EXECUTIVE SUMMARY

Two WARNING-level conditions were identified inside VOC Abatement Unit B: protective coating delamination on the inlet baffle exposing bare substrate, and wear streaks with debris on the rotary valve sealing face at the exhaust manifold. Media support screens on both sides clean up well with only cosmetic residual staining, and the main valve seal ring, valve face, and perforated screens are intact. External stack and gas train hardware are sound aside from minor weld-seam oxidation. Schedule coating repair on the inlet baffle and a rotary valve seal face inspection at the next planned outage before fouling and bypass leakage progress.

PRIORITIZED ACTIONS

1 Strip and recoat inlet baffle; address exposed substrate before corrosion undercuts adjacent coating. WARNING

TARGET: NEXT PLANNED OUTAGE

2 Inspect rotary valve sealing face, measure wear, and clear debris from sealing land. WARNING

TARGET: NEXT PLANNED OUTAGE

3 Verify baffle-to-vessel wall seam integrity and reseal if gaps are confirmed. INFO

TARGET: NEXT PLANNED OUTAGE

4 Re-clean upper chamber walls to remove residual reddish-brown and pink staining for baseline. INFO

TARGET: WITHIN 30 DAYS

5 Wire-brush and touch-up stack weld seams showing rust streaking to halt oxidation.

INFO

TARGET: NEXT QUARTERLY INSPECTION

6 Document cleaned screen condition as baseline for differential pressure trending.

GOOD

TARGET: NEXT QUARTERLY INSPECTION

FINDINGS

01 Cleaned screen

INFO

— LEGEND

1 **Residual Deposit**
Reddish-brown residue remaining on upper wall

2 **Clean Perforated Screen**
Perforations clear and unobstructed after cleaning

3 **Mounting Hardware**
Edge fasteners intact, screen seated properly

— DISCUSSION

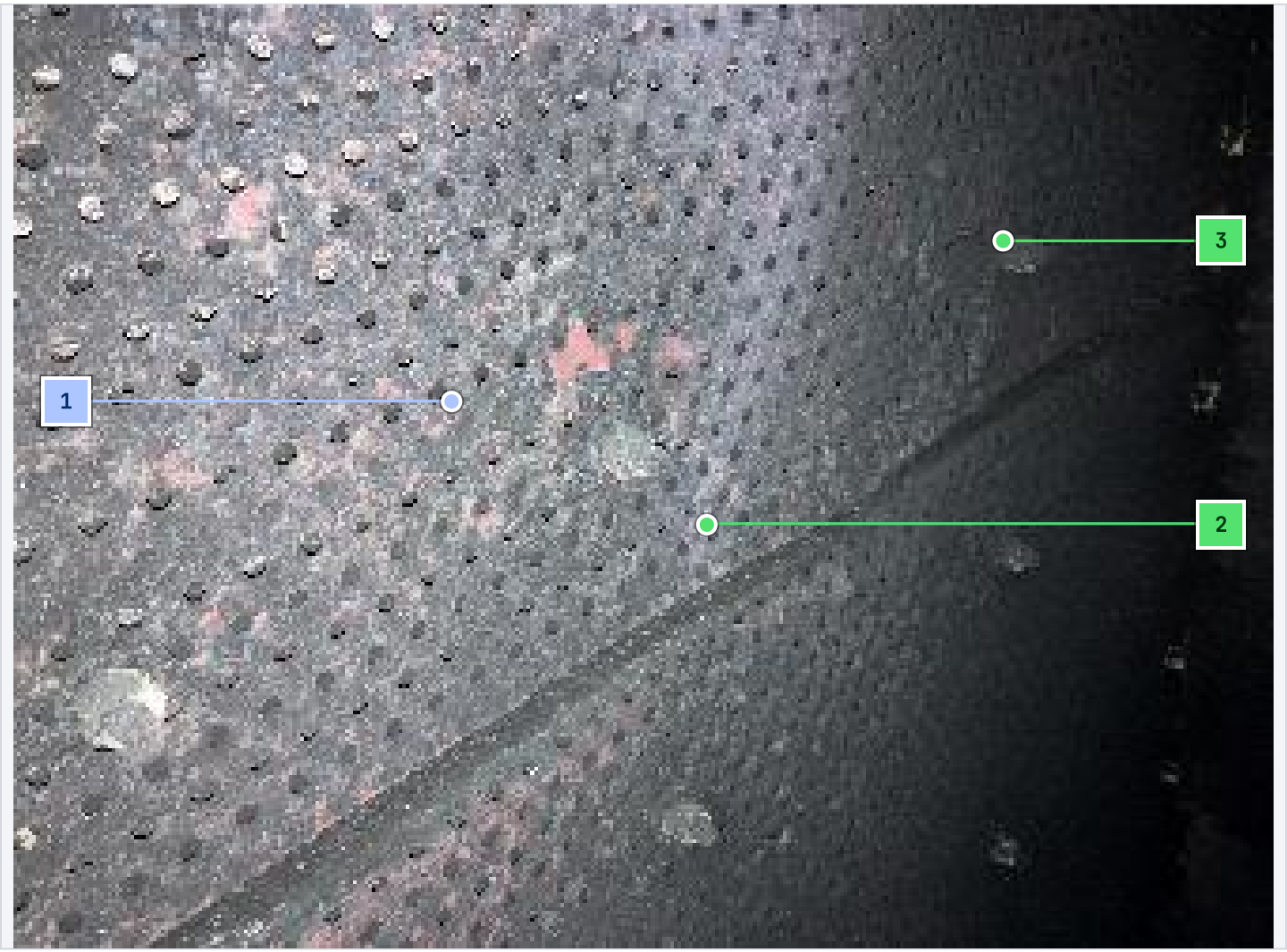
Media support screen perforations are fully open after cleaning and edge fasteners remain seated. Reddish-brown residue persists on the upper refractory wall above the screen, indicating the wash did not fully reach that surface. No structural concerns on the screen itself.

