



# National Transportation Safety Board

Office of Aviation Safety / Operational Factors Division (AS-30)

## ATC Services Review Worksheet

**Date of Event (UTC)**

Jun 30, 2024

**Review Date**

Jun 26, 2025

**Time of Event (UTC)**

1755

**Time of Event (LCL)**

1355 EDT

**Investigation Number**

ERA24FA283

**Keys Number**

194574



CHART



AIRFIELD



SIAP/SID/STAR

A review of the ATC services provided in the above incident/accident was conducted by an ATC Investigator. Investigative work was limited to a review of the factual data collected over the course of the investigation and consideration of the current rules, regulations, and procedural guidance current at the time. The ATC investigator did not travel to the scene, nor to any ATC facilities in support of this investigation. Additionally, the ATC investigator did not conduct any personnel interviews, and all investigative work was conducted from their assigned office.

**ATC Investigator:** Casey Ogden, ATC Accident Investigator



SRT RELEASE APPROVED

**Involved ATC Facilities:** Facility 1: ZBW

Facility 2:

Facility 3:

Facility 4:

**Involved Aircraft:** Aircraft 1: N85PG

Aircraft 2:

Aircraft 3:

Aircraft 4:

☒ Data Requested

☐ NOTAM Issues

**Surveillance Data Source**

**Audio Data Source**

☒ ATC Procedures

☐ Safety Improvements

FAA ADS-B Data

FAA Certified Audio

### PRELIM Summary Information - SAFTI

N85PG/PA46 was en route from the Albert S Nader (N66) Airport, NY to the West Virginia Yeager (CRW) Airport, WV, when they crashed 7 miles east of the Sidney Municipal (N23) Airport, NY under unknown circumstances. N85PG was the subject of an ALNOT. ATC services were provided by Boston ARTCC (ZBW).

### Accident Location - SAFTI



## ATC Service Review Summary

A thorough review of certified data related to this event was conducted. The following deficiencies were noted in air traffic control (ATC) services.

1. Facility identification was not provided on initial contact to N85PG.
2. The clearance to CRW for N85PG to did not include required phraseology.
3. The weather call to N85PG did not include depicted extreme precipitation and did not include required phraseology.
4. The hazardous inflight weather advisory did not include required phraseology.
5. The altimeter setting was not provided to N85PG.
6. No PIREPs (pilot reports) were solicited or disseminated to N85PG.

These deficiencies were not considered causal or contributory in this event.

## ATC Supporting Data

1. Certified ATC audio (3 files).
2. Automatic dependent surveillance-broadcast (ADS-B) data.
3. FAA Aircraft Accident Package
4. FAA Covered Event Review (CER)

## ATC Procedural References

FAA Order JO 7110.65AA, Air Traffic Control, stated in part:

### 2-4-8. RADIO MESSAGE FORMAT

Use the following format for radio communications with an aircraft:

- a. Sector/position on initial radio contact:
  1. Identification of aircraft.
  2. Identification of ATC unit.

### 2-6-2. PIREP SOLICITATION AND DISSEMINATION

Emphasis must be placed on the solicitation and dissemination of Urgent (UUA) and Routine (UA) PIREPs. Timely dissemination of PIREPs alerts pilots to weather conditions and provides information useful to forecasters in the development of aviation forecasts. PIREPs also provide information required by ATC in the provision of safe and efficient use of airspace. This includes reports of strong frontal activity, squall lines, thunderstorms, light to severe icing, wind shear and turbulence (including clear air turbulence) of moderate or greater intensity, braking action, volcanic eruptions and volcanic ash clouds, detection of sulfur gases in the cabin, and other conditions pertinent to flight safety. Controllers must provide the information in sufficient detail to assist pilots in making decisions pertinent to flight safety.

#### NOTE-

Routine PIREPs indicating a lack of forecasted weather conditions, for example, a lack of icing or turbulence, are also valuable to aviation weather forecasters and pilots. This is especially true when adverse conditions are expected or forecasted but do not develop or no longer exist.

