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Re:- Florida Exposure of Z.R.C. Cold Galvanizing Compound protected Steel after ten years.

## Gentlemen

On November 21<sup>st</sup> 1997 four 4" x 8" panels of 1/16" thick hot rolled steel, white blasted (SSPC SP 5) and spray coated with one coat of ZRC Cold Galvanizing Compound at various film thicknesses (see Table I) were exposed in South Florida by Q-Lab Weathering Research Service. Panels were each backed and edged with an adhesive white vinyl tape of 5 mils in thickness.

Exposure conditions were 45 direct south. Radiation Log was 63247,99 MJ/m (TUVR 3194.98MJ/m). Both front (ZRC coated) and back (bare with vinyl tape) were evaluated after 10 years continuous exposure.

As may be noted from Table I the exposed face of each of the four panels remain excellent after 10 years. Some spotty ferric corrosion is seen at the edges of all four panels, but the exposed areas are, with one exception, universally protected and in excellent condition.

The white (zinc) corrosion is distributed across the entire exposed and zinc coated areas of all four panels which may be explained by the natural deterioration of the zinc powder (anode) which has successfully prevented the ferric corrosion of the under-film steel.

The level of performance noted is exceptional and surprising considering the range of ZRC film thicknesses evaluated. Panels #3 and #4 are less than 2 mils thick and yet continue to provide a most superior level of protection.

On the contrary the taped back faces of all four panels exhibit very severe ferric corrosion with associated scaling and pitting. The white tape has cracked and largely peeled from the backs and edges of all four panels.

The general condition of these four panels is a most valuable testament to the protective properties of ZRC Cold Galvanizing Compound and usefulness of this product.

Yours very truly,

CLIVE H HARE

## TABLE I:- Florida Exposure of ZRC Cold Galvanized Compound protected steel after ten years exposure.

Panel	Film Thickness	Ferric Corrosion of Protected Face	Zinc Corrosion of Protected Face	Blistering of Coating Film on Protected Face	Condition of Vinyl Tape on Reverse Face	Condition of Steel on Reverse Face
#3	1.83 mils	Excellent. No Corrosion except at edges.	Universally distributed Zinc Corrosion.	None	Cracked and Partially Flaked	Heavily Rusted Scaled and Pitted Metal Loss at Corner
#4	1.93 mils	Very Good. Corrosion Eruptions on one area of panel only. Edge Corrosion	Universally distributed Zinc Corrosion.	None	Gone	Heavily Rusted Scaled and Pitted
#5	3.80 mils	Excellent. No Corrosion except at edges.	Universally distributed Zinc Corrosion.	None	Cracked and Partially Flaked	Heavily Rusted Scaled and Pitted
#8	3.83 mils	Excellent. No Corrosion except at edges.	Universally distributed Zinc Corrosion.	None	Gone	Heavily Rusted Scaled and Pitted

FIGURE 1: ZRC Panel No. 3 after 10 Years Exterior Exposure.



FIGURE 2: ZRC Panel No. 4 after 10 Years Exterior Exposure.



FIGURE 3: ZRC Panel No. 5 After 10 Years Exterior Exposure.



FIGURE 4: ZRC Panel No. 8 After 10 Years Exterior Exposure.