— RECOMMENDATION

Re-clean the upper wall during the next entry to remove residual deposit and establish a clean baseline.

02 Cleaned screen

GOOD



— LEGEND

1 **Residual Discoloration**
Pink residue staining remains after cleaning

2 **Support Seam**
Welded seam between screen panels intact

3 **Perforation Pattern**
Perforations clear and unobstructed post-clean

— DISCUSSION

Welded panel seam and perforation pattern are intact and unobstructed. Pink staining remains across the screen face — cosmetic, consistent with process residue not removed by the wash. No blinding observed.

— RECOMMENDATION

No action required; note staining as baseline and monitor for any increase in coverage at the next inspection.

03 Inlet baffle, Valve face, Main valve seal ring, inlet

GOOD

— LEGEND

1 **Main Valve Seal Ring**
Seal ring intact along valve face edge

2 **Inlet Baffle**
Baffle surface shows minor surface discoloration

3 **Valve Face Perforations**
Perforated face clean, no fouling or blockage

— DISCUSSION

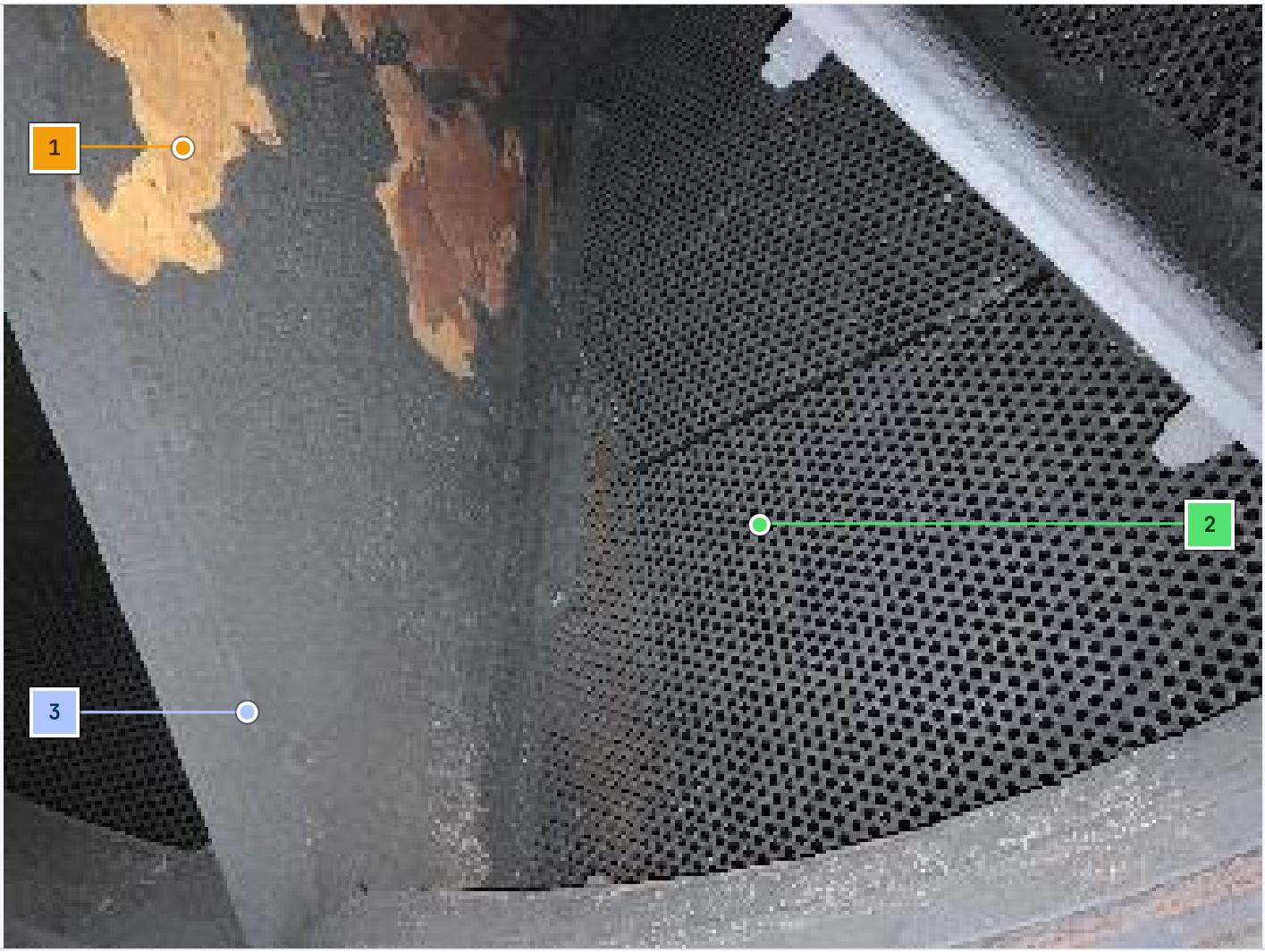
Main valve seal ring is continuous along the valve face edge and the perforated valve face is clean with no fouling. Inlet baffle shows minor surface discoloration only, no metal loss visible from this angle.

— RECOMMENDATION

No action required; confirm baffle coating condition against Photo 4 close-up before closing the inspection.

04 Inlet baffle

WARNING



— LEGEND

1 **Coating Delamination**
Protective coating peeling, exposing substrate to corrosion

2 **Perforated Baffle Screen**
Perforated baffle plate intact, holes unobstructed

