

EXECUTIVE SUMMARY

Significant particulate buildup is present throughout the lower inlet manifold of Coater 2 RTO, including heavy ash piles on the manifold floor, coating on divider walls, and fouling at the inspection hatch face. Media support baffles and main valve sealing surfaces were inspected post-cleaning and are in serviceable condition with no warping, scoring, or seal ring degradation observed. Primary next step is to remove the accumulated material from the inlet manifold and confirm root cause before flow distribution to the media beds is compromised.

PRIORITIZED ACTIONS

1

Vacuum and remove ash accumulation from inlet manifold floor, divider walls, and inlet duct.

TARGET: WITHIN 30 DAYS

 WARNING

2

Clean inspection hatch interior face and verify gasket condition after deposit removal.

TARGET: WITHIN 30 DAYS

 WARNING

3

Investigate upstream source of particulate loading driving manifold fouling rate.


TARGET: WITHIN 60 DAYS

 WARNING

4

Wipe residual yellow and pink process residue from baffle plate surfaces during next entry.

TARGET: NEXT PLANNED OUTAGE

 INFO

5

Re-inspect main valve seal ring and valve face seating at next scheduled internal inspection.

TARGET: NEXT QUARTERLY INSPECTION

INFO

6

Document manifold deposit depth at fixed reference points to trend accumulation rate.

