



## **NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Washington, D.C. 20594

February 21, 2015

### **Attachment 6 – Witness Statements**

## **OPERATIONAL FACTORS**

**DCA15MA019**

## Jennifer Whaley

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**From:** Matthew Stinemetze  
**Sent:** Thursday, November 13, 2014 4:33 PM  
**To:** Mark Stucky  
**Cc:** Jennifer Whaley  
**Subject:** RE: Statment requests

### Name/age/title and years with TSC/VG/Scaled

Matthew Wayne Stinemetze  
 Will be (b) (6)

Tier-1B Program Manager (SS2 program)  
 16 years, 1 month, 5 days, 9 Hours, and 30 Minutes

### Roles/responsibilities

at scaled: design engineer, project engineer, engineering hiring manager, program manager, flight test engineer  
 On T1b: Started as SS2 project engineer, promoted to overall Program Manager. Also one of many flight test engineers

### Role during the mission

In preparation for mission, Program manager, FRR host and  
 On day of mission, Flight test engineer in the Wk2/mothership

### Observations seen during the accident flight

All nominal during climb up and racetrack inbound. I unbuckled and stood up to film the release at approx. T-4min. Released on queue at which point we pulled up and bunted over top. We started to maneuver & descend when it was clear something was amiss. At some point we made a moderate reverse to the left which would have put us crossing the intended SS2 flight path at approx. 90°. I could see what looked like the rocket motor plume behind us, but it abruptly ended. We had no visual throughout the descent. Release was the last we saw of SS2 until we circled the crash/ chute site after everything was on the ground.

### Comms heard during the accident flight

Too many to mention

Normal comms from takeoff through run in. After release don't recall exact details... something like :  
 "good rates" shortly into the burn.

Very briefly approx. 10sec heard "knock it off, knock it off, knock it off".

Shortly later "lost TM"

At some time later due to adrenaline I cannot accurately comment, heard extra call visual and "vehicle is in a spin".

Shortly later something like "one good chute"

Extra called "thumbs up" from chute. Chatter regarding reconnoitering other impact sites

Then lots of comms regarding brining in the SAR's helos.

I heard late into the rescue, what I interpreted was the NTPS helo something like "one soul onboard, good vitals, Siebold  
 \_Middle name\_Peter"

We RTB'ed once we knew the survivor was onboard.

### Actions taken after the accident

Immediately after we knew something was amiss, I continued mobile around the WK2 cabin in search of SS2. Because I'm not strapped in I usually have the best vantage to get visual. We never got visual.

Once everything was on the ground we decided to circle (first at 15Kft then at 10kft) providing high cap over the downed pilot and numerous wreckage sites. We conferred and decided not to leave until the survivor was onboard. We circled, but from 10kft, we could barely make out the (site2) vehicle crash site. We saw Extra below and we circled the extents

of the debris field. We never had visual on the chute so asked if "extra could see us overhead" he confirmed we were circling the downed pilot and we radioed a lat/long to base. Pilots continued to relay to Base/ Joshua when extra was low and bad comms. Once survivor was onboard SAR aircraft we RTB'd Mojave. We were immediately picked up on egress and shuttled to the Scaled conference room where we were quarantined we were told to call our spouses who were aware that something had happened. The entire mission control team joined us at which time we recorded our immediate thoughts on the incident which were collected by management. I went home.

Matt Stinemetze



**From:** Mark Stucky  
**Sent:** Wednesday, November 05, 2014 8:17 AM  
**To:** Ken Baker; Cedric Gould; Matthew Stinemetze  
**Cc:** Jennifer Whaley; Liz Serrano  
**Subject:** Fwd: Statment requests

Cedric, Ken, Matt - Please see below, the NTSB wants written statements from you three. The easiest way might be to go to Security and check out the statements that you wrote last Friday and simply add the header info asked for below.

Ask if you have any questions. Please email me when you've provided them to Jenn or security. Or you can give them to me and I'll route them.

Thx,  
 Forger

Sent from my iPhone

Begin forwarded message:

**From:** Lawrence David <[david.lawrence@ntsb.gov](mailto:david.lawrence@ntsb.gov)>  
**Date:** November 5, 2014 at 7:48:36 AM PST  
**To:** <[mark.stucky@scaled.com](mailto:mark.stucky@scaled.com)>, <[David.Mackay@virgingalactic.com](mailto:David.Mackay@virgingalactic.com)>  
**Cc:** <[david.gerlach@faa.gov](mailto:david.gerlach@faa.gov)>, <[katherine.wilson@ntsb.gov](mailto:katherine.wilson@ntsb.gov)>, Ward Lorenda <[wardl@ntsb.gov](mailto:wardl@ntsb.gov)>  
**Subject:** Statment requests

Forger/Dave

I need statements from the following individuals:

Statements from :

- Cedric Gould
- 
- 
- Ken Baker
- Matt Stinemetze (WK2 engineer)
- 

Please request statements include the following:

- Name/age/title and years with TSC/VG/Scaled
- Roles/responsibilities
- Role in the during the mission
- Observations seen during the accident flight
- Comms heard during the accident flight
- Actions taken after the accident

Captain David A. Lawrence  
Senior Air Safety Investigator  
Operational Factors Division (AS-30)  
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Jose Stevens

### My Observations of PFO4

I was present in the Sealed video room, which is located below the control room in Hangar 18. A couple of meter temps were reported out of spec, but only by 1 or 2 degrees. Decision was made to go with drop.