3 **Baffle-to-Wall Seam**
Joint between baffle and vessel wall, inspect seal

— DISCUSSION

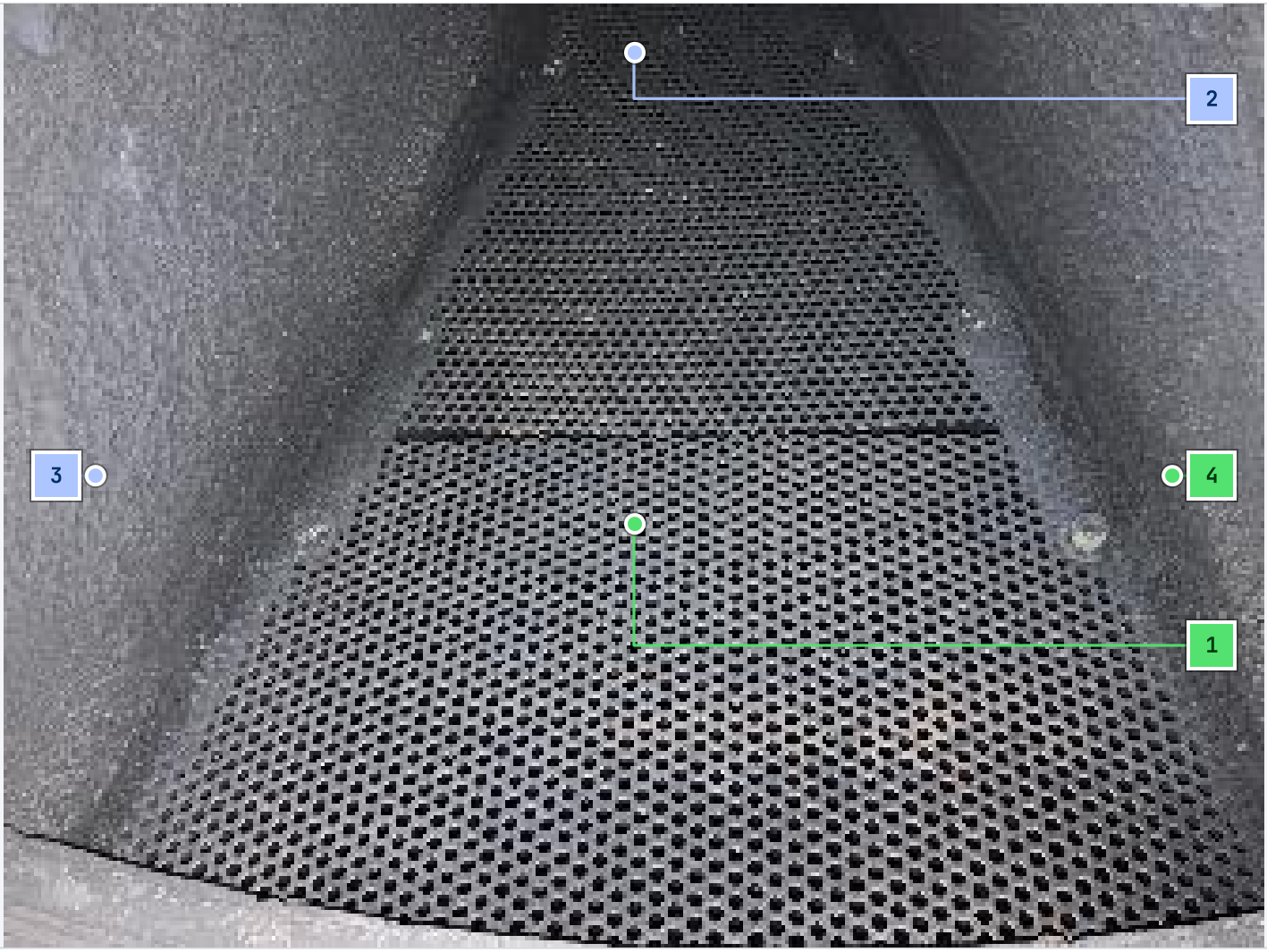
Close-up of the inlet baffle shows protective coating peeling away in sheets, exposing the underlying substrate to the inlet gas stream. The perforated plate itself is intact and unobstructed, but bare substrate will corrode rapidly under VOC-laden inlet conditions. The baffle-to-wall seam should be confirmed sealed while access is open.

— RECOMMENDATION

Strip loose coating, prep the substrate, and recoat the baffle during the next planned outage. Verify and reseal the baffle-to-wall joint in the same work order.