- a. Solicit PIREPs when requested, deemed necessary or any of the following conditions exists or is forecast for your area of jurisdiction:
  1. Ceilings at or below 5,000 feet. These PIREPs must include cloud bases, tops and cloud coverage when available. Additionally, when providing approach control services, ensure that at least one descent/climb-out PIREP and other related phenomena is obtained each hour.
  2. Visibility (surface or aloft) at or less than 5 miles.
  3. Thunderstorms and related phenomena.
  4. Turbulence of moderate degree or greater.
  5. Icing of light degree or greater.
  6. Wind shear.
  7. Braking action reports less than good.
  8. Volcanic ash clouds.
  9. Detection of sulfur gases (SO<sub>2</sub> or H<sub>2</sub>S), associated with volcanic activity, in the cabin.

#### NOTE-

1. The smell of sulfur gases in the cockpit may indicate volcanic activity that has not yet been detected or reported and/or possible entry into an ash-bearing cloud. SO<sub>2</sub> is identifiable as the sharp, acrid odor of a freshly struck match. H<sub>2</sub>S has the odor of rotten eggs.
2. Pilots may forward PIREPs regarding volcanic activity using the format described in the Volcanic Activity Reporting Form (VAR) as depicted in the AIM, Appendix 2.

- b. Record with the PIREPs:

1. Time.
2. Aircraft position.

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3. Type aircraft.
4. Altitude.
5. When the PIREP involves icing include:
  - (a) Icing type and intensity.
  - (b) Air temperature in which icing is occurring.
- c. Obtain PIREPs directly from the pilot, or if the PIREP has been requested by another facility, you may instruct the pilot to deliver it directly to that facility.

PHRASEOLOGY-

REQUEST/SAY FLIGHT CONDITIONS. Or if appropriate, REQUEST/SAY (specific conditions; i.e., ride, cloud, visibility, etc.) CONDITIONS. If necessary, OVER (fix), or ALONG PRESENT ROUTE, or BETWEEN (fix) AND (fix).

- d. Disseminate PIREPs as follows:

1. Relay pertinent PIREP information to concerned aircraft in a timely manner

2-6-4. ISSUING WEATHER AND CHAFF AREAS

- a. Controllers must issue pertinent information on observed/reported weather and chaff areas to potentially affected aircraft. Define the area of coverage in terms of:
  1. Azimuth (by referring to the 12-hour clock) and distance from the aircraft and/or
  2. The general width of the area and the area of coverage in terms of fixes or distance and direction from fixes.

NOTE-

Weather significant to the safety of aircraft includes conditions such as funnel cloud activity, lines of thunderstorms, embedded thunderstorms, large hail, wind shear, microbursts, moderate to extreme turbulence (including CAT), and light to severe icing.

PHRASEOLOGY-

WEATHER/CHAFF AREA BETWEEN (number) O'CLOCK AND (number) O'CLOCK (number) MILES, and/or (number) MILE BAND OF WEATHER/CHAFF FROM (fix or number of miles and direction from fix) TO (fix or number of miles and direction from fix).

- b. Inform any tower for which you provide approach control services of observed precipitation on radar which is likely to affect their operations.
- c. Use the term "precipitation" when describing radar-derived weather. Issue the precipitation intensity from the lowest descriptor (LIGHT) to the highest descriptor (EXTREME) when that information is available. Do not use the word "turbulence" in describing radar-derived weather.
  1. LIGHT.
  2. MODERATE.
  3. HEAVY.
  4. EXTREME.

2-6-6. HAZARDOUS INFLIGHT WEATHER ADVISORY

Controllers must advise pilots of hazardous weather that may impact operations within 150 NM of their sector or area of jurisdiction. Hazardous weather information contained in the advisories includes Airmen's Meteorological Information (AIRMET) (except over the CONUS), Significant Meteorological Information (SIGMET), Convective SIGMET (WST), Urgent Pilot Weather Reports (UUA), and Center Weather Advisories (CWA). Facilities must review alert messages to determine the geographical area and operational impact of hazardous weather information. Advisories are not required if aircraft on your frequency(s) will not be affected.

