

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



MATERIALS LABORATORY

Specialist's Factual Report 25-065

September 25, 2025

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A. ACCIDENT INFORMATION

Location: Anchor Point, Alaska
Date: December 8, 2023
Vehicle: Piper PA-18-150
Investigators: Mark Ward AS-ANC
Clint Crookshanks AS-40

B. COMPONENTS EXAMINED

- Two (2) sections of wing fabric (outboard and inboard)
- Propeller blade with missing blade tip

C. EXAMINATION PARTICIPANTS

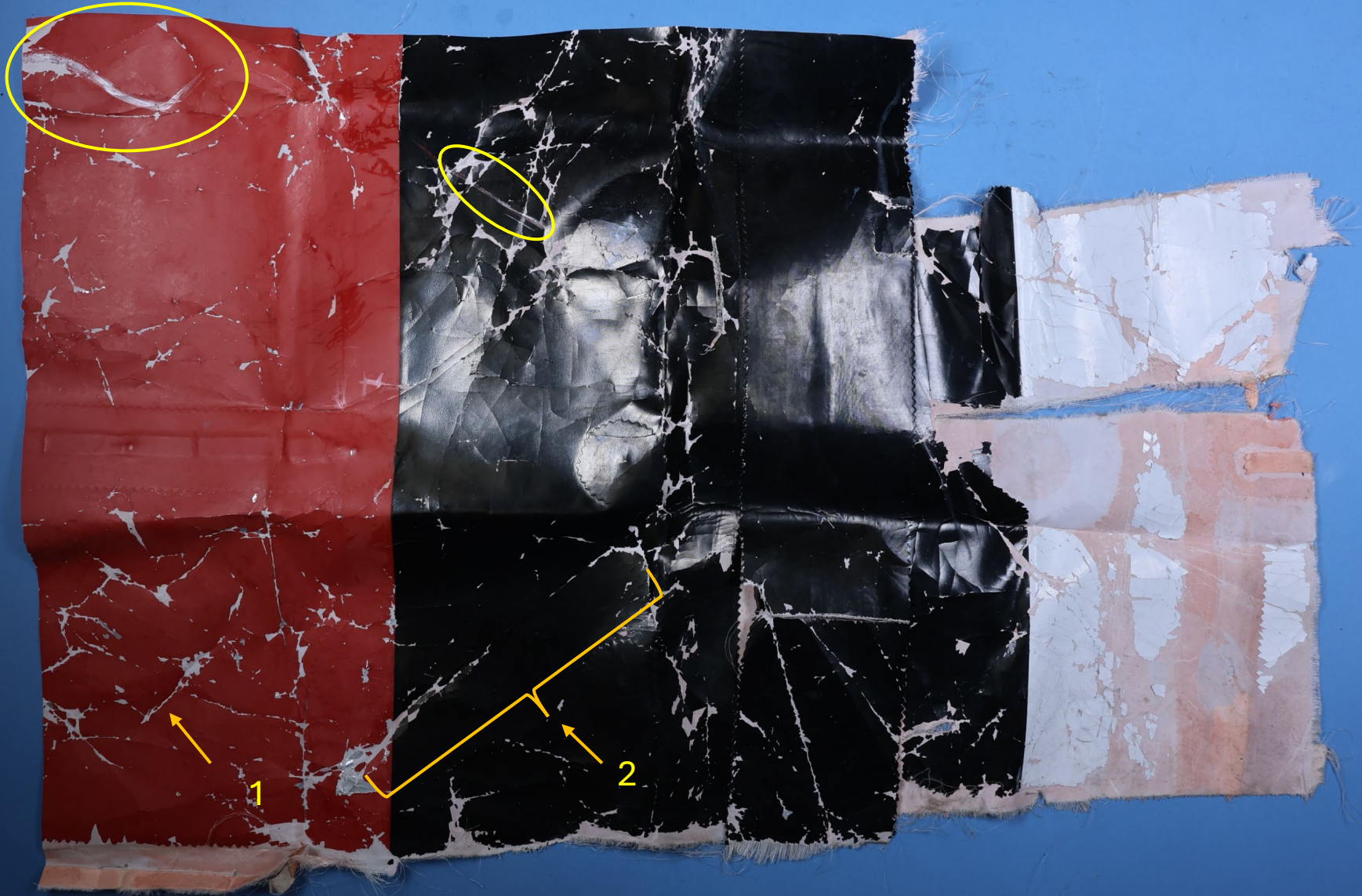
Specialist Nancy B McAtee
National Transportation Safety Board
Washington DC

D. DETAILS OF THE EXAMINATION

See attached photographs and written summary.

Submitted by:

