

## Tim Sorensen

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**From:** Nancy McAtee  
**Sent:** Monday, March 24, 2025 3:34 PM  
**To:** Tim Sorensen; Helmandollar, Steven W (FAA)  
**Cc:** Matthew Fox; Michael Budinski  
**Subject:** Email report-CEN24LA291 (Review of Third Party Laboratory Fuel Testing Reports)  
**Attachments:** A250107007 (002)\_Redacted.pdf; A250107008 (002)\_Redacted.pdf; A250107009 (002)\_Redacted.pdf; A250107010 (002)\_Redacted.pdf

Tim,

Four fuel samples (Right wing, Left wing, Header tank and Filter) from the accident aircraft were submitted to an independent third-party laboratory for examination. The testing reports were sent to the Materials Laboratory for review. Redacted copies of the testing reports are attached to this email. The purpose of the testing was to determine if the samples met the specifications for ASTM D910-*Standard Specification for Leaded Aviation Gasolines*. The small sample volumes limited the types of testing that could be performed. Insufficient samples volumes did not allow for volatility or contaminate/particle testing to be completed. The following test methods were done on three of the samples. One sample (Filter) was evaluated using ASTM D130 only.

- ASTM D130-*Standard Test Method for Corrosiveness to Copper from Petroleum Products by Copper Strip Test*. This test determined the corrosiveness of the fuel when used with copper, brass, or bronze parts. Elevated corrosiveness can indicate degradation or adulteration of aviation gasoline.
- ASTM D1094-*Standard Test Method for Water Reaction of Aviation Fuels*. This test determined the presence of water-soluble components in aviation gasoline and turbine fuels. These components allow water to be entrained within the fuel rather than separating from the fuel.

The testing results for all four samples met the specifications for ASTM D910 for the test methods performed on each respective sample.

If you have any questions, please let me know.

Nancy B McAtee  
Senior Chemist  
RE-30



## CERTIFICATE OF ANALYSIS

National Transportation Safety Board  
490 L'Enfant Plaza E SW  
Washington, DC 20594  
Attn: Nancy McAfee  
[REDACTED]

Report Date: 1/31/2025  
Laboratory ID: A250107007  
Sample Type: Aviation Gas  
Sample Date 1/2/2025  
Sample ID: CEN24LA291 -  
Left Tank  
Customer PO#: CEN24LA291

| <u>Tests Requested</u>                        | <u>Result</u> | <u>Units</u> | <u>Test Method</u> | <u>Specification</u> |            |
|-----------------------------------------------|---------------|--------------|--------------------|----------------------|------------|
|                                               |               |              |                    | <u>min</u>           | <u>max</u> |
| Copper Strip Corrosion<br>(2 hours at 100 °C) | 1A            |              | ASTM D130          |                      | No.1       |
| Water Reaction Analysis                       |               |              | ASTM D1094         |                      |            |
| Volume Change                                 | 0             | mL           |                    |                      | ±2         |
| Interface Condition                           | 1             |              |                    |                      |            |
| Degree of Separation                          | 1             |              |                    |                      |            |

Where appropriate, these tests meet the specification standards of ASTM D910 for Aviation Gasoline.  
Note: All reported test results apply to sample as received.

Report Prepared by,

[REDACTED]

Brandon Parra, Lab Technician

Reviewed and Approved by,

[REDACTED]

Kara Ruckriegle, Technical Advisor



## CERTIFICATE OF ANALYSIS

National Transportation Safety Board  
490 L'Enfant Plaza E SW  
Washington, DC 20594  
Attn: Nancy McAfee  
[REDACTED]

Report Date: 1/31/2025  
Laboratory ID: A250107008  
Sample Type: Aviation Gas  
Sample Date 1/2/2025  
Sample ID: CEN24LA291 -  
Right Tank  
Customer PO#: CEN24LA291

| <u>Tests Requested</u>                        | <u>Result</u> | <u>Units</u> | <u>Test Method</u> | <u>Specification</u> |            |
|-----------------------------------------------|---------------|--------------|--------------------|----------------------|------------|
|                                               |               |              |                    | <u>min</u>           | <u>max</u> |
| Copper Strip Corrosion<br>(2 hours at 100 °C) | 1A            |              | ASTM D130          |                      | No.1       |
| Water Reaction Analysis                       |               |              | ASTM D1094         |                      |            |
| Volume Change                                 | 0             | mL           |                    |                      | ±2         |
| Interface Condition                           | 2             |              |                    |                      |            |
| Degree of Separation                          | 2             |              |                    |                      |            |

Where appropriate, these tests meet the specification standards of ASTM D910 for Aviation Gasoline.  
Note: All reported test results apply to sample as received.

Report Prepared by,

[REDACTED]

Brandon Parra, Lab Technician

Reviewed and Approved by,

[REDACTED]

Kara Ruckriegle, Technical Advisor





## CERTIFICATE OF ANALYSIS

National Transportation Safety Board  
490 L'Enfant Plaza E SW  
Washington, DC 20594  
Attn: Nancy McAfee  
[REDACTED]

Report Date: 1/31/2025  
Laboratory ID: A250107009  
Sample Type: Aviation Gas  
Sample Date 1/2/2025  
Sample ID: CEN24LA291 -  
Header Tank  
Customer PO#: CEN24LA291

| <u>Tests Requested</u>                        | <u>Result</u> | <u>Units</u> | <u>Test Method</u> | <u>Specification</u> |            |
|-----------------------------------------------|---------------|--------------|--------------------|----------------------|------------|
|                                               |               |              |                    | <u>min</u>           | <u>max</u> |
| Copper Strip Corrosion<br>(2 hours at 100 °C) | 1A            |              | ASTM D130          |                      | No.1       |
| Water Reaction Analysis                       |               |              | ASTM D1094         |                      |            |
| Volume Change                                 | 0             | mL           |                    |                      | ±2         |
| Interface Condition                           | 1B            |              |                    |                      |            |
| Degree of Separation                          | 1             |              |                    |                      |            |

Where appropriate, these tests meet the specification standards of ASTM D910 for Aviation Gasoline.  
Note: All reported test results apply to sample as received.

Report Prepared by,

[REDACTED]

Brandon Parra, Lab Technician

Reviewed and Approved by,

[REDACTED]

Kara Ruckriegle, Technical Advisor



**CERTIFICATE OF ANALYSIS**

National Transportation Safety Board  
490 L'Enfant Plaza E SW  
Washington, DC 20594  
Attn: Nancy McAfee  
[Redacted]

Report Date: 1/31/2025  
Laboratory ID: A250107010  
Sample Type: Aviation Gas  
Sample Date 1/2/2025  
Sample ID: CEN24LA291  
Filter  
Customer PO#: CEN24LA291

| <u>Tests Requested</u>                        | <u>Result</u> | <u>Units</u> | <u>Test Method</u> | <u>Specification</u> |            |
|-----------------------------------------------|---------------|--------------|--------------------|----------------------|------------|
|                                               |               |              |                    | <u>min</u>           | <u>max</u> |
| Copper Strip Corrosion<br>(2 hours at 100 °C) | 1B            |              | ASTM D130          |                      | No.1       |

Where appropriate, these tests meet the specification standards of ASTM D910 for Aviation Gasoline.  
Note: All reported test results apply to sample as received.

Report Prepared by,

[Redacted Signature]

Brandon Parra, Lab Technician

Reviewed and Approved by,

[Redacted Signature]

Danny Torres, Lab Supervisor