NOTE-

In recognition that there are several uses/definitions for the acronym CONUS, references herein to CONUS are specific to the contiguous United States (i.e., "lower 48").

- a. Controllers must broadcast a hazardous inflight weather advisory on all frequencies, except emergency frequency, upon receipt of hazardous weather information. Controllers are required to disseminate data based on the operational impact on the sector or area of control jurisdiction. Pilots requesting additional information must be directed to contact the nearest Flight Service.

PHRASEOLOGY-

ATTENTION ALL AIRCRAFT. HAZARDOUS WEATHER INFORMATION (SIGMET, Convective SIGMET, AIRMET, Urgent Pilot Weather Report (UUA), or Center Weather Advisory (CWA), Number or Numbers) FOR (specific weather phenomenon) WITHIN (geographical area), AVAILABLE ON FLIGHT SERVICE FREQUENCIES.

2-7-2. ALTIMETER SETTING ISSUANCE BELOW LOWEST USABLE FL

- a. TERMINAL. Identify the source of an altimeter setting when issued for a location other than the aircraft's departure or destination airport.
- b. EN ROUTE. Identify the source of all altimeter settings when issued.

PHRASEOLOGY-(If the altimeter is one hour old or less), THE (facility name) ALTIMETER (setting). or (If the altimeter is more than one hour old), THE (facility name) ALTIMETER (setting) MORE THAN ONE HOUR OLD.

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c. Issue the altimeter setting:

1. To en route aircraft at least one time while operating in your area of jurisdiction. Issue the setting for the nearest reporting station along the aircraft's route of flight:

4-2-1. CLEARANCE ITEMS

Issue the following clearance items, as appropriate, in the order listed below:

a. Aircraft identification.

b. Clearance limit.

1. When the clearance limit is an airport, the word "airport" must follow the airport name.

**FAA Certified ADS-B Data**

The below information and included graphics were developed using certified Automatic Dependent Surveillance - Broadcast (ADS-B) data provided by the FAA. These data are direct source data that has extracted and exported by the FAA's Office of Accident Investigation and Prevention (AVP-100) using the SBS Analysis Tool (SAT). A surveillance system in which an aircraft or vehicle to be detected is fitted with cooperative equipment in the form of a data link transmitter. The aircraft or vehicle periodically broadcasts its GPS-derived position and other information such as velocity over the data link, which is received by a ground-based transmitter/receiver (transceiver) for processing and display at an air traffic control facility. ADS-B data is subject to coverage limitations like any other system that relies on line-of-sight signal transmission, so there can be portions of a flight track that are unavailable, or will have to be combined with other source data for the most complete flight track.

**Pertinent NOTAM Information**

N/A

**Flight Track Information**

ADS-B data were examined in the services review and was used to create the overhead aerial view graphic image. The following is a summary of this data. All times are in eastern daylight time (EDT), and altitudes are in geometric altitude (galt). Track data indicates that the accident airplane departed runway (RWY) 24 at Albert S. Nader Regional Airport (N66), in Oneonta, NY, at about 1343. After departure, the airplane flew generally south-westbound climbing to an altitude of about 10,000 feet momentarily then slowly beginning to descend. When the airplane had flown about 24 nautical miles (nm), it made a right 270 degree turn rolling out generally eastbound briefly until entering a clockwise spiraling descent. Track data was lost approximately 23 nm SW of N66 at about 1355.

- First Track Data: 1343:49 EDT / 2125 galt / Lat: 42.514901 / Lon: -75.080245
- Last Track Data : 1355:04 EDT / 5900 galt / Lat: 42.235909 / Lon: -75.261455

**ATC Communications**

The following communications occurred with ZBW Delancy sector radar position controller (R24), the ZBW Delancy sector relieving controller (R24-R), the pilot of N85PG, and an unidentified speaker. All times are in EDT and altitudes are in msl unless otherwise stated. Transmissions not germane to the accident sequence have been omitted for brevity.