Nancy B McAtee
Senior Chemist



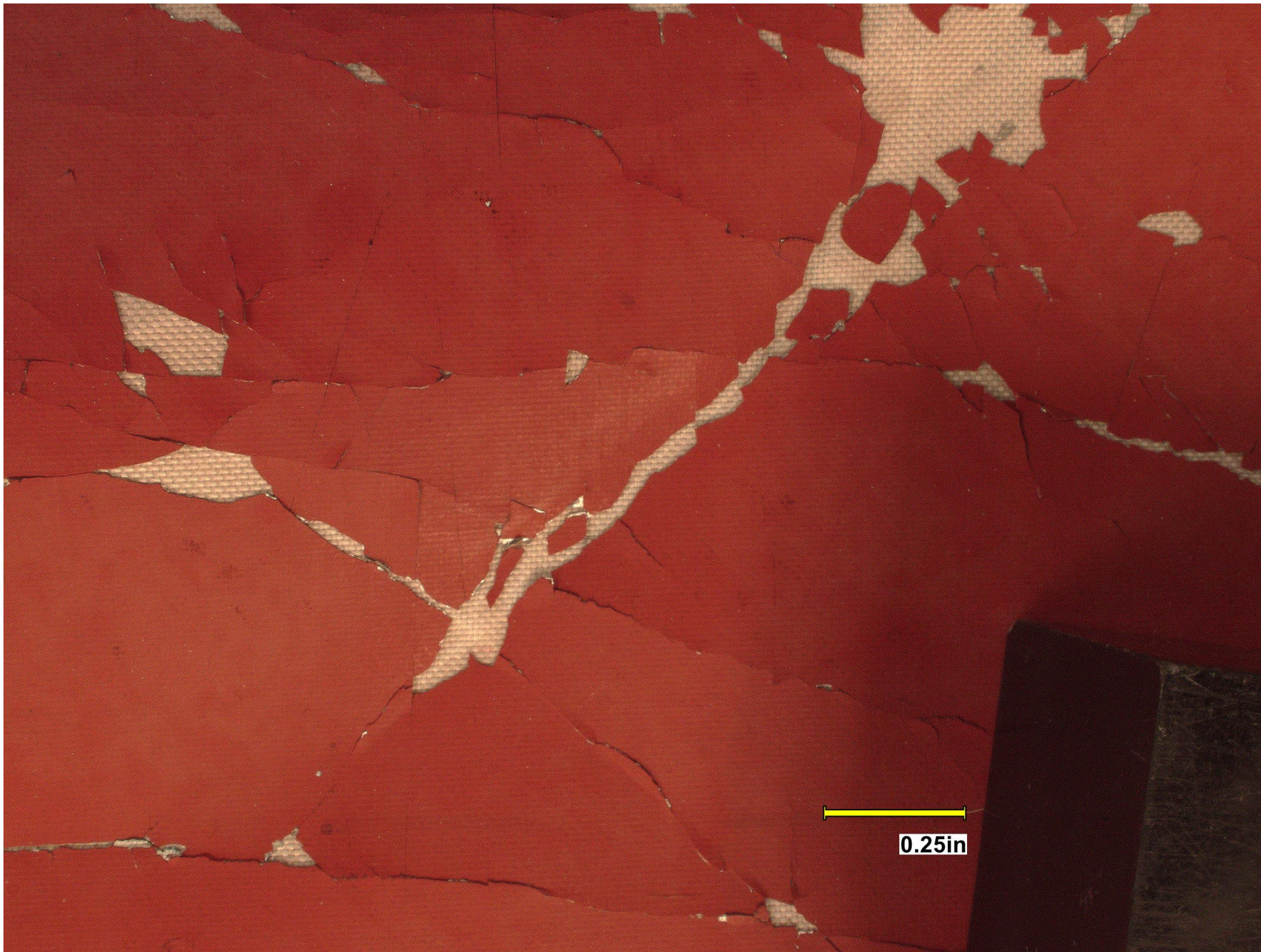
Outboard

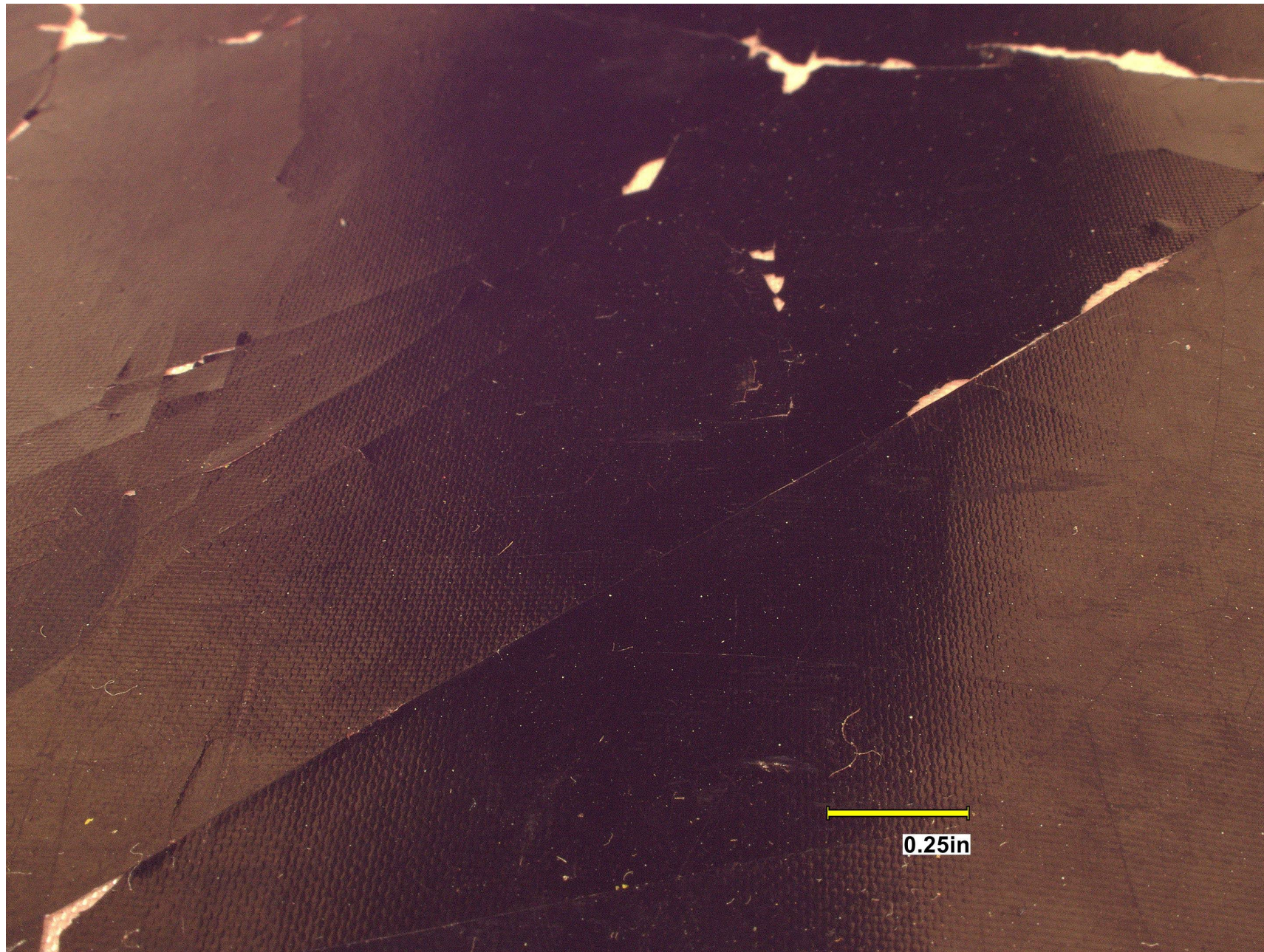
Arrow 1- This is a 1.5-inch crack in the paint. There is no discernible material in the crack and the fabric underneath appears to be clean.

