

## Suffern Paul

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**From:** [REDACTED]  
**Sent:** Friday, August 25, 2017 6:15 PM  
**To:** [REDACTED]  
**Subject:** Fwd: : ASOS related question...

Hey Paul!

Just got this response back from Brian. I've only skimmed it but wanted to pass it along so you have it for your review. I'll take a closer look on Monday!

Let me know if you have any questions! Feel free to copy Brian in if you want, just keep me on so I'll see his answer as well.

Have a great weekend!  
Lora

Sent from my iPhone. Pls excuse the brevity.

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On August 25, 2017 at 17:41:01, [REDACTED] wrote:

Lora, please pardon the delay but I wanted to provide a full response given the importance. The first 2 paragraphs below answer the question but for you or NTSB, ASOS its important to know the reset occurs for most elements except Present Weather and Sky, details follow:

In the example you provided it appears the Visibility was edited at 2001Z or a minute or two prior depending on how quickly the observer transmitted the observation. We do not know from the observations alone if the observer edited the visibility again but after the 2053z hourly observation, the visibility appears to have changed to 1 sm triggering a SPECI and sending the change in visibility at 2058z.

Augmented values for visibility are reset (revert) to the automated value after each hourly METAR is issued. It is up to the Observer to ensure the completeness and accuracy of the observation with each METAR or SPECI issued per 7900.5c 2.4-2.5.

Additional Background on ASOS Edits:

An edit made by the observer for 3 sm at 1400z (or any time that hour) remains 3 sm UNTIL changed by the observer or UNTIL the observation is transmitted. The 1453z observation will carry 3sm but to carry 3 sm on to the SPECI observations 1454z till the next hourly observation at 1554z, the observation would need to be augmented again in the 15z hour.

Edited weather elements stay edited until after the next hourly observation for all elements Visibility, Wind, Temperature, Dew Point, etc EXCEPT: Present Weather and SKY above 12,000 ft.

**Present Weather**, those edits such as Thunderstorms, Hail, etc remain edited until they are changed by the observer. These edits continue past the hourly observation until changed by the observer.

**Sky Cover**, observer edits ABOVE 120, for example OVC250, those cloud groups above 12,000 feet, do not reset after the hourly observation. Cloud Groups over 12,000 feet remain until changed/removed by the Observer.

ASOS METAR/SPECI which do NOT contain the word AUTO have an Observer logged into ASOS who is responsible for the representiveness of the observation at the time of that observation.

Let me know if you have additional questions.

Brian

On Thu, Aug 24, 2017 at 8:21 AM, [REDACTED] wrote:

Hey Brian!

I know this is technically a SR location, but you're really good at ASOS questions and that's recognized by the folks at NTSB as well :-). Hopefully, you have time to answer this one for us. If not, do not hesitate to tell me to go to SR and ask them!

See the email below from Paul Suffern regarding a LAWRS issue related to an ongoing investigation from 2016.

Let me know if you have any questions!

Thanks!

Lora

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----- Forwarded message -----

From: [REDACTED]

Date: Thu, Aug 24, 2017 at 8:04 AM

Subject: ASOS related question...

To: [REDACTED]

Good morning Lora,

I've got an ASOS related question that I hope Brian Hirsch and the ASOS folks in KC could answer for me, but wanted to pass it through you since it is investigation related... This is from an incident (non-fatal) case from Sugarland, TX, back in July 2016... I'm looking into some LAWRS/ATC issues in this case. Here is my question, when the observer or LAWRS person inputs or changes a variable (say visibility), for the next hour does it keep that input or change the same in every SPECI afterward automatically (basically does the OID from the ASOS automatically remember that change)? Or does the observer/LAWRS person have to change the variable everytime... now for the context part:

In this case I have a visibility sensor that went missing:

07/26/16 13:57 \*ST 2793 VISIBILITY SENSOR #1 NOT OPERATIONAL: VISIBILITY DROPPED FROM 7 MILES TO LESS THAN 2

07/26/16 13:57 \*ST 1388 VISIBILITY SENSOR #1 VISIBILITY DATA QUALITY FAILURE

07/26/16 13:58 \*ST 2706 VISIBILITY SENSOR #1 IS FULLY OPERATIONAL

That completely makes sense to me because the 1 minute visibility went from above 7 miles to less than 2 in one minute (because of a thunderstorm)... I know this is built in the ASOS system mainly for spiders and the like so no issue there....

In this case the LAWRS/ATC person updates the visibility to 3SM at 2001 UTC, but for every SPECI afterwards it is still 3SM visibility... when I clearly have video evidence and 1-minute ASOS data that say otherwise. So does the ASOS automatically bring up 3SM and the LAWRS person just pressed enter a bunch, or does the observer/LAWRS person have to enter in 3SM everytime. When questioning the ATC/LAWRS person they were not clear/could not remember. See METARs below for context... issue happens around 1957 UTC, then 3SM from 2001 UTC onward:

SP 26/07/2016 20:58-> SPECI KSGR 262058Z 22005KT 1SM +TSRA BR OVC031 24/23 A2993  
RMK AO2 LTG DSNT ALQDS P0002 T02390228=

SA 26/07/2016 20:53-> METAR KSGR 262053Z 22005KT 3SM +TSRA BR OVC025 24/23 A2993  
RMK AO2 WSHFT 2008 LTG DSNT ALQDS SLP138 ACFT  
MISHAP P0239 60263 T02390228 51004=

SP 26/07/2016 20:28-> SPECI KSGR 262028Z 19009KT 3SM +TSRA BR FEW007 OVC011 24/23  
A2993 RMK AO2 WSHFT 2008 LTG DSNT E AND SE AND  
NW ACFT MISHAP P0154 T02390233 \$=

SP 26/07/2016 20:17-> SPECI KSGR 262017Z 18013G19KT 3SM +TSRA BR FEW008 BKN011  
OVC018 24/23 A2994 RMK AO2 LTG DSNT E AND NW ACFT  
MISHAP P0097 T02440233 \$=

SP 26/07/2016 20:06-> SPECI KSGR 262006Z 13008KT 3SM +TSRA BR FEW007 BKN013 OVC037  
24/23 A2994 RMK AO2 LTG DSNT E AND W AND NW P0027  
T02440228 \$=

SP 26/07/2016 20:01-> SPECI KSGR 262001Z 13004KT 3SM +TSRA BR BKN015 BKN025 OVC047  
24/23 A2994 RMK AO2 LTG DSNT NE AND E AND W P0008  
T02440228 \$=

SA 26/07/2016 19:53-> METAR KSGR 261953Z 30007KT 10SM -TSRA SCT015 BKN035 OVC060  
24/23 A2993 RMK AO2 LTG DSNT NW-E TSE24B32 SLP138  
P0021 T02440228=

Any answers that Brian Hirsch and the KC ASOS folks have would be helpful! Have a super morning,



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