



PO Box 191  
Pennington, NJ 08534  
609-865-5074 cell 1  
215-485-0226 cell 2  
609-737-6517 fax

April 28, 2010

Mr. Al Ruglio  
Alcatel-Lucent Technologies Inc.  
600 Mountain Avenue  
Murray Hill, NJ 07974

**Subject:** Cooling Tower Peroxide Corrosion Study Report

Dear Al,

This set of corrosion coupons were removed from the cooling tower system on April 22, 2010. The coupons had been exposed in the system for 358 days.

New coupons were installed in the rack for the present season.

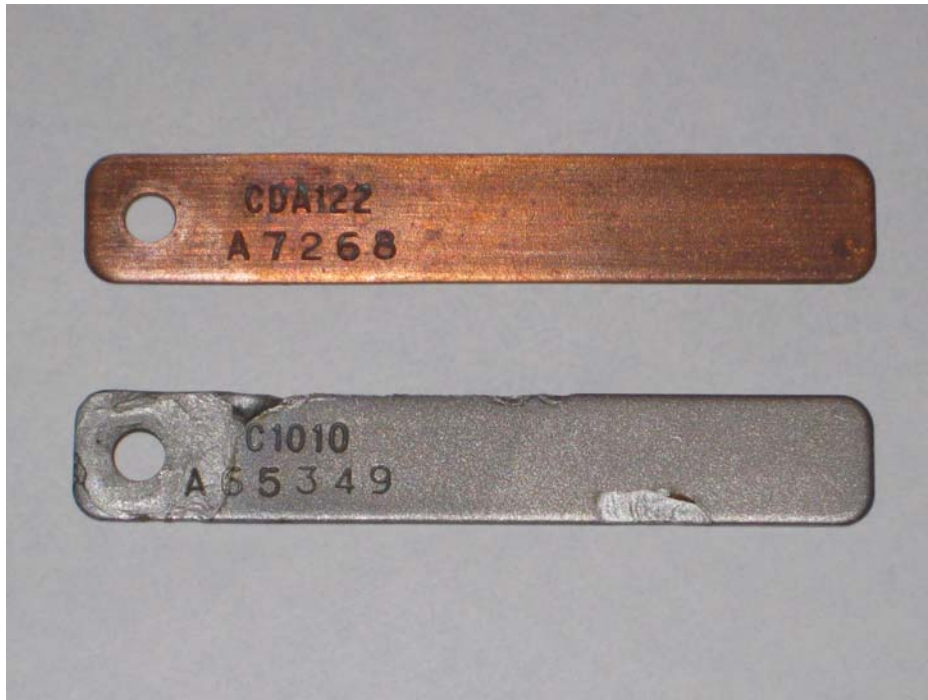
The mild steel specimen removed was in excellent condition. Most of the surface of the coupon was clean of any deposit. There was only a small amount of deposit and metal loss where the coupon had been handled during installation. The specimen #A65349 (11.67160 grams in/11.29264 grams out) resulted in 1.05 mils per year corrosion rate. This represents excellent control and demonstrates the performance of peroxide as an excellent total treatment concept.

The copper specimen demonstrated even better control at 0.09 mils per year corrosion rate for the #A7268 (12.65800 grams in/12.62660 grams out) specimen. This copper coupon contained a complete protective oxide layer which is desirable for copper metallurgy and normally takes several months to form.

See "**Figure 1:** Photo of mild steel and copper coupons after cleaning" on the following page.

In general, the control by the operating staff has been commendable and is responsible for the above results. Also, the continuous operation of the Adams strainer system is most important in control of suspended solids resulting from organic oxidation by the peroxide.

**Figure 1:** Photo of mild steel and copper coupons after cleaning



Please contact us with any questions.

Sincerely yours,

Nelson Brown  
Nelson Brown II

Cc.: P. Declesis; K. Pearson; R. Dynes