| Time    | - Ident | - Message                                                                                                                                                          |
|---------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1344:17 | - N85PG | - boston center this is malibu eight five papa golf                                                                                                                |
| 1344:23 | - R24   | - malibu eight five papa golf go ahead                                                                                                                             |
| 1344:27 | - N85PG | - yeah id like to get my uh just taking off from the ralf uh nader I mean the uh the nader regional airport november sixty six id like to get my ifr clearance     |
| 1344:39 | - R24   | - november eight five papa golf squawk seven three five six                                                                                                        |
| 1344:42 | - N85PG | - squawk seven three five six eight five papa golf                                                                                                                 |
| 1345:08 | - R24   | - november five papa golf uh radar contact five south west of uh oneonta cleared uh to charlie romeo whiskey as filed climb and maintain one zero thousand for now |
| 1345:21 | - N85PG | - okay cleared to the uh uh charlie romeo whiskey as filed climbing ten thousand eight five papa golf                                                              |
| 1345:36 | - R24   | - november five papa golf uh there will be areas of moderate and heavy precipitation off your right side for the next uh thirty miles then mostly clear after that |
| 1345:46 | - N85PG | - roger eight five papa golf thank you                                                                                                                             |
| 1345:58 | - R24   | - november five zulu golf uh areas of moderate to extreme precipitation twelve o clock in about uh twenty five miles extending for five miles                      |
| 1346:18 | - N85PG | - five papa golf                                                                                                                                                   |
| 1346:20 | - R24   | - five papa golf that was for a november five zulu golf                                                                                                            |
| 1346:23 | - N85PG | - oh sorry                                                                                                                                                         |
| 1349:21 | - R24   | - november five papa golf climb and maintain one two thousand                                                                                                      |
| 1345:25 | - N85PG | - climb and maintain one two thousand eight five papa golf                                                                                                         |

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1349:55 - R24 - [position relief briefing] okay here we go this is twenty three twenty four status on the board equipment no thats the old checklist new checklist uh you already said you had items one through three so number four weather uh theres weather I dont know if you were aware of that or not but there is a lot of it down here um this one I think the tops are around twenty four its not really that scary the five papa golf went uh I mean he just took off oneonta and drove right through it didnt really care jet speed deviated just barely I gave him uh I gave him extol rockdale filps he went maybe two miles north of rockdale and then down and probably only because he was at nineteen so uh this zulu golf I think is deviating a little right for eagle for here he said he was vmc when he check when I uh told him about it and then uh I was like okay um uh romeo hotel he said he has the weather youll have to read him the notams he wanted direct to citet I cant remember which approach that one is on I think its maybe six uh yeah uh no uh must be this one yeah right here so he wants that one for looks like the rnav two four would be my guess there I havent pointed him out for lower or anything yet um and that is it uh area e is gonna hold this uh united so we are gonna run him and uh that is it questions

1351:21 - R24-R - no questions [indiscernible]

1351:51 - R24-R - attention all aircraft convective sigmet one one echo and one two echo valid until one niner five five zulu and uh the new england eastern sea board and coastal waters more information is available on flight service frequencies

1353:28 - R24-R - november eight five papa golf it looks like you are deviating left for weather and what fix do you wanna go uh downstream to

1353:45 - R24-R - november eight five papa golf are you back on course

1354:02 - R24-R - november eight five papa golf boston

1354:05 - N85PG - yeah I lost [unidentified speaker: oh my god]

1354:32 - N85PG - yeah boston I I lost

1354:45 - R24-R - november eight five papa golf that was broken um say that again

1354:53 - N85PG - [indiscernible]

1355:20 - UNK - help please help us please help us please help us please help

1355:49 - R24-R - november eight five papa golf boston center

1356:03 - R24-R - november eight five papa golf boston center

1356:24 - R24-R - november eight five papa golf radar contact lost last seen altitude was six thousand four hundred