At drop, I went outside. I witnessed a clean plume that lasted for about 5 seconds and then shut off. Some seconds later, I believe I saw Wk 2 making a turn. I lost sight of Wk 2 after ~30 seconds and did not see either SS 2 or Wk 2 from that point on.

DAVID WOLFORD  
david.wolford@whittinghillaerospace.com

10/31/2014

Arrived at viewing ~~site~~ <sup>site</sup> by tower at 7:00am

Watched SS2 & WK2 sit on runway for 2 plus hours waiting for nitrous to be on condition. Watched nominal take off.

Saw WK2 & SS2 again 4 minutes before drop. Followed it until drop. Saw SS2 separate & engine light. ~~within 5 seconds~~

Saw smoke for about 58 seconds then saw smoke cut out. About 2 or 3 seconds later saw short (less than 1 second) puff of smoke. Saw SS2 continue pulling up, within several seconds it appeared to slow to a stop & it seemed like it began falling back, ~~lost~~ lost visual at this point.

During drop & ~~test~~ fire I could over hear radio frequency 123.225. Immediately after small puff of smoke described above I heard "knock it off, knock it off" called. Shortly after I could hear calls of one chute with person below sighted. Could not distinguish any other calls.

## Jarret Morton

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**From:** David Herman  
**Sent:** Friday, October 31, 2014 12:25 PM  
**To:** Jarret Morton  
**Subject:** My observations

Hi Jarret,

Below is summary of my observation of today's flight. I was using a pair of 8X30 binoculars.

I did not observe the release as it was cloudy and hard to locate WK2 just before the release. I saw the plume from SS2 as RM started and immediately begin using the binoculars. I did see the flames from the RM exhaust for only a couple seconds when I heard over the radio something like "back it off". The RM engine stopped at this point and I was able to watch SS2 still climbing for a couple more seconds. Then I lost track of it in the clouds.

Sorry I do not have more info. Let me know if there is anything else I could do.

Dave

POWERED FLIGHT 4 - 10/31/2014 - EZEK LASSEN

I watched powered flight 4 from the base of tower, from TAKE OFF UNTIL BOOSTED FLIGHT.

IN THE EXCITEMENT, I DIDN'T COUNT HOW LONG THE MOTOR BURNED FOR, BUT IT COULDN'T HAVE BEEN FOR MORE THAN 5-10 SECONDS MAX. WITH SUCH A SHORT BURN, I INSTANTLY WORRIED AND LOOKED FOR SOME SIGN OF AN EXPLODED MOTOR CASE OR TANK. NO OBVIOUS WITNESS ~~WAS~~ OF SUCH AN EVENT WAS OBSERVABLE FROM THE GROUND, SO I ASSUMED MOTOR WAS SHUT DOWN INTENTIONALLY.

THROUGH THE CLOUDS, IT LOOKED LIKE THE SPACE SHIP WAS FALLING PRE-MATURELY, BUT THEN I COULD SEE CONTRAILS OF WHITE KNIGHT Z, AND I WAS CONFUSED IF I WAS WATCHING SPACE SHIP OR WK II EXPERIENCE EXTREME MANEUVERS.

AFTER REVIEWING MY PHOTOS, I'M ASSUMING SSZ EXPERIENCED A IN FLIGHT STRUCTURAL FAILURE, AND THAT SITE WAS TUMBLING ~~WHITE~~ SSZ. MY THIRD PICTURE LOOKS LIKE A MAJOR SECTION OF THE SHIP WAS LEFT BEHIND.



10/31/14

Sarret A. Molton

11:06 AM

Report

Tower viewing location w/ Binoculars

- Drop

- Ignition, plume <sup>fire</sup> visible at first

- Secondary white object visible early

- Plume fire no longer visible

- SS2 continuing to climb w/ white contrail (no plume fire)

- SS2 losing altitude, possibly tumbling

- lost site

31 OCT 2014

Jeff A. Maki

10:39 AM

Report

Location: Tower viewing station

Equipment: Binoculars 7x50

Spaceship deployed successfully, dropped and fired main motor. 3-5 seconds in it appeared that the fire had been extinguished. Spaceship continued climbing and leveled off.