Arrow 2- This is a cut into the paint approximately four inches long. It goes through the entire paint layer in several spots along the entire length. There is no discernible transfer in the cut.

Yellow circles- two (silver) transfer patterns. a flake from one of the silver transfers through the FTIR spectrometer. The silver one had several strong peak matches to several metallic paints.

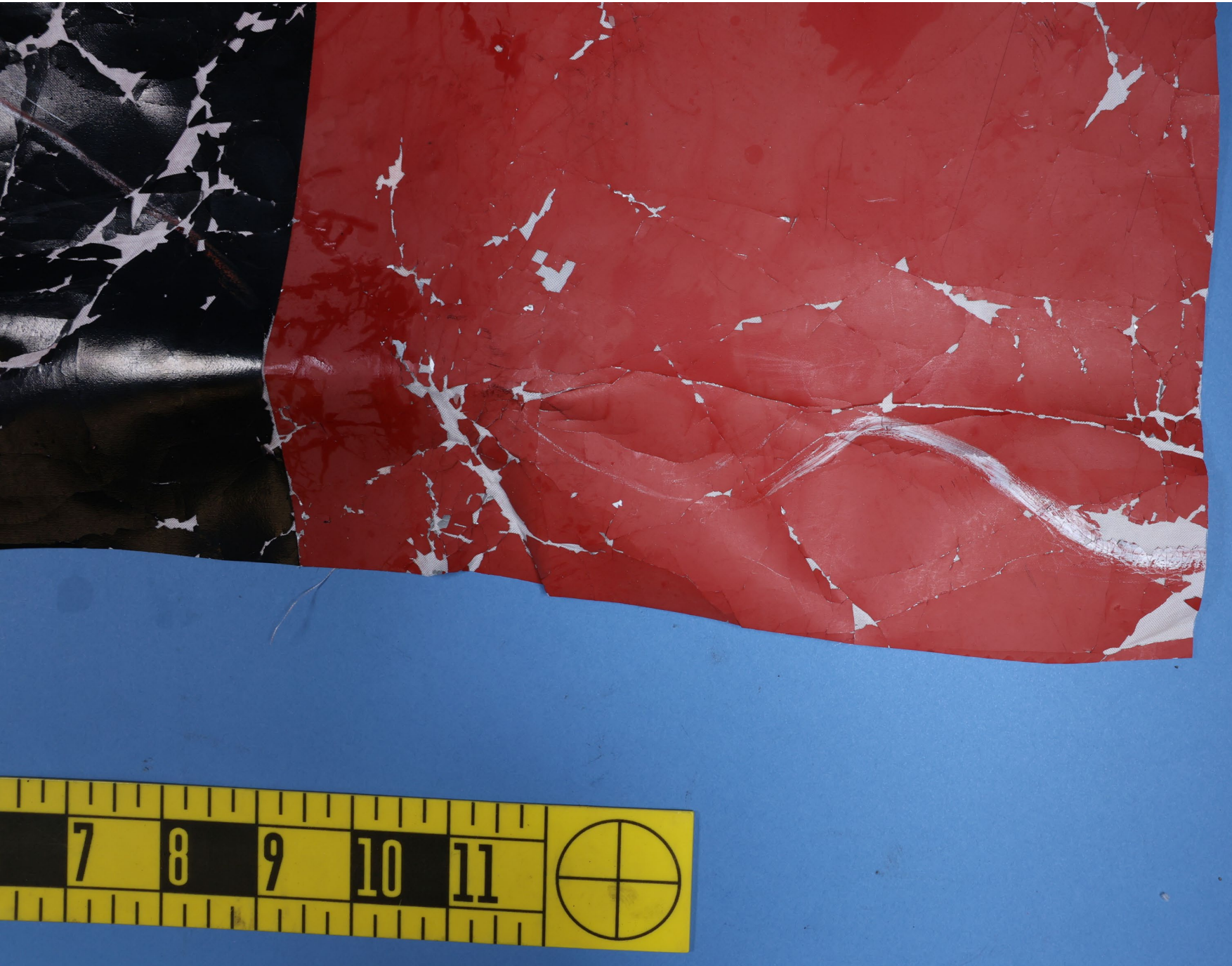
Closeup of area highlighted
by Arrow 1 in Slide 1

