Elevated Tank Inspection
Town of Centreville
Joseph Street Elevated Tank
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This report, the conclusions, recommendations and comments contained in this report are based upon spot examinations from readily accessible parts of the tank. Should latent defects or conditions which vary significantly from those described in the report be discovered at a later date, these should be brought to the attention of a qualified individual at that time. These comments and recommendations should be viewed as information to be used by the Owner in determining the proper course of action and not to replace a complete set of specifications.

TANK DETAILS:

CAPACITY:	100,000 Gallons
DESIGN	Double Ellipsoidal
CONSTRUCTION STYLE	Welded Steel, Multi-Column
CONSTRUCTION DATE	1969
BUILDER	Brown Steel Contractors, Inc.
HEIGHT	100' to bottom of tank Wet
RISER STYLE	36"
RISER SIZE	4
NUMBER OF SUPPORT COLUMNS	Welded Steel
SUPPORT COLUMN STYLE	Unknown
INTERIOR COATING	Unknown
INTERIOR LEAD	Unknown
EXTERIOR COATING	Unknown
EXTERIOR LEAD	

GENERAL TANK CONDITIONS

TANK SITE:

Fenced	Yes
Electricity on site	Yes
Water on site	Yes
Tank site accessible to large trucks	Yes
Any structures present that interfere with worker access	No

SAFETY EQUIPMENT:

Ladder Gate on Tower Ladder	No
Safety Climb on Tower ladder	Yes
Safety Climb on Roof Ladder	Yes
Safety Climb on Interior Ladder	Yes

SANITARY CONDITION:

Locked access into tank site	Yes
Access into tank (hatches) locked	No
Overflow screen/Flapper functioning properly	Yes
Vent Screen functioning properly	Yes
Graffiti or evidence of unauthorized access	No

STRUCTURAL CONDITION:

Tank Foundation (cracking, settling, etc)	Good
Wind Rods	Good
Struts	Good
Extensive Pitting or Steel Loss	No

ACCESSORY ITEMS:

Water Level Indicator in working condition	No
FAA Lights	Yes
Antennas	No
Balcony Floor properly draining	Yes
Vent condition	Fair
Access hatch condition	Good
Tower Ladder condition	Good
Roof Ladder condition	Good
Interior Ladder condition	Good
Shell Manway Present	Yes

EXTERIOR CONDITION:

SUPPORT COLUMN AND STRUCTURE

This portion of the tank is in good condition. The legs, wind-rods, struts, and column flanges are in good condition, but the protective coating is in poor condition. There are isolated areas of coating failure. There is complete coating failure and corrosion on the foundation, struts, and wind rods. There is a safety climb device on the tower ladder, but no anti-climb device at the base of the ladder.

BOWL & RISER:

This portion of the tank is also structurally sound. The coating on the underside of the bowl is in poor condition, with large areas that were missed during the last coating.

TANK SHELL:

The coating system on the shell wall is in poor condition. There is complete coating failure in areas that were missed during the last coating. These areas are showing an average coating thickness of 1.8 mils. There is a secondary manway in the shell wall, but it is outdated.

ROOF/DOME:

The coating on the roof of the tank is in poor condition. There is complete coating failure on the areas that were missed during the last coating. The roof manway was found unlocked.

INTERIOR CONDITION:

The interior of the tank is in good condition. There are multiple areas of heavy staining and heavy sedimentation on the walls and floor of the tank. The safety grate for the riser is not in place. The tank vent has areas of coating failure and section loss. Areas below the water level could not be inspected at this time. The tank level indicator is not functioning properly. There is a safety climb on the interior ladder.

REPAIR ITEMS:

It is recommended that in the next 2 years, the exterior of this tank be blasted and coated to prevent deterioration of steel. The interior should be drained, and pressure washed for further inspection. It is also recommended that at the time of rehabilitation, the tank be brought into compliance with current AWWA specifications.