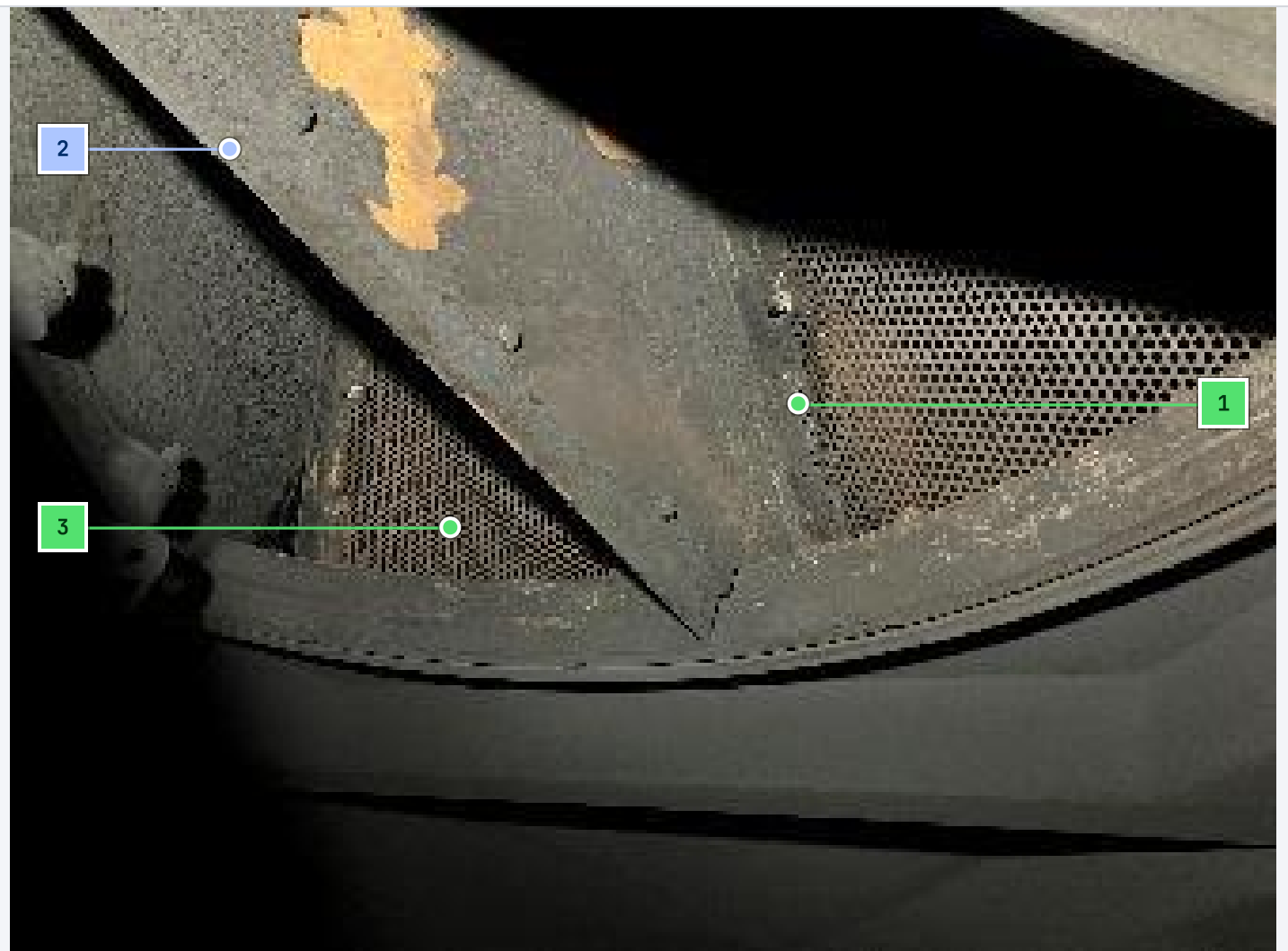
TARGET: NEXT QUARTERLY INSPECTION

INFO

FINDINGS

01 Cleaned screen

GOOD



– LEGEND

- 1 Clean Perforated Screen**
Support screen perforations clear post-cleaning
- 2 Residual Deposit**
Yellow residue on baffle plate surface
- 3 Baffle Plate Edge**
Plate seating against housing intact

– DISCUSSION

Perforated support screen under the baffle plate is clear and unobstructed following cleaning, and the plate-to-housing seat is intact. A yellow process residue remains on the baffle plate surface but does not affect flow area.

– RECOMMENDATION

Wipe down residual process deposit from the baffle plate surface at next entry. No structural action required.

02 Cleaned screen

GOOD



– LEGEND

- 1 Perforated Screen Surface**
Perforations clear and unobstructed post-cleaning
- 2 Edge Frame Condition**
Residual buildup along screen frame edge
- 3 Mounting Hardware**
Fastener seated at screen perimeter

– DISCUSSION

Perforated screen face is fully open post-cleaning with fastener seated correctly at the perimeter. Light residual buildup remains along the frame edge but does not obstruct perforations.

– RECOMMENDATION

Brush the frame edge during the next cleaning cycle to prevent edge buildup from migrating across the screen.

03 Baffle plates at media support

● GOOD



– LEGEND

1 Baffle Seam Joint

Diagonal seam between baffle plates, intact

2 Perforated Support Plate

Perforations clear after screen cleaning

3 Residual Deposits

Light pink residue on baffle surface

– DISCUSSION

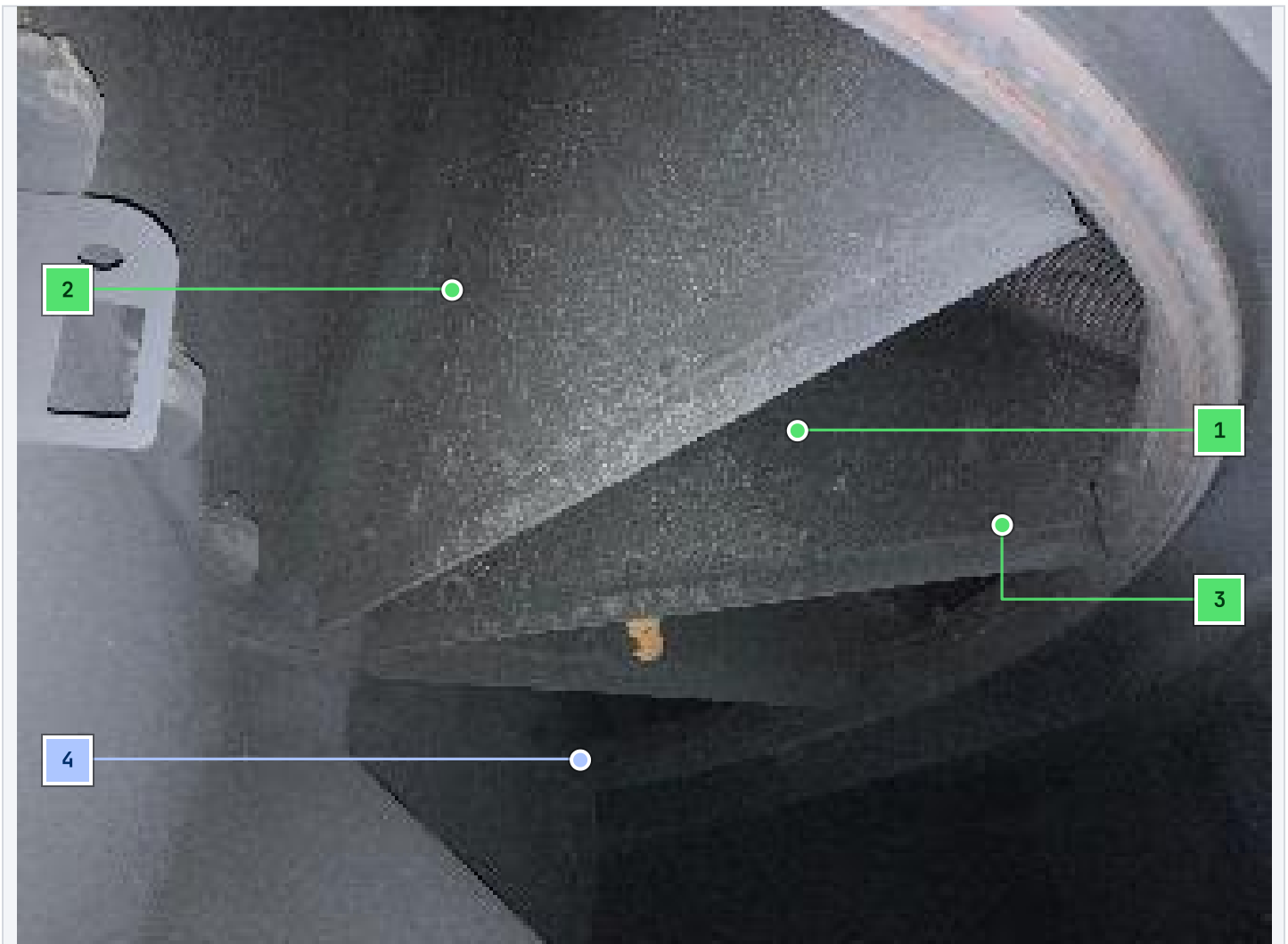
Diagonal seam between baffle plates is sound and the perforated support plate is clear after screen cleaning. Light pink residue on the baffle surface is cosmetic and consistent with process carryover.

