

Factual Report – Attachment 7

Summary of interview with the Electronic Systems Analyst at the National Weather Service Elko Weather Forecast Office.

METEOROLOGY

WPR19FA084

*Submitted by: Mike Richards
NTSB, AS-30*

Interviewee: Steve Leedy, Electronic Systems Analyst, NWS Weather Forecast Office, Elko, Nevada
Representative: Gregory Barnhart, Meteorologist In Charge, NWS Weather Forecast Office, Elko, Nevada
Date / Time: May 1, 2019 / 0900 Pacific daylight time (PDT)
Location: Telephone
Investigator: Mike Richards
Also present: Tom Little, NTSB; Art Patrick, NWS; James Beavers, NWS; Joseph Roberts, NWS; Lora Wilson, NWS

The following summarizes information provided by Mr. Leedy during the interview, and includes contributions from Mr. Beavers and Mr. Roberts:

He has been an Electronic Systems Analyst at the Elko, Nevada, National Weather Service (NWS) Weather Forecast Office (WFO) since 2006. Prior to this, he was with the US Coast Guard for 24 years.

He learns about issues with the Automated Surface Observing Systems (ASOS) his office maintains through emails regarding ASOS Operations and Monitoring Center (AOMC) tickets, on the “EM7” ASOS webpage and from forecasters at his WFO. Response to a “Priority 1” ASOS issue needs to be immediate and the issue must be taken care of as quickly as possible. According to the ASOS maintenance manual, there is a 36-hour timeline for response to a Priority 1 issue on the ASOS at the Ely Airport (ELY) in Ely, Nevada. He does not know what “response” means specifically, but he takes it to mean that the issue must be addressed, such as having technicians assigned to fix the problem if needed.

When a notification on ASOS issues is received from the AOMC, he would call the forecasters at his WFO and see how they are receiving the METARs from the ASOS in question, and then determine if technicians are needed or what will address the issue. He does not advise the FAA of erroneous sensor status. He is not sure who would call in NOTAMs for erroneous ASOS sensor information. Sometimes his WFO will put information in TAFs and Area Forecast Discussions that speak to ASOS issues. He is not aware of how a pilot would know about erroneous (or suspected erroneous) sensor information coming from an ASOS.

All ASOSs in his territory are “remote” except for the ASOS at Elko, Nevada. Regarding the protocols for addressing ASOS issues, he indicated that normally they will first dial in to the site remotely and check out the maintenance section and try to determine what the problem is and if they need to respond physically. This is all accomplished from their office.

Their office does not have a written policy concerning when to turn off remote processing for a visibility sensor when erroneous reporting may be or is present. General policy is that if there is a questionable sensor or word of a questionable sensor then it will be shut off and be replaced or recalibrated, but this is not written policy. He has spoken with his Meteorologist In Charge about allowing forecasters to turn off report processing at his WFO, and this is appropriate for any WFO

for ASOSs at smaller airports with no human observer present for augmentation. If there is a question as to the accurate accuracy of a sensor's reporting, there is no reason to have that information out there. Assuming proper connectivity, report processing can be turned off remotely.

On February 20, 2019, NWS technicians from the Elko WFO arrived at ELY and turned off report processing for the visibility sensor on the ELY ASOS until February 27, 2019, when they returned to ELY and fixed the visibility reporting issue. The same process occurred between March 5, 2019, and March 14, 2019.

When an ASOS is cleared remotely, the "\$" at the end of the METARs/SPECIs goes away.

The last time the ELY ASOS was calibrated on-site was November 27, 2018.

He cannot recall if he requested travel to the ELY ASOS during the government shutdown. If he had approval, we would have gone if the weather was suitable for maintenance. He would have needed to request funding for a GSA vehicle, gas for a 6-hour round trip and possibly overtime through his NWS region and then to Washington, DC. Authorization would have taken an extra day or two during the shutdown.

On January 21, 2019, they remotely checked the ELY ASOS in response to an AOMC ticket, and did not find any flags with the visibility, and cleared the system remotely. This was the day that forecasters at their WFO started talking about the visibility issues with the ELY ASOS. Between January 21, 2019, and February 15, 2019, there was likely an opportunity weather-wise to get to ELY, however he is not sure how that all coincided with any ASOS parts that were on order. The weather in ELY on January 21, 2019, was snow and wind.

The first part for the ELY ASOS was ordered on February 11, 2019 and was shipped the next day. A receiver for the visibility sensor was ordered because in the technician's experience, the majority of issues are with the receiver. It arrived at the WFO on February 14th, 2019, and was taken by an Elko technician to ELY on the following day (the 15th) but the technician ran into weather and called the WFO and got a forecast that indicated weather was not suitable for maintenance in ELY on that day, so they returned to Elko. NWS technicians were not on-site in ELY between November 2018 and February 15, 2019.

Between January 21, 2019, and February 15, 2019, everything seems normal with the ELY ASOS on the maintenance side and they ordered the parts for the ELY ASOS in response to forecaster comments. They do not carry spare visibility transmitter and receiver parts at their office. The Elko NWS WFO maintains four ASOSs but only three have visibility sensors.

A technician was able to get to the ELY ASOS on February 20, 2019, with the plan to replace the receiver for the visibility sensor, but it was determined that the issue was with the visibility sensor's transmitter. The transmitter was ordered on February 20, 2019 and was installed on February 27, 2019.

If report processing for visibility is turned off, the ASOSs VHF broadcast would report "visibility missing."

He believes that the ELY ASOS visibility sensor was reporting erroneously on the day of the accident. He believed that if visibility is reporting erroneously, this will affect the snowfall intensity reporting. He did not believe that visibility affected any other reporting parameters.

P68 is an NWS-owned ASOS that does not have a visibility sensor or ceilometer. O5U is an FAA AWOS that does report visibility and sky condition. They are located about 100 feet apart at Eureka Airport in Eureka, Nevada.

The Elko WFO shift log provided to the NTSB is in local (Pacific) time.

He indicated that on January 21, 2019, he checked the status (remotely) of the ELY ASOS in response to the AOMC trouble ticket and did not find anything of concern. Between then and February 5, 2019, there was not any further discussion or action regarding the ELY ASOS visibility sensor and he assumed everything was ok.

During the period in question, there was never anything wrong identified with the wind or sky condition reporting at the ELY ASOS.

He has sent information to the ELY airport manager regarding a program to train humans to be weather observers, and he believes it may be the same program as LAWRS.

He did not believe that the government shutdown affected their response to the ELY ASOS, however it could have delayed it a day or two. After the furlough their office was back to normal.

He indicated that an improvement might be to give forecasters control over turning off report processing for a sensor under question until technicians can check the sensor out, as well as to look at NOTAM issuance for ASOSs.

Interview concluded about 1045 PDT.

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