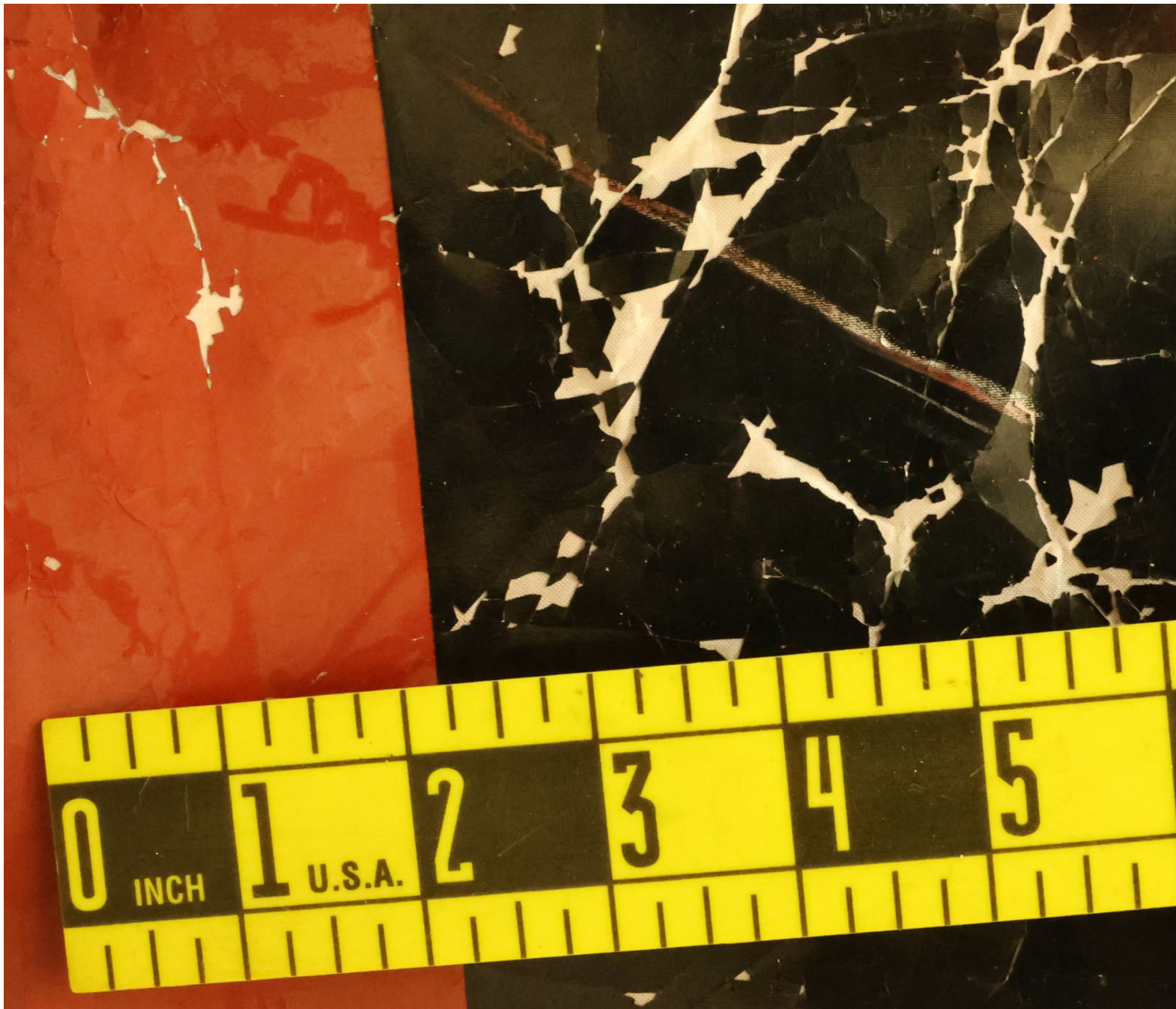




Closeup of area highlighted
by Arrow 2 in Slide 1

Closeup of area circle in
large yellow in Slide 1





Closeup of area circle in
small yellow in Slide 1



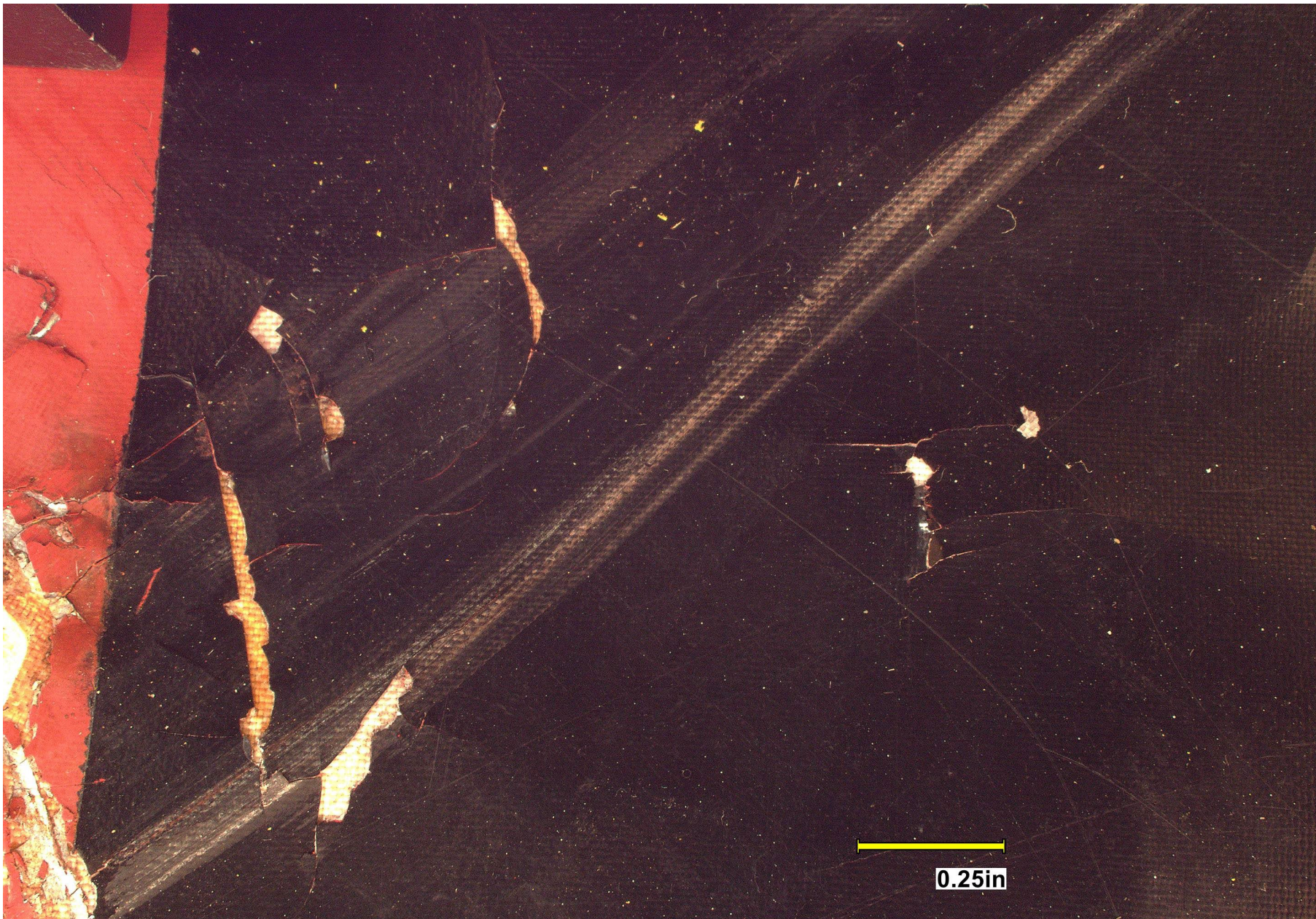
Inboard

Arrow 1 and 2-This 3.5-inch mark is a very shallow gouge in the black fabric. There is no apparent material