– RECOMMENDATION

No action required beyond routine cleaning at the next planned outage.

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

● GOOD



– LEGEND

- 1 Main Valve Seal Ring**
Seal ring seated uniformly along valve face
- 2 Inlet Baffle**
Baffle plate intact, no warping visible
- 3 Valve Face**
Sealing surface clean, no scoring observed
- 4 Inlet Floor**
Minor debris accumulation at inlet base

– DISCUSSION

Main valve seal ring is seated uniformly against the valve face, with no scoring of the sealing surface and no warping of the inlet baffle. Minor debris at the inlet floor is housekeeping-level only.

– RECOMMENDATION

Clear debris from the inlet floor during next entry and continue periodic seal ring inspection.

05 Inlet baffle / Valve face / Main valve seal ring / inlet

● GOOD



— LEGEND

- 1 Main Valve Seal Ring**
Seal ring interface appears intact, continuous
- 2 Inlet Baffle Cone**
Conical baffle surface clean, no distortion
- 3 Valve Face**
Valve face edge visible, no warping

– DISCUSSION

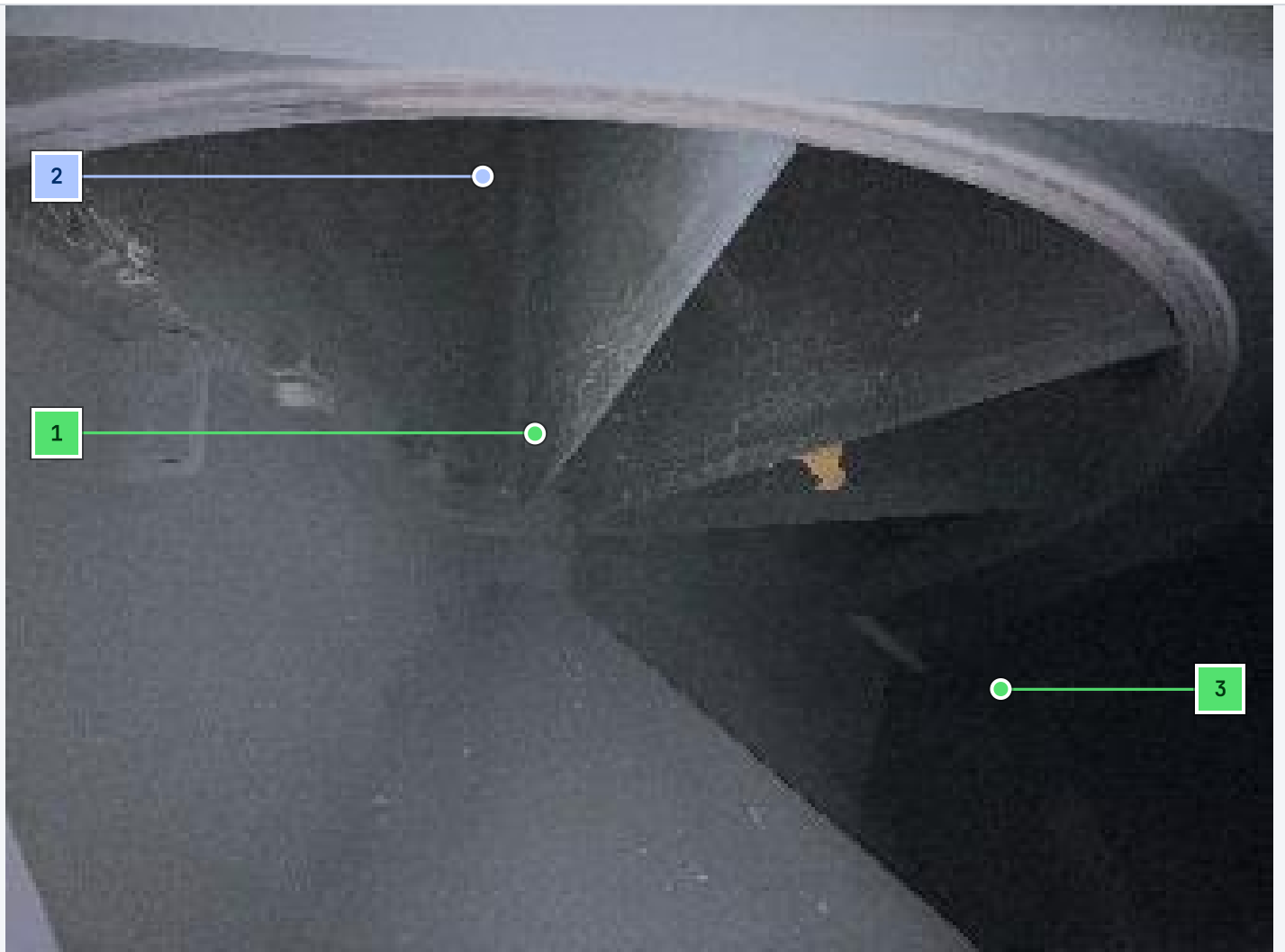
Conical inlet baffle surface is clean and undistorted, and the seal ring interface against the valve face appears continuous. Valve face edge shows no warping at the visible sector.

– RECOMMENDATION

No action required. Reconfirm seal ring continuity at next scheduled valve service.

06 Untitled finding

INFO



– LEGEND

1 Main Valve Seal Ring

Seal ring intact along valve face perimeter

2 Inlet Baffle Edge

Baffle edge shows light particulate accumulation

3 Valve Face Sector

Valve face surface clean, no warping visible

– DISCUSSION

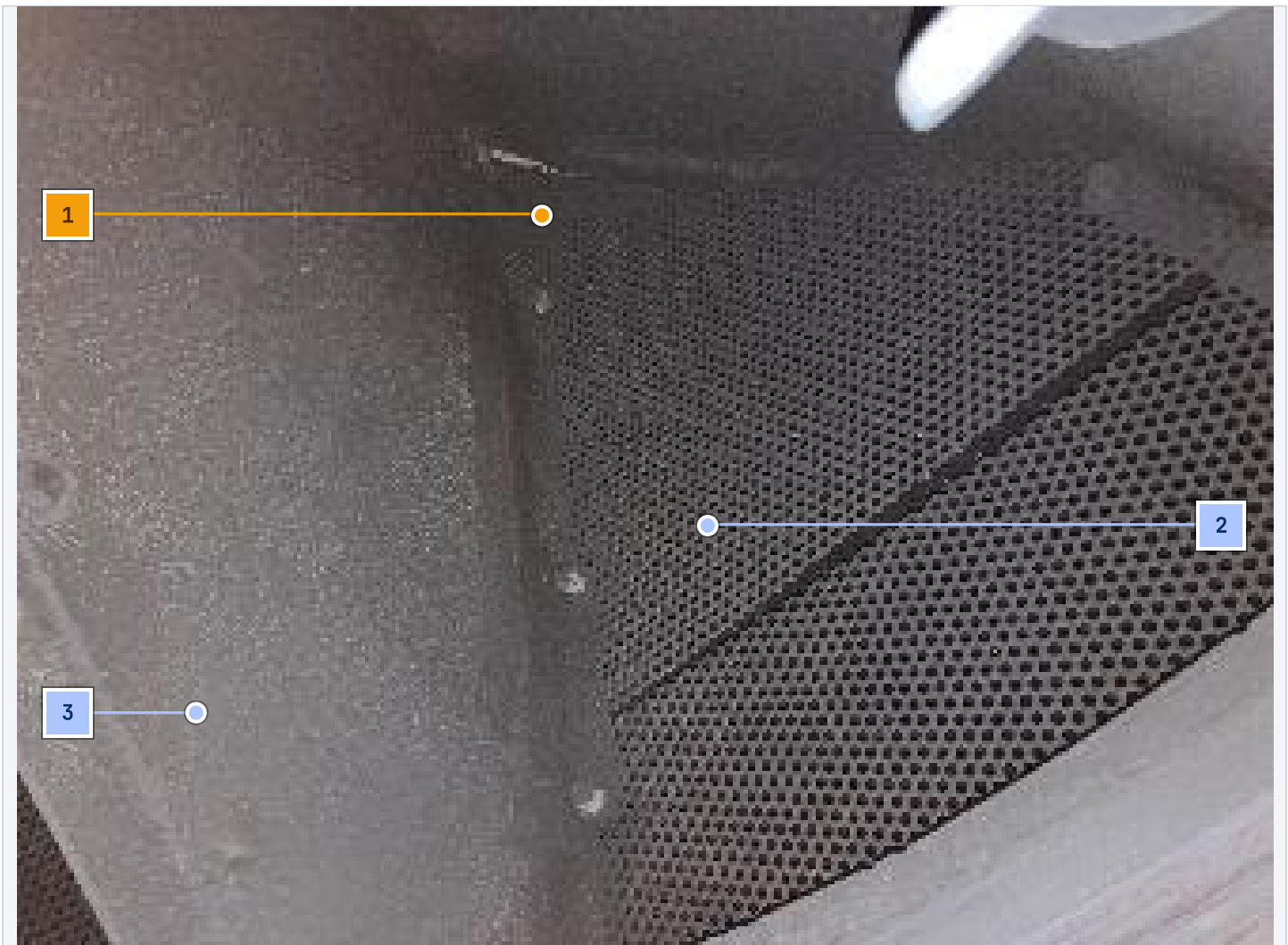
Seal ring tracks intact along the full visible perimeter of the valve face and the valve face sector itself shows no warping. Light particulate accumulation is present on the inlet baffle edge.