Figure 1. Locked entry gate

Figure 2. Condition of tank support foundation

Figure 3. Condition of tank support foundation

Figure 4. Coating failure on struts and heavy mildew on riser

Figure 5. Coating failure on tank column

Figure 6. Coating failure on riser

Figure 7. Coating failure on riser foundation

Figure 8. Riser manway

Figure 9. Coating failure on wind rods

Figure 10. Coating failure on wind rod and broken electrical conduit

Figure 11. Heavy mold and mildew on first level struts

Figure 12. Coating failure on first level struts

Figure 13. Heavy lichen growth on tower ladder

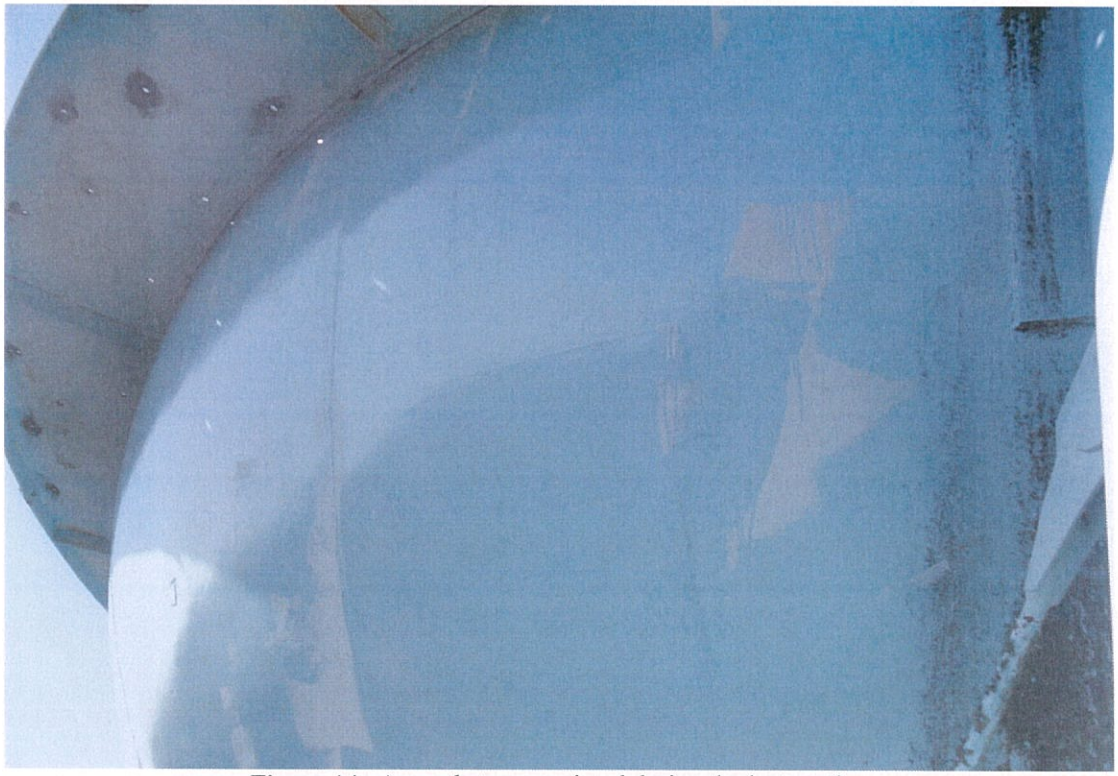

Figure 14. Areas that were missed during the last coating

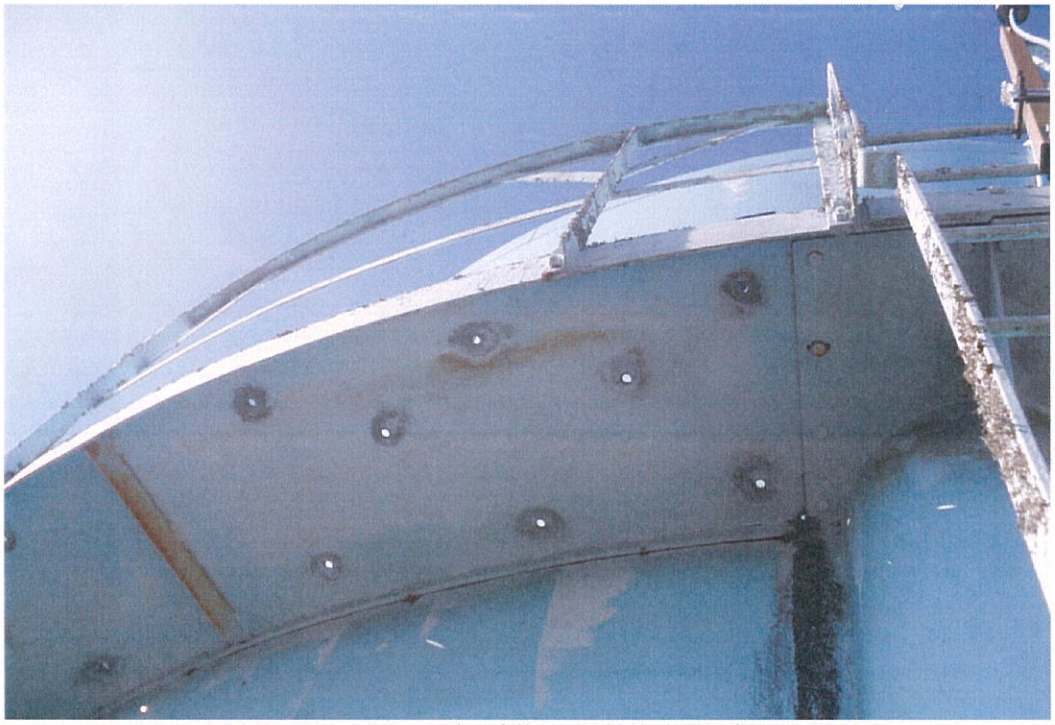

Figure 15. Coating failure under balcony floor

Figure 16. Area missed during last coating on tank shell wall

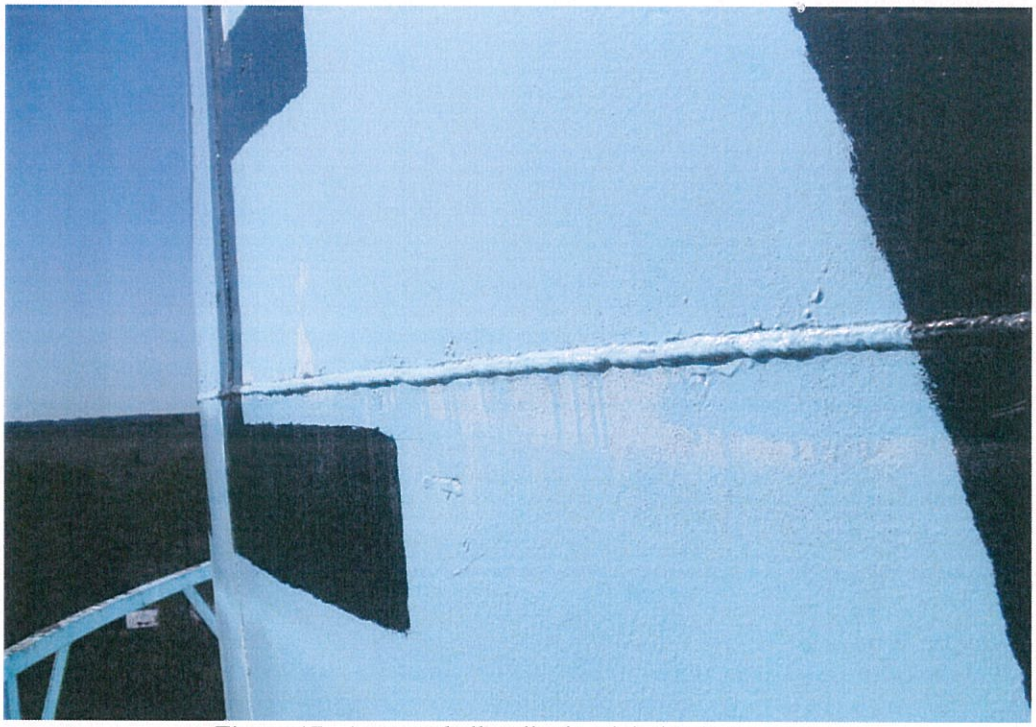