transfer. It looks like it just removed the topcoat of the paint layer.

Arrow 3-This is a 4-inch crack in the paint that exposes the fabric underneath. No transfer material seen.

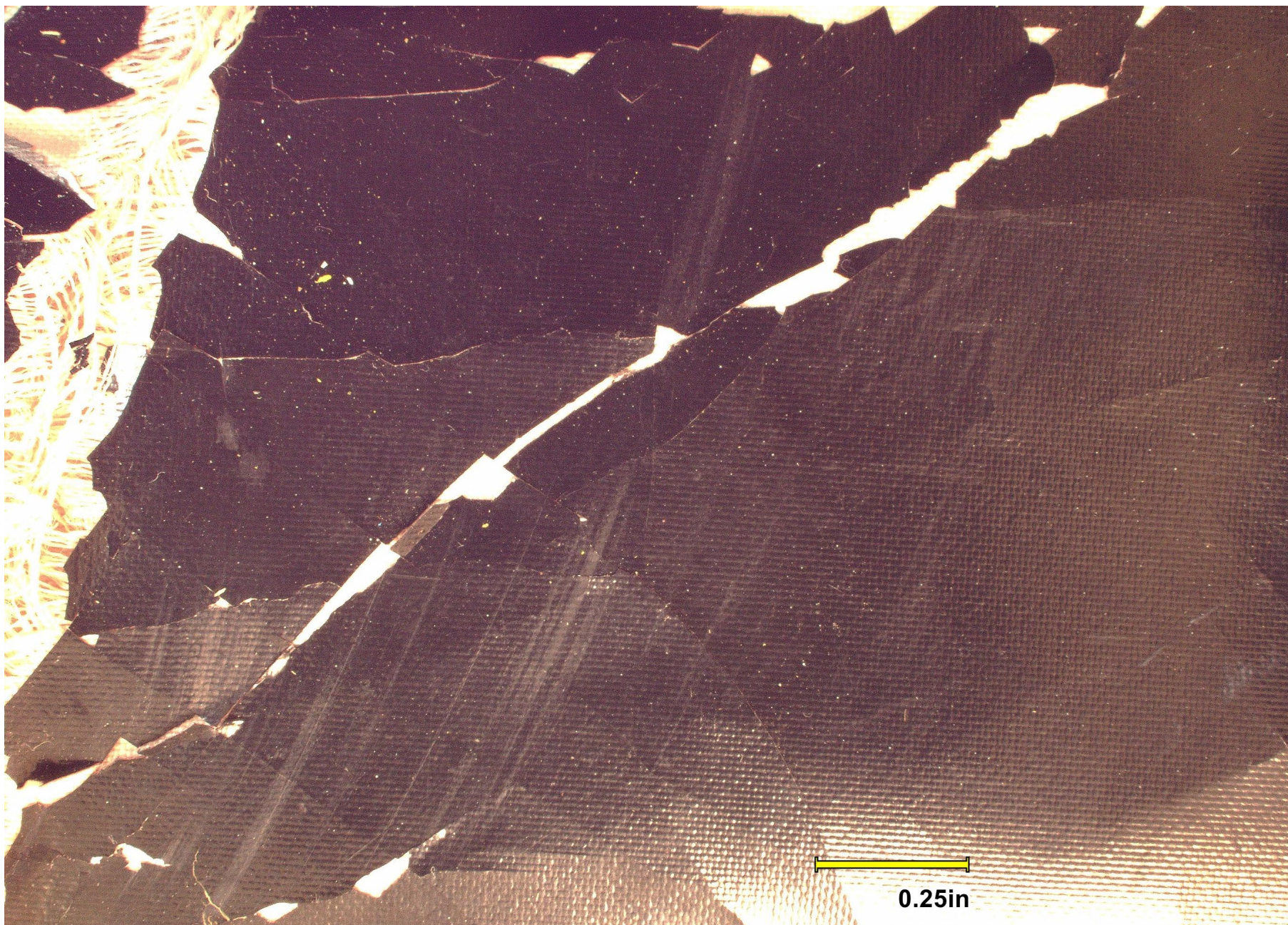
Arrow 4-A similar gouge to the one marked by #1 and #2, approximately 2.5 inches long. No transferred material was found in the gouge.

