recurring incident.

**Violation I.B:** Failure to post signage in accordance with 10 CFR 20.1902(e).

Basin Electric admits this violation. Although not contesting the assessed civil penalty of \$7,000, Basin nonetheless believes that the NRC inappropriately denied corrective action credit.

Although a consultant had reported that inadequate signage was present in a different area of the plant, and work was underway in the facility to install improved signage, it had not been completed at the time and location of the incident. Basin’s interpretation of the recommendation was to immediately improve signage on the gauges with larger sources, and to continue working towards improving the signage for gauges with smaller sources such as those in use in the SeCoal gauges.

The primary corrective action for this violation was the completion of the sign installation. This was completed as a part of the initial response to the incident, prior to the beginning of the NRC’s investigation on October 6, 2009. Basin believes the NRC has failed to consider that the

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<sup>2</sup> Basin Electric believes that the NRC could have appropriately given Basin identification credit for this violation revealed through an event because the unique factors of this first-time event in 30 years showed that the scenario allowing exposure because of unique SeCoal gauge design could not have been reasonably identified or easily discovered in any previous audit or other opportunity to identify the problem. NRC Enforcement Policy, Section VI.C.2.b.(2)(ii).

corrective action was fully implemented at the time of their inspection, and thus recognize that Basin self-corrected its earlier misinterpretation of the consultant's audit.<sup>3</sup>

Additional corrective actions include improvements to the semiannual shutter check procedure to include signage inspection, as well as the inclusion of sign inspection as an item of concern for the monthly management safety inspection when applicable. These procedural and cultural changes will serve to maintain signage and ensure that all signage remains in good repair.

All of these corrective actions are fully implemented.

**Violation II.A: Failure to close and lock shutter gauges at the Laramie River Station.**

Basin Electric admits this violation. Reasons for this violation coincide with those reported for Violation I.A above.

As a result of the initial investigation, the shutters were closed prior to the completion of the work by the employees. Procedures have been improved and implemented to prevent a recurrence assuring that shutters are closed and locked prior to work being performed which may result in part of an employee's body intersecting a beam. Training has also been provided and will be renewed annually and as-needed to insure shutter closure prior to potential exposure.

All of these corrective actions are fully implemented.

**Violation I.C: Failure to report damaged gauge.**

Basin Electric admits this violation. Although not contesting the civil penalty of \$6,500, Basin nonetheless believes that the NRC inappropriately denied corrective action credit.

As was reported to the NRC on November 4, 2009 under Event Report #45441, a small bunker fire resulted in damage to a gauge on March 8, 2007. The NRC Investigator was informed of the event as a part of his investigation of the exposure. No record of reporting of this event by the prior RSO at the time was subsequently found. The NRC investigator was asked to see if a report had been filed with NRC. When he responded that a report had not been received, the RSO placed a phone call to the Operations Center reporting the event on October 16, 2009, and followed up with a written report as referenced above.

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<sup>3</sup> "Normally, the judgment of the adequacy of corrective actions will hinge on whether the NRC had to take action to focus the licensee's evaluative and corrective process in order to obtain comprehensive corrective action." NRC Enforcement Policy, Section VI.C.2.c. Basin believes that it promptly and comprehensively developed corrective actions for signage both before the NRC outbrief of its investigation and well before the PEC (at which time NRC will normally judge the adequacy of corrective actions according to its policy and guidance).

Corrective actions were taken beginning October 16, 2009 with a phone call to NRC reporting the event and completed on November 4, 2009 with the submission of a written report detailing the incident (Event Report #45441).