----- end of pertinent transmissions -----

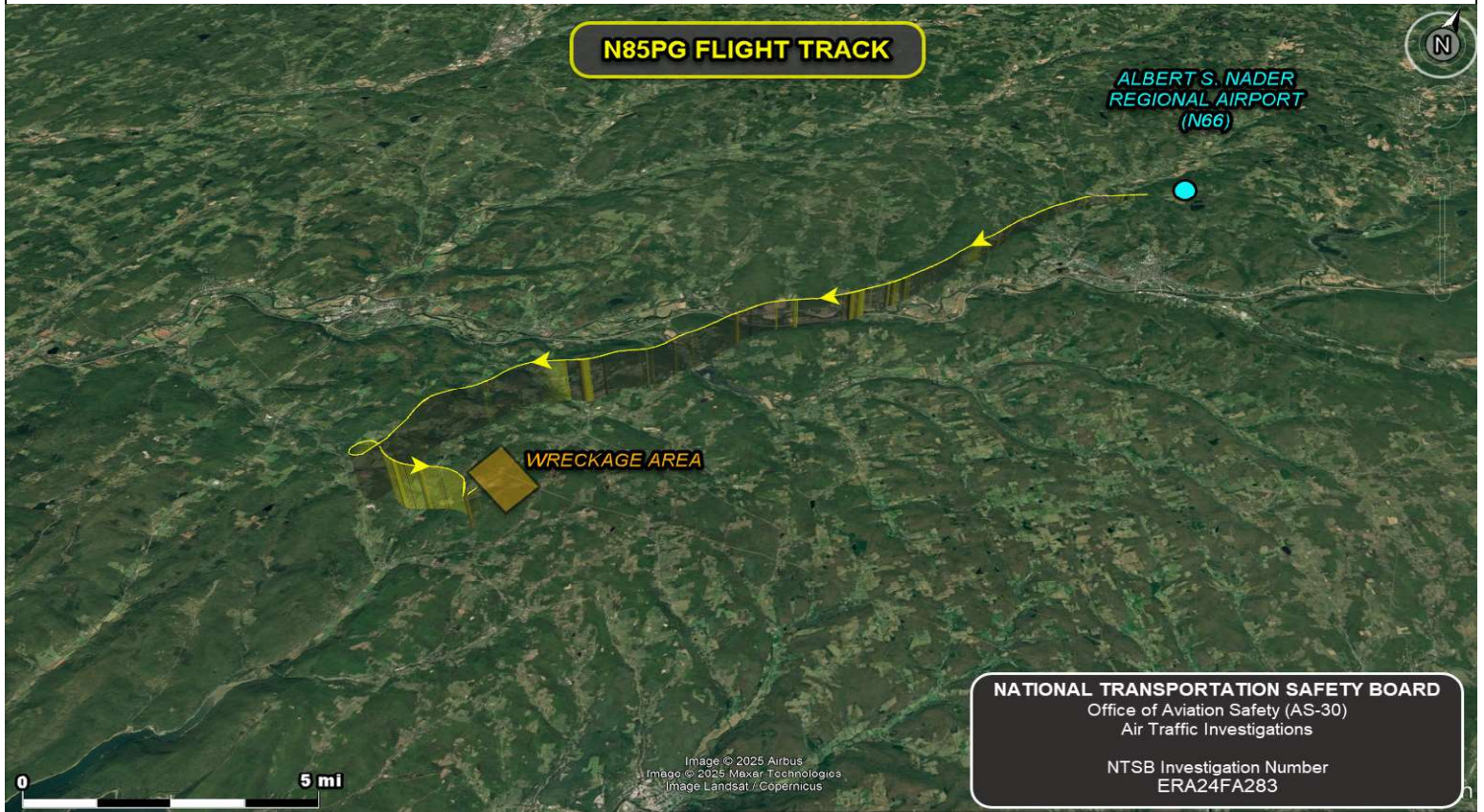
### Included Figures

Figure 1. Aerial graphic view illustrating the flight path of N85PG.

### Docket Attachments

- Certified ATC Audio (3 files).
- ADSB data (kml and excel files)
- FAA Aircraft Accident Package
- FAA Covered Event Review (CER)

Figure 1



**Caption:** Aerial graphic view illustrating the flight path of N85PG.

ADD

**Caption:**

ADD