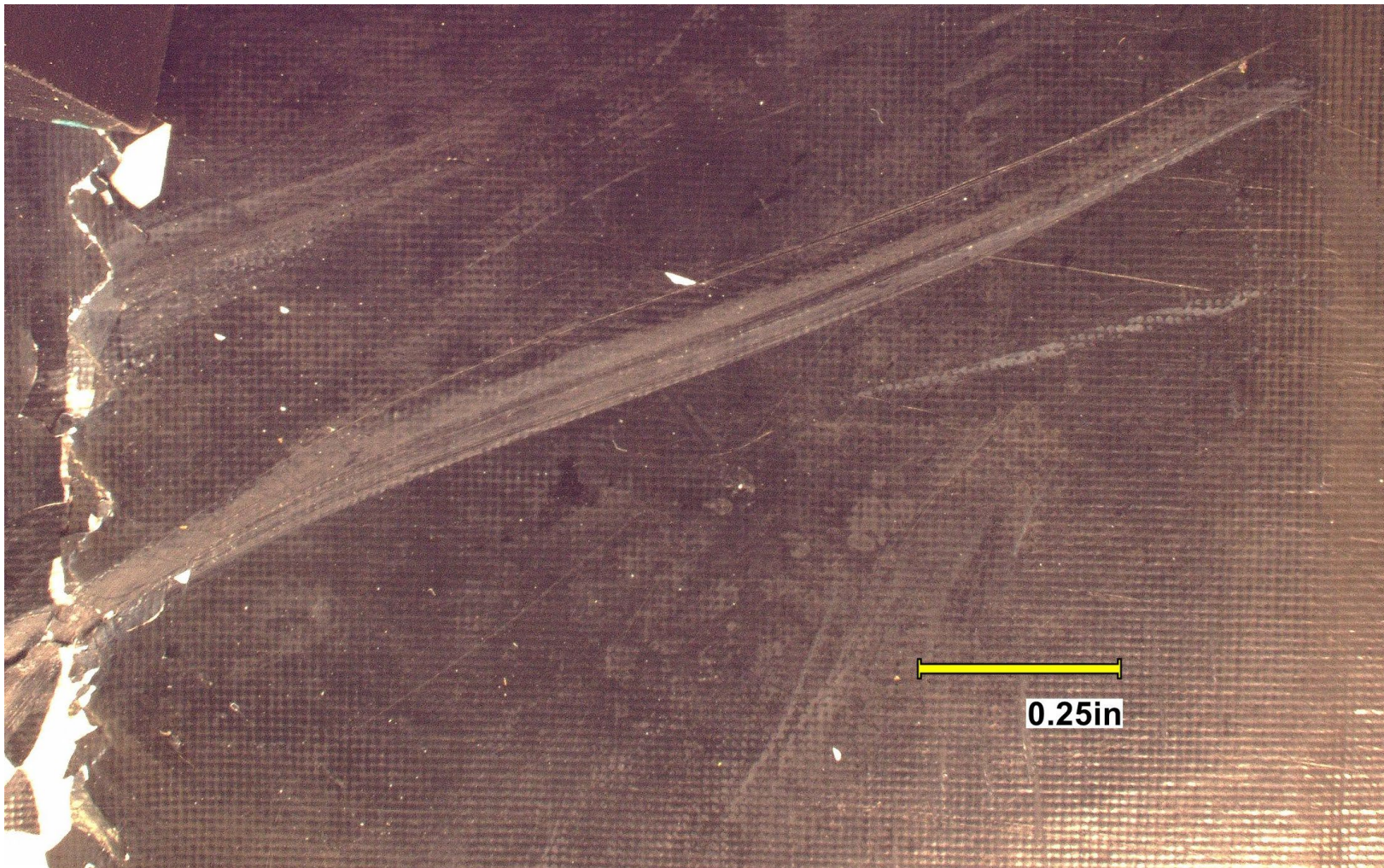
Yellow circle- one transfer pattern (white). A small section of the white transfer through the FTIR spectrometer. The white transfer had some similarities to paint as well but not as strong of a match as the silver transfer.