~~Space~~ At around the level off point it appeared that a glowing/shiny object was ejected from spaceship ~~and~~ ~~parallel~~ parallel with the ground. Spaceship began its decent and I lost it ~~and~~ in the clouds. The ejected ~~sp~~ object appeared to glow for 5 or so seconds after ejection and also started its decent. I lost it in the clouds after the glowing ended. Could not regain a visual on either target for the remainder of viewing.

Jeff A. Maki



31 OCT 2014  
10:46 AM

TSC000005

- Al noted that 552/WK2 were delayed by 2 hours on the runway. He wondered if the fill to T/O time was nominal?
- On drop, I expected ignition to be much less visible, per what we observe at Ulusaba. On ignition I did not observe a plume, but did see a trail. It lasted through what I expected was the start of the gamma turn, and then I lost it in the clouds.
- The vehicle appeared (via its trail) to accelerate nominally. Therefore I assume the  $RM_{\wedge}$  start-up was nominal, ~~that is~~  
~~signature~~

— End —

IAN WHITTINGHILL

12:03p 10/31/14

(b) (6)

- Observing by eye from Miqave tower
  - Listening to com on 123.225
  - Stills and video of <sup>1</sup>takeoff only
- mated WK2+SS2

Liftoff from runway 8 climbout appeared nominal. I am unfamiliar with the N20 conditioning in SS2 but the ~2 hour delay to see proper temps was unexpected. Clouds made observing difficult.

After release, I heard on the radio:

Maach 1, knock it off (repeated 3 times),  
no telemetry, no visual, one chute



Broc Mitchell

(b) (6)

Today, October 31, 2014, I was operating a digital SLR camera to broadcast a view of the powered flight to off-site personnel.

The camera had a lens with an effective focal length of 800 mm.

I was viewing the WK2/552 Flight on the screen of the camera. From this view, I observed what seemed to be a typical release, ignition, and g-curve. After a relatively short climb the rocket plume appeared to terminate. The climb of the spaceship also seemed to halt abruptly. The definition of video was such, combined with clouds in the background, that I could not discern any debris. I did not observe any flames or explosions.

Shortly after the event, I left the site of filming to deploy to my post for support of emergency response.

The location of filming was the North-East corner of B79A. No recording was made of this viewing.

Broc Mitchell

Byron Henning

10/31/2014

1108 hour

Thoughts on events of PFO4.  
(Also seen through 8X binoculars)  
- Drop seemed long

- No clear sign of ignition as expected (may be normal)  
↳ no fuel-rich burst of igniters and sustainers  
↳ did we coldflow (signs of

vapor  $N_2O$  or contrails?)  
- signs of some flow for a few seconds then plume stopped, then more

vapor  
- Then I lost sight of vehicle

- The ignition or plume I did see appeared to me magenta in color ( $N_2O$  decomposition)  
(Like color but they ran low)

- Appearance of  $N_2O$  cloud after cooling plume visual

- all of my thoughts are speculative  
- very good chance the motor can fire from what I could see



Mojave Air & Space Port  
Aircraft Incident Report  
October 31, 2014

At approx. 1000 hrs., at the direction of Stuart Witt and Fire Chief Richard Fauble I boarded a NTPS helicopter to provide rescue and emergency medical services for report of a downed aircraft. Upon landing near Cantil road I departed the aircraft with a Flight Surgeon and NTPS photographer who assisted me with patient care. We took our trauma bag, AED, and O2 bags with us. Upon arrival we located a male pilot in the dirt in a sitting position. I observed a contusion over his right eye and, asked him if he had any additional injuries, and he stated that he had a sore right shoulder, possible broken right arm, injuries to his right wrist and possible broken right ribs.

Patient had a level of consciousness x 3 and responded to verbal stimuli. He also had dirt and debris in his eyes. He had no shortness of breath, and good ABC's, good motor function, and good cap refill of all extremities. We supported his neck and used KCSO deputies for inline immobilization. We used his parachute as stabilization and to protect him from rotor wash, and the elements. KCFD 408 landed approximately 5 minutes later, and we used the O2, trauma gear, and backboard off of their aircraft. I finished my primary trauma assessment and checked DCAPBTLS of all extremities. We then finished C-Spine precautions, continued to administer hi-flow O2, and packaged him for transport. Mercy Air-14 landed, I briefed them on the condition of the patient and then we loaded him into MA-14. He was then transported in stable condition to AV Hospital.

The NTPS helicopter departed to check on the Space Ship-2 crash site as I was administering treatment to the first pilot. Afterward we loaded all of our gear, and returned to Mojave Air & Space Port via KCFD helicopter 408.

