

**WAAS Technical Report**  
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**Pomona, New Jersey**  
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***DR# 35: Extended AORW Signal-in-Space Outage after equipment failure.***  
***GPS Week/Day: Week 1376 Day 4 (5/25/2006)***

**Discussion:**

On week 1376 day 4 AORW was experiencing signal-in-space (SIS) outages after a switchover. The switchover occurred at GPS time 368663 (6:24:24 GMT) where STA-A GUS switched from primary to backup and Clarksburg GUS from backup to primary. About 8 and half-hours later, after an equipment failure at Clarksburg, AOR SIS degraded for approximately 8 minutes (490 seconds) with SIS outages. The SIS outage ended with the second switchover where STA-A was selected as the primary GUS again.

STA-A GUS had 2 faulted conditions on week 1376 day 4. The first faulted condition triggered the first switchover caused by a burn out condition in the Power Conditioner Unit (PCU). Clarksburg (CLK) GUS auto-switched to primary mode with no loss of SIS. 5 and-half hours after the first switchover, STA-A GUS was faulted gain. The cause is still unknown for now. Again, no lost of SIS since Clarksburg GUS is still the primary GUS. Approximately 3 hours later, operator placed STA-A in maintenance mode. About the same time Clarksburg GUS was faulted due to high temperature condition in High Power Amplifier (HPA). AORW experienced SIS outage as a result of the equipment failure in Clarksburg GUS. The SIS was restored after 8 minutes when STA-A GUS returned to primary with the second switchover.

The STA-A on-site maintainers did not configure the replacement PCU at STA-A due to lack of knowledge of the WAAS and the WAAS TIB. The WAAS Operators waited to place STA-A into backup mode until after the PCU was configured. The configuration required for the PCU was for the LAN controller card. The WAAS Operators were able to keep the duration of the SIS outage to a minimum by quickly putting STA-A into primary mode. They were able to do this even though the PCU was not configured. While the PCU is not configured the WAAS Operators do not have the ability to remotely cycle the power on SGS equipment at STA-A.

**Conclusion**

An equipment failure at Clarksburg GUS caused an 8 minutes AORW SIS outage. The SIS outage ended with a switchover to STA-A as the primary GUS that was placed under maintenance mode previously.