05 Untitled finding

GOOD



— LEGEND

1 **Perforated Valve Face**
Perforated valve face plate, uniform hole pattern intact

2 **Inlet Baffle Edge**
Inlet baffle leading edge above valve face

3 **Main Seal Ring**
Main valve seal ring along chamber wall

4 **Opposing Seal Ring**
Opposing seal ring surface, no visible wear

— DISCUSSION

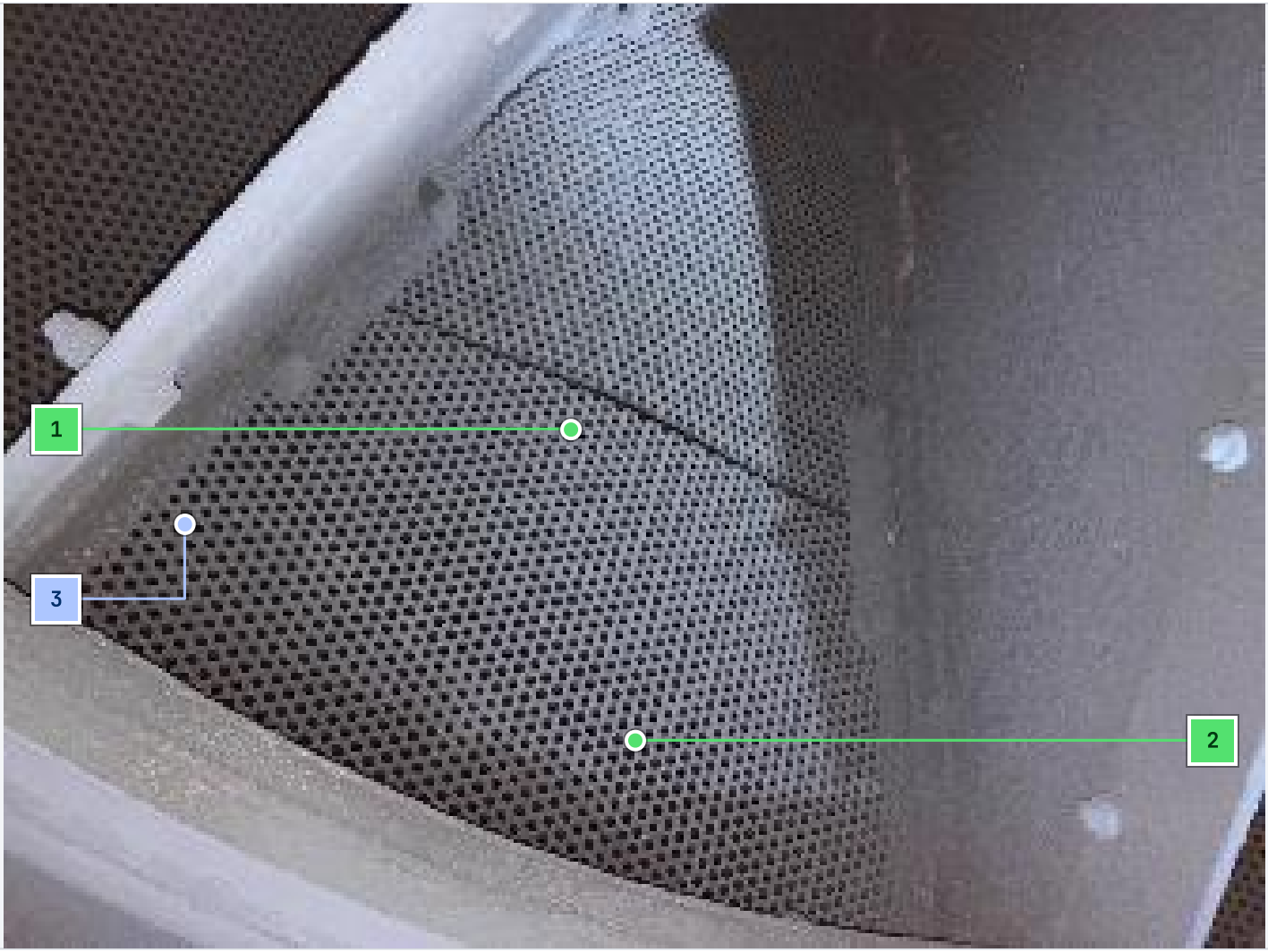
Reference view confirms uniform perforation pattern on the valve face and intact seal rings on both opposing surfaces. Inlet baffle leading edge is visible above the valve face with no displacement. Use this image as the orientation reference for the findings in Photos 3 and 4.

— RECOMMENDATION

No action; retain as reference image for next walkdown comparison.