– RECOMMENDATION

Remove particulate from the baffle edge during routine cleaning; no repair needed.

07 Build up in manifold

● WARNING



– LEGEND

- 1** **Manifold Build-Up**
Particulate accumulation along perforated plate edge
- 2** **Perforated Distributor**
Flow distribution grid, holes still open
- 3** **Manifold Floor Deposits**
Dust layer settled on manifold wall

– DISCUSSION

Particulate accumulation is building along the perforated distributor plate edge inside the manifold. Distributor holes remain open at this time, but the deposit layer on the manifold wall indicates active fouling.

– RECOMMENDATION

Vacuum the manifold and clear the perforated distributor edge before holes begin to blind off and distort flow distribution.

08 Build up in manifold

● WARNING



– LEGEND

1 **Manifold Deposit Buildup**

Particulate accumulation coating interior manifold surface

2 **Access Hatch Fouling**

Heavy deposit layer on inspection door face

3 **Bolted Flange Seal**

Hatch fasteners intact, no visible leakage

– DISCUSSION

Interior manifold surfaces are coated with particulate, and the inside face of the inspection hatch carries a heavy deposit layer. Hatch fasteners and flange seal are intact with no evidence of external leakage.

– RECOMMENDATION

Clean the hatch face and manifold walls; inspect the hatch gasket during reassembly and replace if deposits have impressed into the sealing surface.

09 Build up in manifold

● WARNING



— LEGEND

- 1 Heavy Particulate Pile**
Significant ash accumulation on manifold floor
- 2 Coating On Divider**
Dust layer coating manifold divider walls
- 3 Inlet Duct Buildup**
Buildup obstructing inlet flow path

– DISCUSSION

Significant ash pile has accumulated on the manifold floor, with coating on the divider walls and buildup encroaching on the inlet duct flow path. This level of accumulation will begin to restrict cross-section and skew distribution to the media beds if left.

– RECOMMENDATION

Remove accumulated ash from the manifold floor and inlet duct immediately, and identify the upstream source driving the loading rate.

10 RTO overall

INFO



– LEGEND

1 RTO Main Vessel

Regenerative thermal oxidizer housing, exterior intact

2 Auxiliary Enclosure

Control or blower cabinet, externally sound

3 Base Piping Manifold

Lower manifold area noted for buildup

– DISCUSSION

Overall exterior of the RTO main vessel and auxiliary enclosure is sound with no external defects observed. Findings of concern are concentrated in the lower base piping manifold area as documented in the preceding photos.

– RECOMMENDATION

Address lower manifold buildup as the priority work scope; no external vessel action required.