Figure 17. Area on shell wall missed during last coating

Figure 18. Condition of secondary shell wall manway

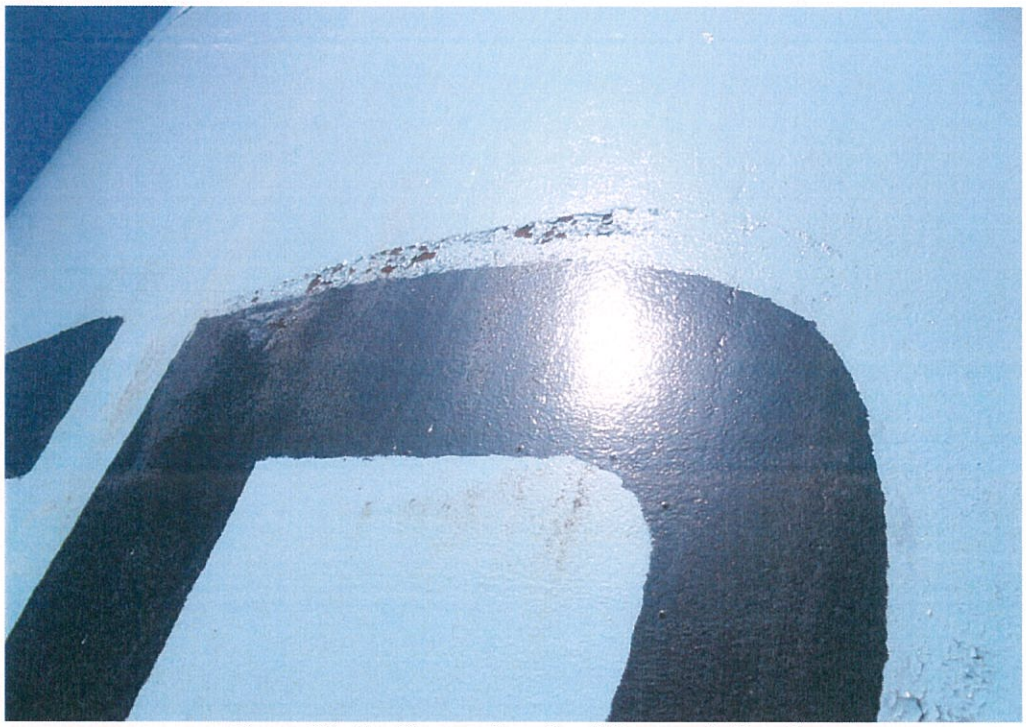

Figure 19. Small area of coating failure on shell wall

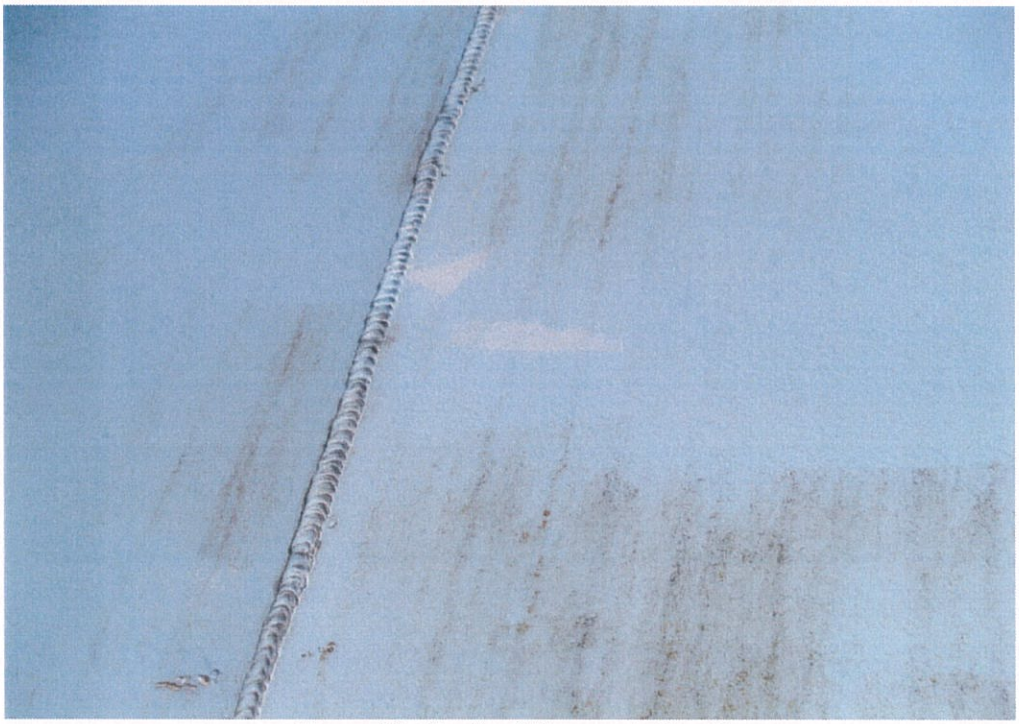

Figure 20. Coating failure on shell wall

Figure 21. Coating failure on shell wall

Figure 22. Coating failure on shell wall

Figure 23. Coating failure on overflow

Figure 24. Coating failure on balcony floor

Figure 25. Coating failure on tank level indicator

Figure 26. Uncoated area on tank column flange above balcony

Figure 27. Area missed during last coating and two localized areas of coating failure on roof of tank.

Figure 28. Coating failure on roof of tank

Figure 29. Coating failure on tank roof

Figure 30. Coating failure on roof of tank

Figure 31. Unlocked hatch. Door is warped, lock wouldn't reach.