NRC believes that no corrective action credit is warranted because the corrective actions implemented by Basin were not prompt or comprehensive. The NRC makes several claims to support this, including 1) the licensee did not conduct a thorough investigation; 2) the licensee did not conduct a comprehensive radiation survey; 3) the licensee did not conduct interviews of persons working around the gauge; and 4) the licensee did not determine if personnel were exposed to radiation. The facts as presented in Event Report #45441 are contradictory to these claims: 1) The RSO did perform an investigation and given the location of the gauge at approximately 20 feet above the floor and a survey reading of 80 millirem at 2 feet from the gauge determined that the where employees would have been in relation to the gauge, with controlled access at an 8 foot radius under the gauge, to be adequate for prevention of exposure. Calculations indicate this distance would be sufficient to prevent exposure in excess of member of the public level. 2) The employee who performed the wipe test and survey was wearing a badge, and recorded a dose of 5 millirems during this work demonstrates that work was done to determine dosage of affected employees; 3) the extenuating circumstances of the entire area having been involved in a fire would naturally preclude 'normal' work from having taken place following damage to the gauge, and 4) the prompt isolation, and subsequent removal and replacement of the gauge by the manufacturer all are indicative of the efforts of the prior RSO to ensure that no employee exposure occurred.

The NRC also claims that corrective actions do not include steps to ensure that the radiation safety officer is sufficiently knowledgeable of all reporting requirements. While Basin agrees that the prior RSO did not report the incident with the mandated 24 hour period, Basin has also demonstrated that as a part of ongoing training, the RSO and immediate supervisors of gauge workers will maintain training as radiation safety officers. Additionally, the emergency operations procedure has been modified by the Plant Safety Coordinator to ensure that timely reporting to the NRC will occur even in the absence of the RSO, and the Plant Manger will ensure this is done. While Basin will not speculate as to why the former (retired) RSO did not report the event in 2007, Basin maintains that appropriate actions have indeed been taken to ensure future compliance with this mandate which the NRC has failed to consider.<sup>4</sup>

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<sup>4</sup> According to NRC policy, one of the purposes of a civil penalty is remedial to encourage licensees to take effective and lasting corrective actions to avoid future problems by being in compliance. NRC Enforcement Manual, Chap. 4, section 4.5.E.1. As far as Basin is aware, there was no indication at either the PEC or in the NOV that Basin has failed to take effective and lasting corrective actions for any violation, including the 2007 violation as soon as it was discovered.

**Conclusion:** Although Basin believes it has grounds to formally protest the penalties imposed in a separate answer pursuant to 10 CFR 2.205, Basin has elected to move forward and focus its energies on future compliance and prevention of recurrence of similar incidents. That was the message Basin hoped to convey to NRC representatives at the PEC. Given that message and Basin's belief that it took prompt and comprehensive corrective actions by the time of the PEC, Basin was surprised by the civil penalties imposed in the NOV. Nevertheless, in accordance with the instructions in NUREG/BR-0254 payment has been made by check mailed today in the amount of \$24,700 to resolve the NOV without further efforts to convince the NRC of Basin's prompt and comprehensive corrective actions. In closing, Basin and LRS remain fully committed to comply with NRC licensing requirements and conditions. As requested in the NOV, this response is submitted under oath.

Sincerely,



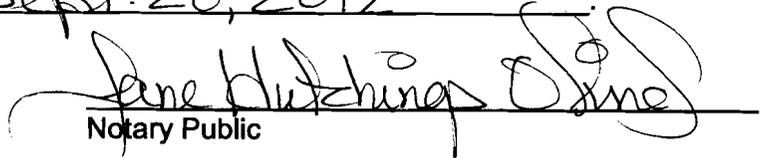
Brian Larson  
Plant Manager, Laramie River Station

STATE OF WYOMING )  
 ) ss.  
COUNTY OF PLATTE )

The foregoing instrument was subscribed and sworn to before me this 22<sup>nd</sup> day of September, 2010, by Brian Larson.

Witness my hand and official seal.

My commission expires: Sept. 20, 2012



Notary Public

cc: D. Cummings, RSO  
B. Eriksen, HQ

Elmo E. Collins, Regional Administrator  
United States Nuclear Regulatory Commission  
Region IV  
612 East Lamar Boulevard Suite 400  
Arlington, TX 76011-4125