(b) (6)

  
Patrick Campbell  
Firefighter/ EMT  
Mojave Air & Space Port

On 10/31/14 while working on Mercy Air 14 based at the Mojave Air & Spaceport, a report for an aircraft accident was received at 1022 hours through the Kern County Emergency Communications Center. We were placed on standby at 1043 hours at base. Our crew was ready to respond immediately and we called Kern County Emergency Communications Center via landline and advised them of our immediate availability to launch to scene. We were told to remain on standby which we did. At 1102 hours Kern County fire helicopter 408 who was on scene with the pilot of the accident aircraft requested us to launch to their location to transport the injured pilot to the hospital. We had an approximate flight time on 12 minutes from our base to the scene.

We landed on scene at 1118 hours and received a brief report from staff with Mojave Air & Spaceport fire department regarding the condition of the patient involved. We made contact with the patient and quickly determined his injuries and level of concussions. We moved the patient to the aircraft and prepared for transport to Antelope Valley Medical Center in Lancaster, CA. We lifted off from scene at 1122 hours en route to Antelope Valley Medical Center.

During transport I was talking with the patient to obtain a more in depth history of the accident. The patient told me that he was outside of the aircraft and that he was in a free fall from an altitude of approximately 46,000 feet and that his parachute opened at approximately 10,000 feet. I also obtained further history regarding his injuries as well. At 1147 hours we landed without incident at Antelope Valley Medical Center and turned over the patient to the Emergency Department staff and relayed all information regarding patient condition and mechanism of injury.

Brent Eichelberger, FP-C  
Flight Paramedic, Mercy Air

(b) (6)



On 10/31/2014 I was on duty at Mercy Air 14. At approximately 10:20 we were outside awaiting the landing of Virgin Galact spaceship 2. We witnessed the flight school next to us frantically pull out a helicopter out and load equipment from the fire truck. They eventually lifted with the fireman on board. We were out of service at the time with maintenance. Our pilot Ed was just landing and I notified him that we needed to go back in service as quickly as possible in which we did. We were put on standby immediately for an alert 3. I spoke with ECC and asked if they wanted us to launch as it was an auto launch area and we could be closer if needed. They advised to remain on standby.

At approx. 1100 we were requested to launch to the scene. We transported the lone survivor of the crash. My interaction with the pilot was minimal. My partner did the initial assessment on the ground. We received report from the fireman on scene who stated "patient is awake and alert, does recall being thrown from the aircraft and tumbling through the air, patient does not remember whether or not he pulled the cord for his parachute"

During flight I asked if he was having pain. He was able to tell me that he had pain rated at an 8. I asked if he was able to recall what happened and he responded yes. Upon arrival at the hospital he was able to tell me his full name and date of birth. Other than that I did not ask any further questions regarding the accident or what he was able to remember.

Thank You

Kathy BransonRN

From: Edmund M. Keefe, Mercy Air 14 pilot and Air Methods employee (661 816 6004)

Subject: Mercy Air 14 pilot statement from Edmund Keefe regarding aircraft mishap

On October 31<sup>st</sup> I was the medevac pilot that flew Pete Siebold from the crash site to Antelope Valley Hospital. Around 1000 AM I was conducting a compass rose swing in aircraft 407 with the mechanic. We finished our compass work and flew back to our dolly. On the way back I heard on Mojave tower frequency a "request for the helicopter." We landed and called ECC and Aircom to put us back in service in the county. While I was doing my post flight walk around I noticed a lot of people pushing a Huey out of the test pilot hangar. There were firefighters running around and jumping in the Huey with medical bags. I had heard the request for a "helicopter" on the radio and now I was watching a lot of people cold starting a Huey and getting ready to launch. I asked the nurse Kathy Branson to call ECC and see if they wanted us to launch. ECC said they did not want us to launch. They put us on stand by some time after that phone call. It was strange to me that they did not want us to launch because we all knew that there had been a major malfunction with the rocket and at least one parachute had deployed.

We, the aircrew, waited at the aircraft listening to radio traffic on ECC about other helicopters launching to the crash site. After waiting by the aircraft for 20 minutes we finally got the launch call. We jumped in and flew about 10 minutes to the crash site. I believe I was the 5<sup>th</sup> helicopter to arrive at the crash site. We landed next to the pilot as the firefighters were giving first aid. We were on the deck for about 5 minutes. The ground team did a great job packaging the victim and getting him into our helicopter. We departed the crash site and proceeded to Antelope Valley Hospital which took about 20 minutes of flight time. The Mercy 14 medical team transitioned the care of the victim to the ER staff at Antelope Valley Hospital.

All emergency situations are dynamic and fluid but I believe Pete Siebold was very lucky to survive this crash. I estimate that Pete Siebold lay on the ground for 30 to 40 minutes before Mercy 14 was given approval to respond.