Figure 32. Heavy sediment on interior wall and overflow

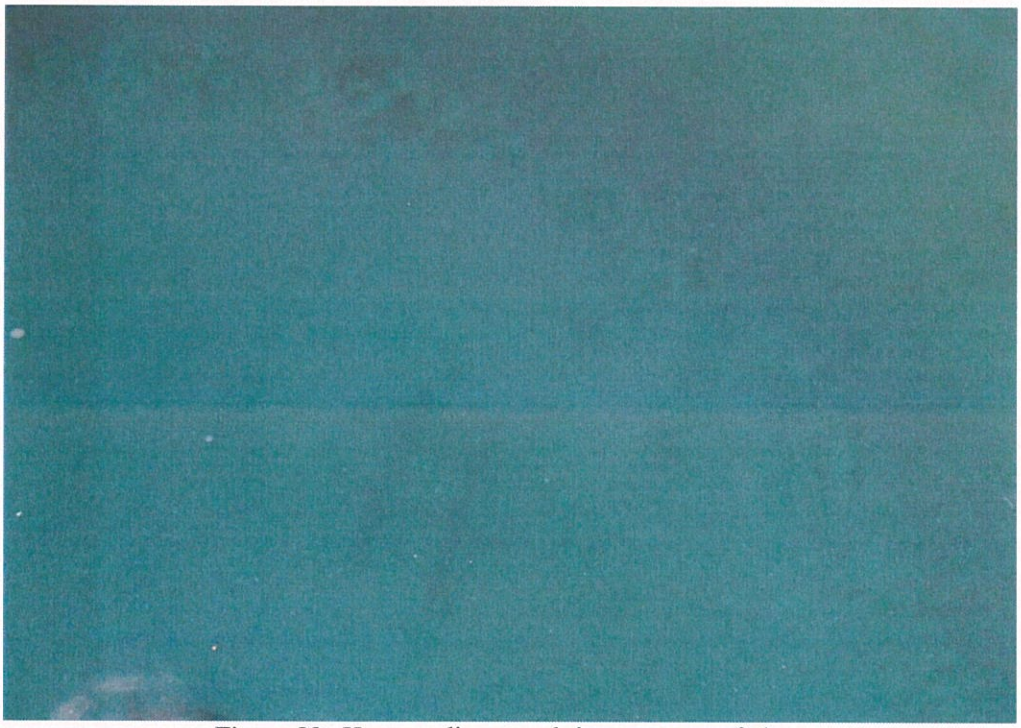

Figure 33. Heavy sediment and riser grate out of place

Figure 34. Heavy sediment on interior wall and secondary manway

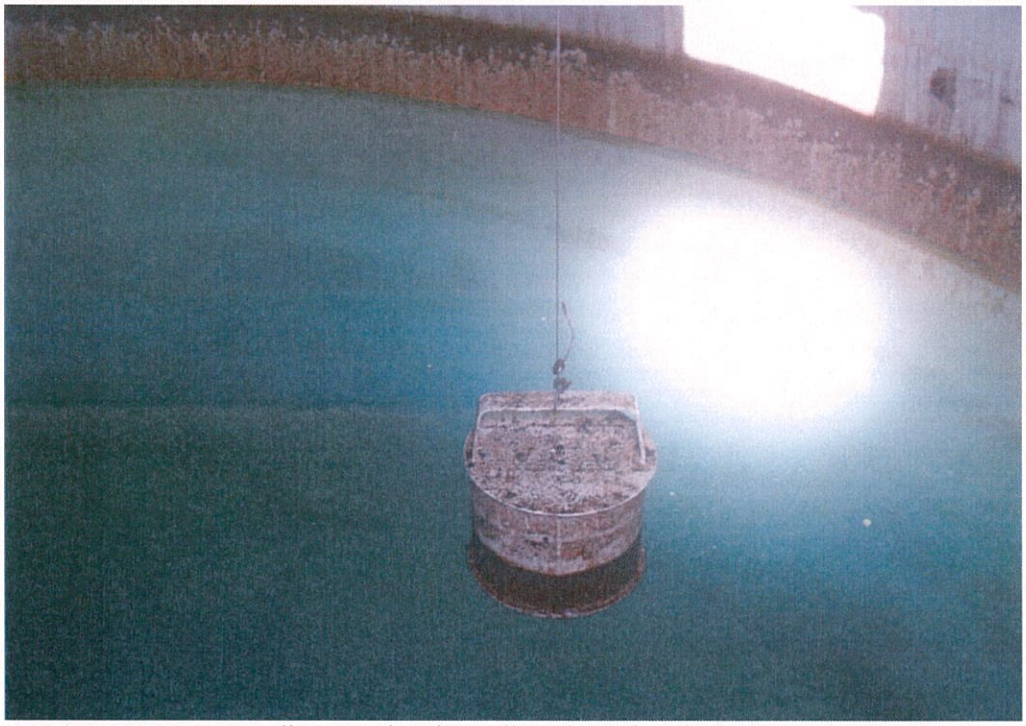

Figure 35. Heavy sediment on interior walls and non-functioning water level indicator.