06 B side screens

GOOD



— LEGEND

1 **Perforated Screen Surface**
Uniform perforation pattern, no blinding observed

2 **Lower Screen Seam**
Seam intact, no debris accumulation visible

3 **Side Frame Edge**
Frame-to-screen interface clean and aligned

— DISCUSSION

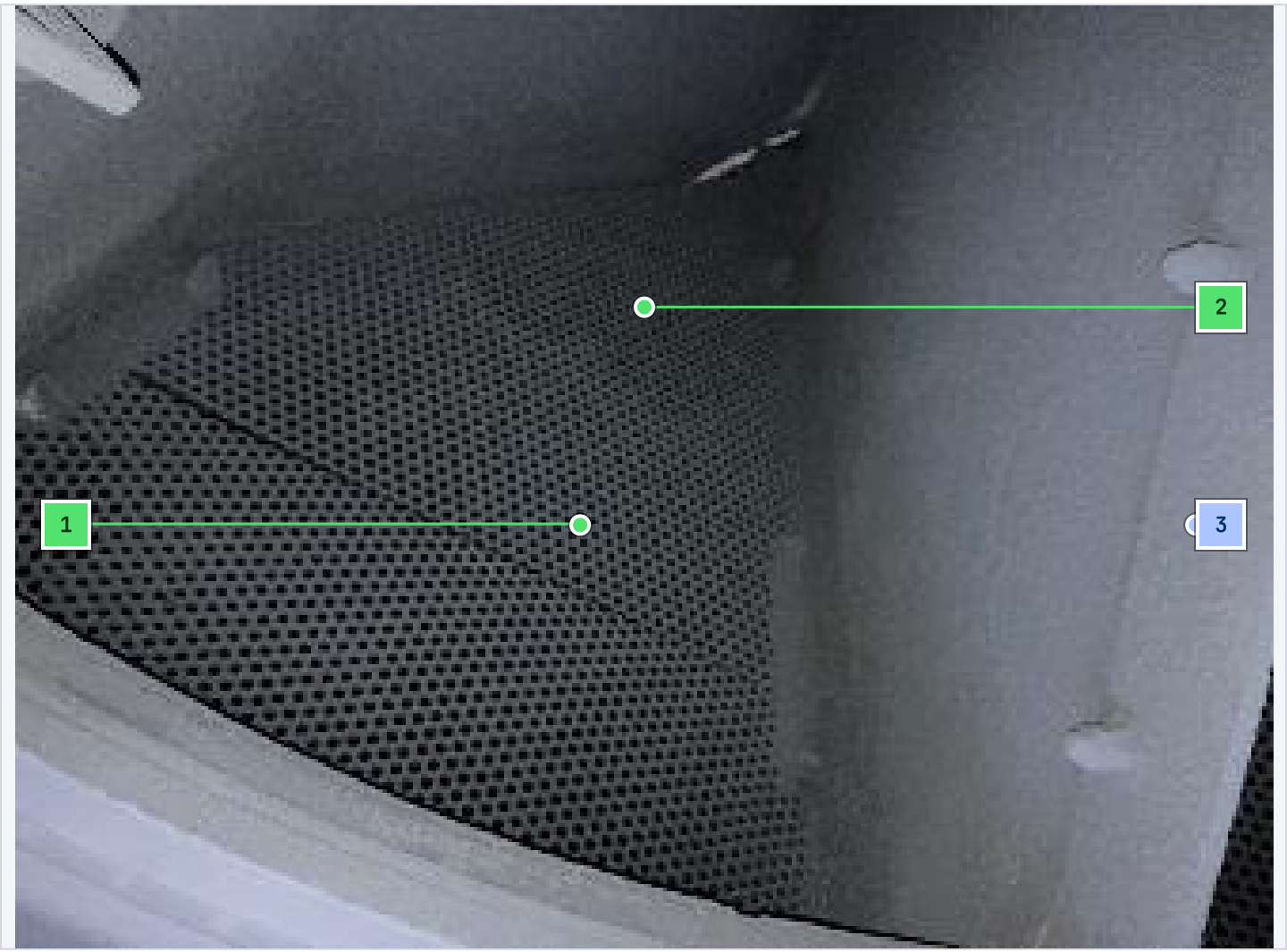
B-side media support screens show uniform perforation with no blinding, intact lower seam, and clean frame-to-screen interface. No debris accumulation observed.