Closeup of area highlighted
by Arrows 1 and 2 in Slide 6

Closeup of area highlighted
by Arrow 3 in Slide 6





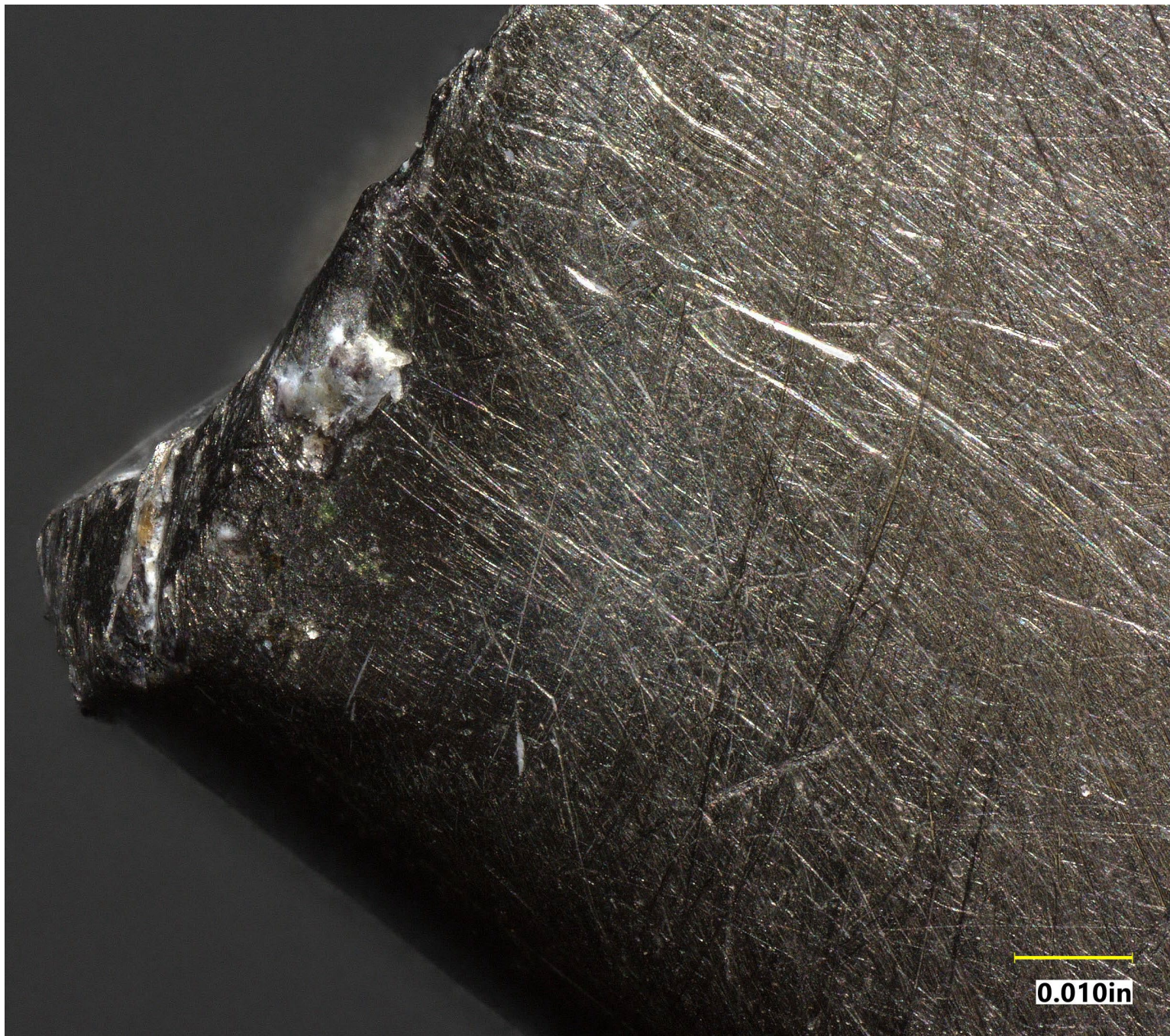
Closeup of area highlighted by Arrow
4 in Slide 6