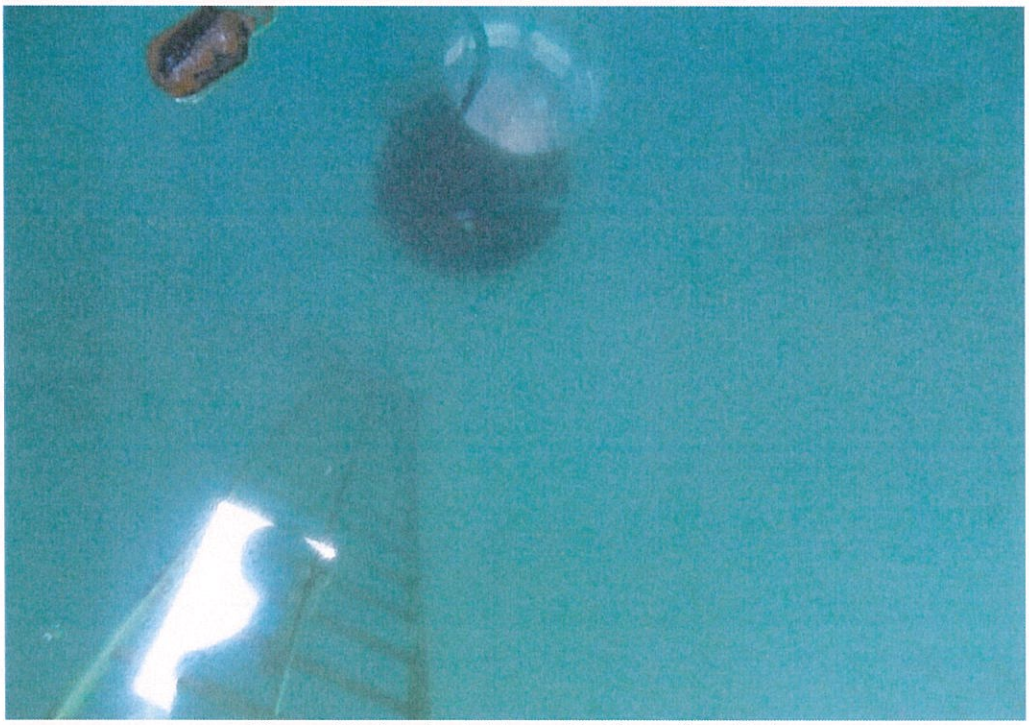

Figure 36. Interior ladder and ladder safety climb

Figure 37. Heavy sediment on interior wall

Figure 38. Coating failure on tank roof vent

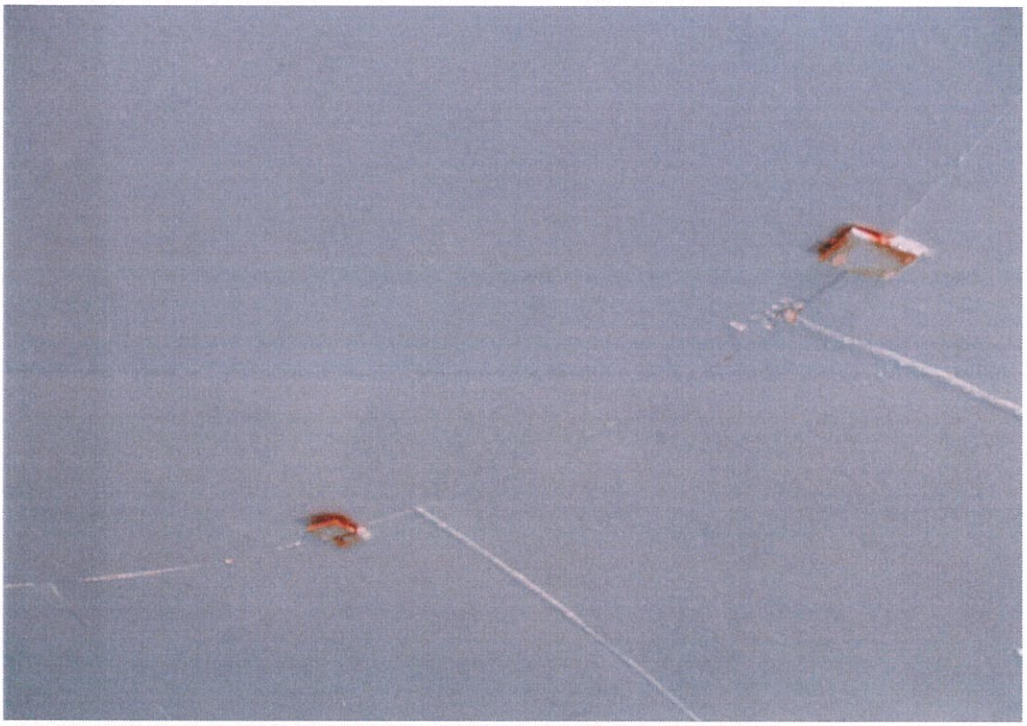

Figure 39. Coating failure on roof brackets

Figure 40. Overflow with flapper and splash pad