— RECOMMENDATION

No action required; continue routine DP monitoring.

07 Cleaned screen

GOOD



— LEGEND

1 **Clean Perforated Screen**
Media support perforations clear, unobstructed

2 **Seam Joint**
Screen panel seam intact, properly seated

3 **Vessel Wall Interface**
Screen-to-wall edge sealed without gaps

— DISCUSSION

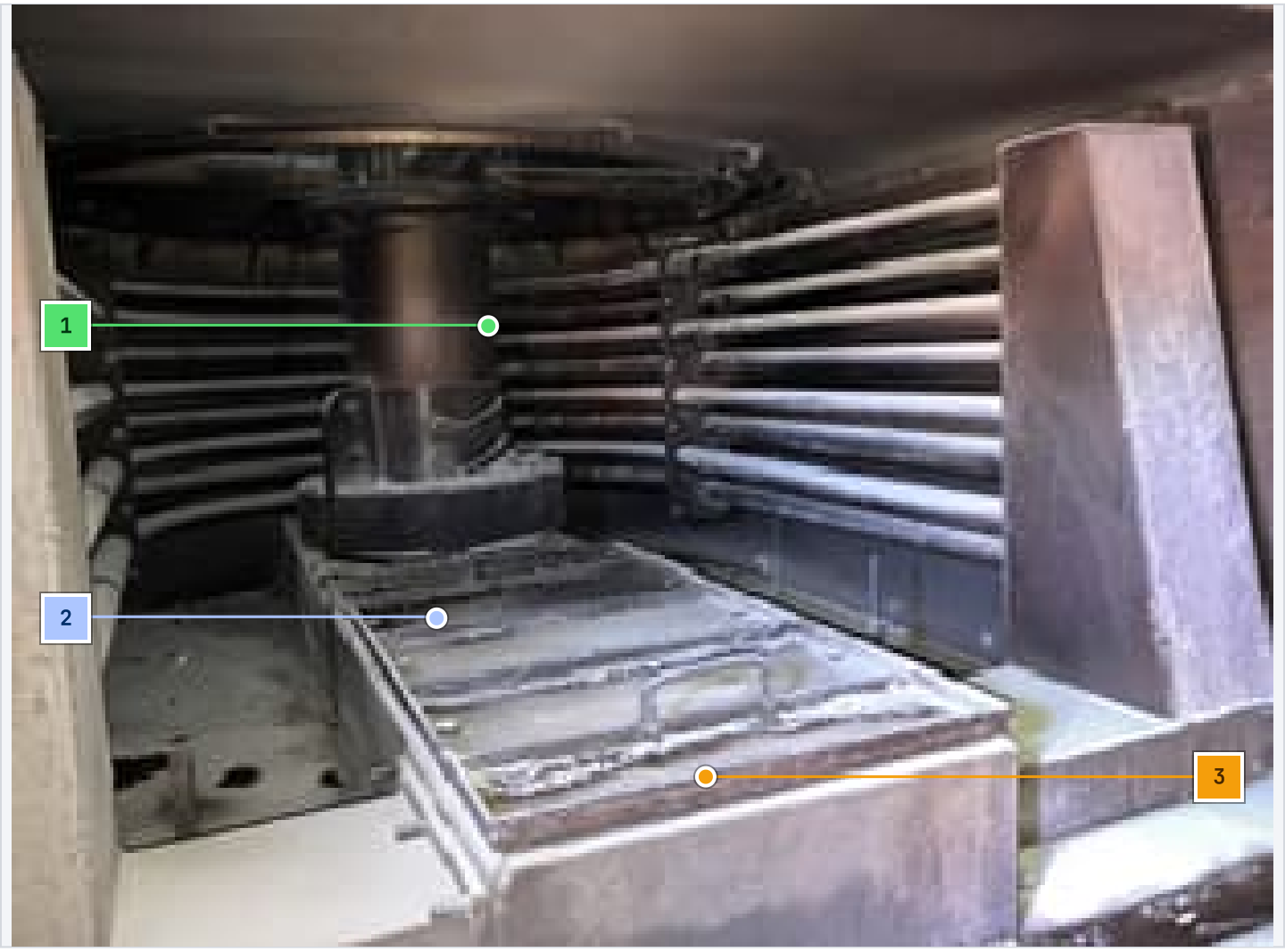
Cleaned media support screen with clear perforations, properly seated panel seam, and tight screen-to-wall edge. Condition is consistent with the B-side screens and represents a good post-clean baseline.