Closeup of area with white transfer highlighted by yellow circle in Slide 6



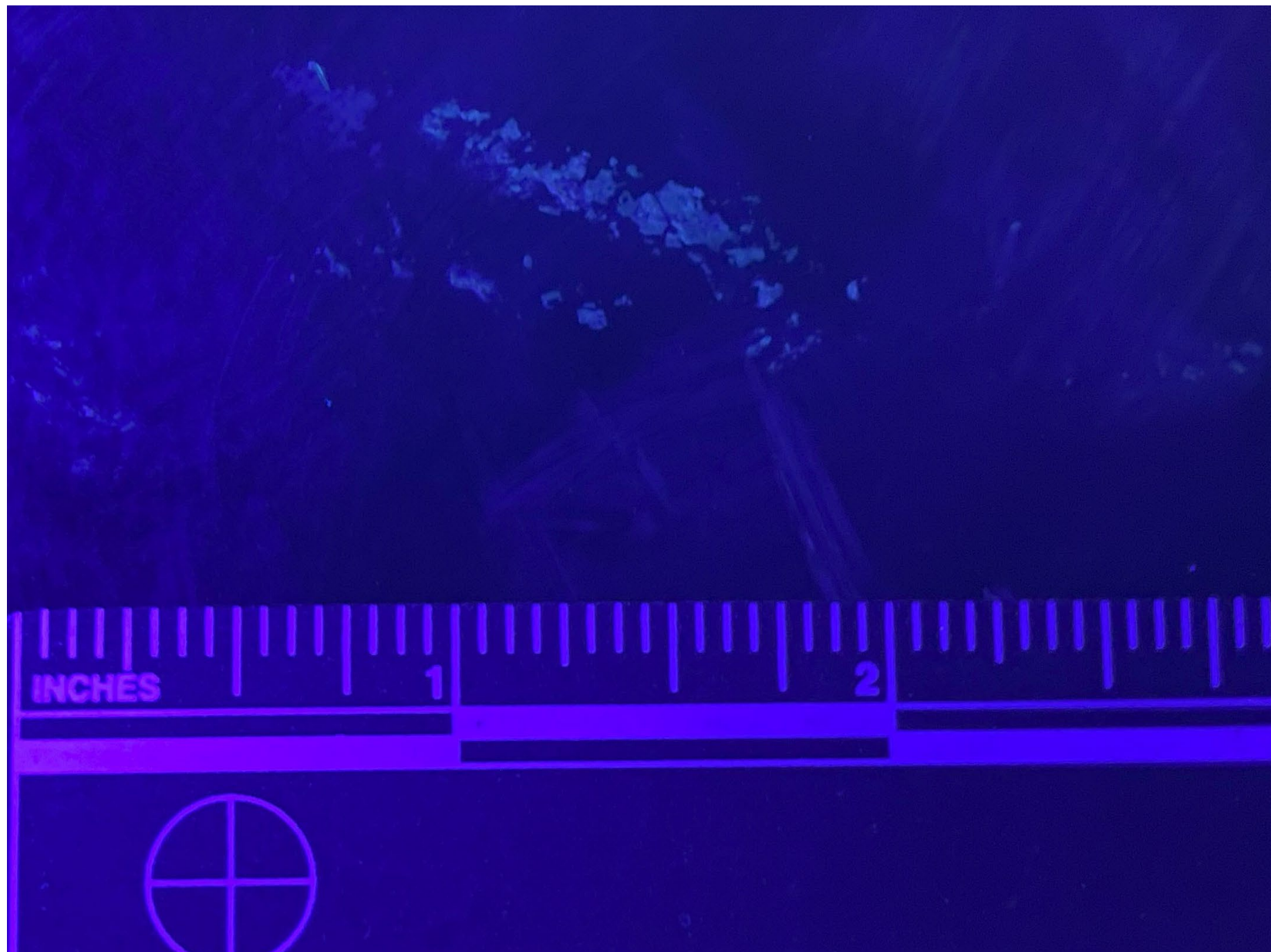
Propeller blade



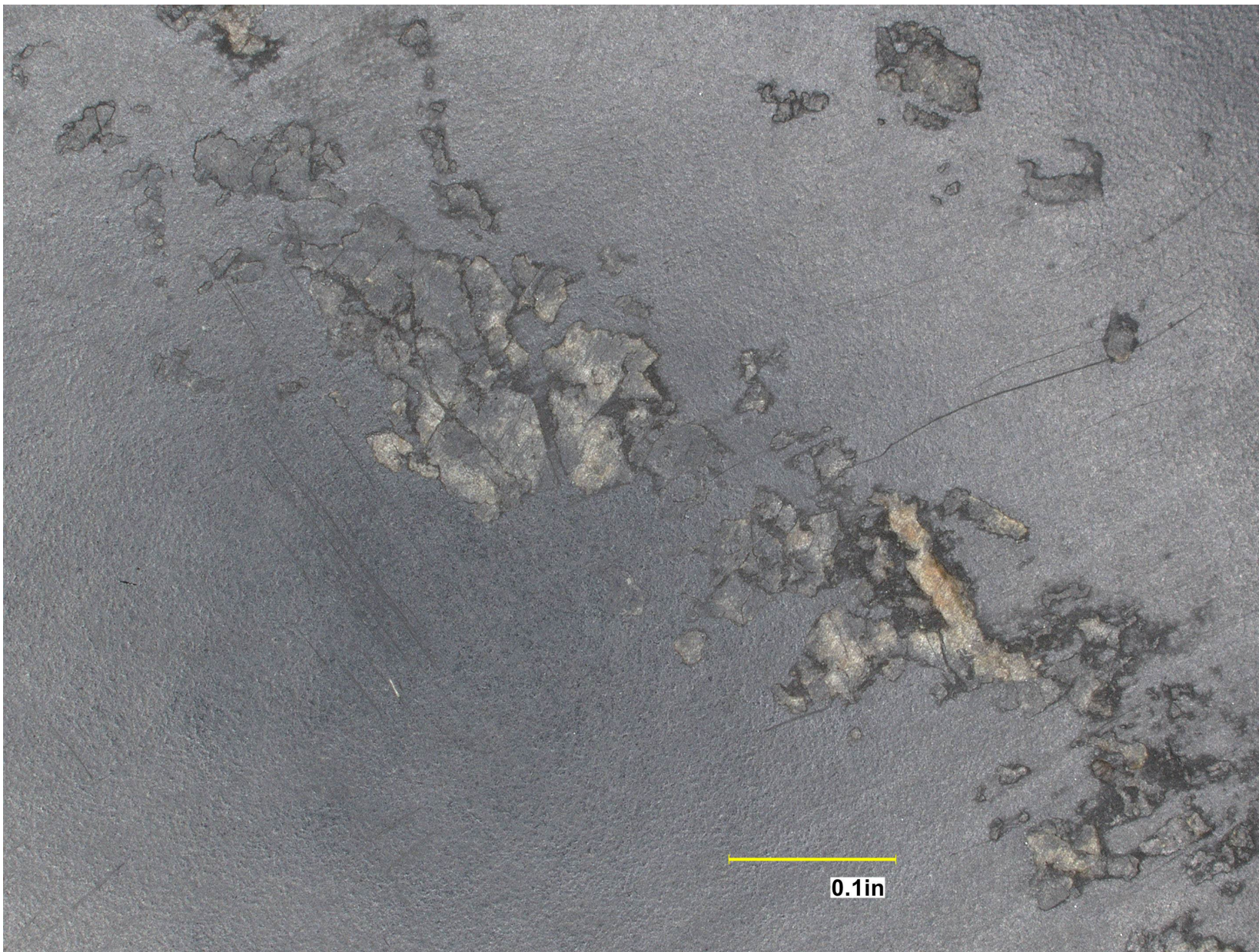
Closeup of section of fracture surface on blade. Fracture features indicate that the blade tip separated under overstress. No transfer marks were found.



Photograph of front surface of blade under UV light



Closeup of foreign material
deposited on surface of blade
under UV light



Closeup of foreign material deposited on surface of blade. Material was consistent with silicon likely soil/dirt as per X-ray fluorescence analysis.