Case No(s). 65-2007-0474 Date 8 207 Rptr MU

From: Patrick, James R

Sent: Thursday, December 08, 2005 3:17 PM

To: Cooper, Richard D; Pierie, Thomas C; Bluemner, Steven D; Ratliff, Matthew M

Cc: Witt, Warren A; Scott, Jeffrey T; Ferguson, Robert W; Schoolcraft, Steven J

Subject: RE: Taum Sauk Plant Spring 06 outages

FILED
August 21, 2007
Data Center
Missouri Public
Service Commision

We need to nail down when the Taum Sauk outages will occur next spring. First of all it is agreed that we should have a dual outage next spring to fix the unit #1 inlet valve and to inspect/repair the upper reservoir liner. The question is what is the best fit, timing wise, for the #1 & #2 outages. The outages for #1 & #2 are targeted for 3 weeks each mainly for the controls upgrade. Rick, you noted in your original e-mail you would need 2 weeks to repair the inlet valve which requires the reservoir and penstock drained. During this 2 week time period the tunnel inspection/repairs and upper reservoir inspection/repairs could also be accomplished. In trying to optimize the outage we would like to get some input on the pros and cons if we were to only overlap the #1 and #2 outages for 2 weeks instead of the full 3 weeks. The actual schedule we want some input on would be as follows where we only have a 2 week dual outage time period. Note we have also slipped the outage starting date to April 15 versus the current March 25 date.

Week Beginning

16-Apr-06 23-Apr-06

30-Apr-06

07-May-06

Taum Sauk #1

Taum Sauk #2

Please let me know as soon as possible what your thoughts are on this schedule.

Jim Patrick

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

From: Schoolcraft, Steven J

Sent: Monday, December 05, 2005 9:35 AM

To: Pierie, Thomas C; Cooper, Richard D; Witt, Warren A; Bluemner, Steven D; Ratliff, Matthew M **Cc:** Scott, Jeffrey T; Ferguson, Robert W; Birk, Mark C; Elschlager, David C; Weiman, Larry A; Patrick,

James R; Finnell, Timothy D; Brickey, John C Subject: RE: Taum Sauk Plant Spring 06 outages

We discussed this at the recent outage scheduling meeting. Jim Patrick was planning to discuss the options with you to finalize your plans.

Steve

----Original Message----From: Pierie, Thomas C

Sent: Wednesday, November 23, 2005 2:00 PM

To: Cooper, Richard D; Schoolcraft, Steven J; Witt, Warren A; Bluemner, Steven D; Ratliff,

Matthew M

Cc: Scott, Jeffrey T; Ferguson, Robert W; Birk, Mark C; Elschlager, David C; Weiman, Larry A

Subject: RE: Taum Sauk Plant Spring 06 outages

Rick.

Having both units out of service for the controls upgrade would be an advantage

from an installation, checkout and demo standpoint. The probability of tripping the in-service unit while upgrading the second goes away with both unit OOS, I think this would increase productivity and safety.

With both units out we could have 2 work crews, one for each unit. Working it this way would eliminate the night shift we currently have scheduled. Eliminating the night shift would save roughly \$12,000.

Tom

----Original Message-----From: Cooper, Richard D

Sent: Monday, November 14, 2005 1:56 PM

To: Schoolcraft, Steven J; Witt, Warren A; Bluemner, Steven D; Pierie, Thomas C; Ratliff,

Matthew M

Cc: Scott, Jeffrey T; Ferguson, Robert W; Birk, Mark C; Elschlager, David C; Weiman,

Larry A

Subject: Taum Sauk Plant Spring 06 outages

Presently Taum Sauk is scheduled for spring 2006 outages of three weeks per unit, one at a time, leaving the other unit in service.

The dates for the outages are Mar 25^{th} to Apr 15 for the first unit, Apr 15 to May 6^{th} for the second unit. The purposes for the outages are to complete the digital controls on both units and inspect/repair the runners.

Some things have happened that we need to consider modifying this schedule. I wanted to send this email out to get everyone's input. I'm talking about draining the upper reservoir and taking both units OOS simultaneously for a period of at least three weeks, possibly one or two more, but I'm not sure how much this would cost. Additionally, as explained below, maybe a fall outage should be considered.

- 1. There is presently a leak on the Unit 1 inlet valve flange that has gotten worse since it started in Jan of 2005. It is still tolerable at present but sometime in the future it will need to be fixed. Presently there is no scheduled outage for this repair. The new parts for this valve are scheduled to arrive at the end of Dec 2005. This job alone takes two weeks (with help from Keokuk/Osage employees) with the upper reservoir drained. Spring is the rainy season and rains might make this job difficult as well as trying to avoid a flood into the plant. This job would be better in a fall outage.
- 2. The upper reservoir liner has been in service for a year. Of what we can see it still looks OK. But we are unable to see the bottom 25 feet. With an upper reservoir outage we would be able to inspect the entire surface. We also have some slope wall anchor plates that have pulled loose that could be repaired. Bluemner may have some other things to do or look at. We still have to repair the level gage piping soon and by the spring we would be able to see if this repair is a permanent fix or not.

- 3. We think the tunnel liner epoxy repair that was completed last fall has come loose. Our tunnel drains are running a full pipe. With an upper reservoir outage we could inspect the liner. I don't think repairs would be scheduled for a spring outage but it depends on what we find when we inspect it.
- 4. The digital controls job might go quicker with both units OOS at the same time, I'm not sure. But if we drain the upper reservoir we would be starting both units up in pump instead of generate for the first time. This is a little more difficult such that if we have problems we only get two starts per unit to get them on per night, unless we can pump or at least test start them during the day. Still we are limited to two starts every six hours per unit.
- 5. Assuming the tunnel liner epoxy patch turned loose and went thru the runners of both units we are not sure what condition the runners will be in. They may require additional repair.

I'm asking that each of you think about the possibility of modifying the current schedules. What is the cost involved? I don't have extra money in my budget to cover extensive runner repairs, upper reservoir liner repairs and tunnel liner repairs. The inlet valve flange is capital work but I don't have money budgeted for that work either. Rather than wait for the inlet valve flange to force us to drain the upper reservoir at some future date (I wouldn't have money then either) we should consider scheduling it as well as the other items above.

When responding to this email please use "Reply to all" so that everyone is kept in the discussion loop.

Rick