— RECOMMENDATION

No action required; photo serves as cleaned-condition baseline.

08 Exhaust end of manifold

WARNING



— LEGEND

1 **Manifold Tube Bundle**
Exhaust tubes intact, no visible deformation

2 **Central Hub Flange**
Bolted hub seated, light surface deposits

3 **Rotary Valve Face**
Sealing face shows wear streaks and debris

— DISCUSSION

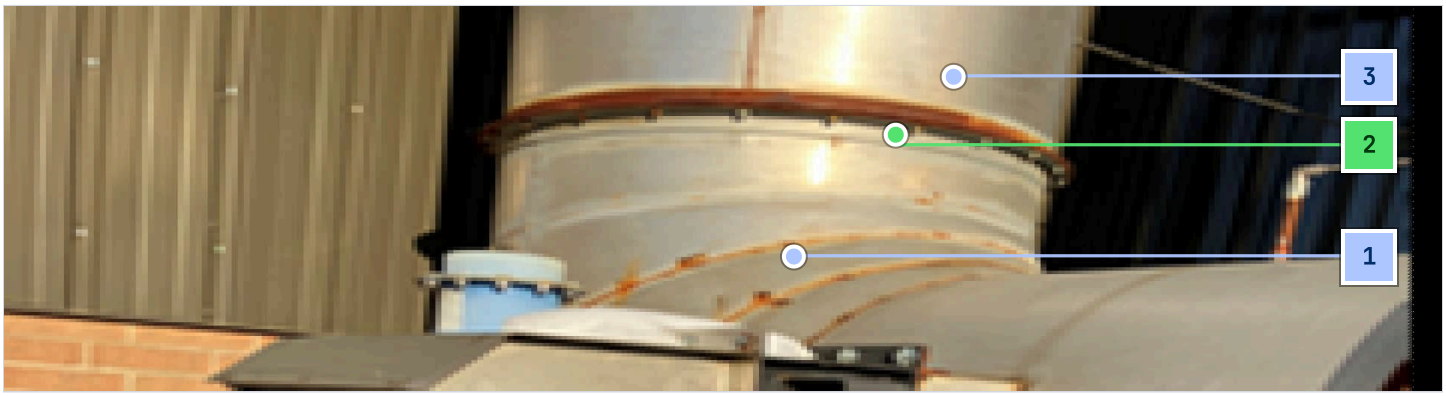
Exhaust manifold tube bundle is intact with no visible deformation and the bolted central hub flange is seated with only light surface deposits. The rotary valve sealing face, however, shows wear streaks and entrained debris — a precursor to bypass leakage and reduced VOC destruction efficiency.

— RECOMMENDATION

At the next planned outage, pull the rotary valve, measure sealing face wear, clean the sealing land, and replace the seal if wear exceeds OEM limits.

09 Untitled finding

INFO



— LEGEND

1 **Rust Staining At Seam**
Corrosion streaks along lower stack weld seam

2 **Flanged Joint**
Bolted flange ring intact, no gasket weep

3 **Upper Stack Seam**
Vertical weld seam shows minor oxidation

— DISCUSSION

External walkdown of the exhaust fan, bearings, gas train, and fresh air/purge damper shows components in serviceable condition. Bolted flange ring shows no gasket weep, but rust staining is visible along the lower stack weld seam and minor oxidation on the upper vertical seam. Cosmetic at this stage, but worth tracking.

— RECOMMENDATION

Wire-brush affected weld seams and apply touch-up coating at the next quarterly inspection to arrest oxidation.