UNIVERSITY OF KENTUCKY

COLLEGE OF ENGINEERING

KENTUCKY TRANSPORTATION CENTER
CE/KY TRANSPORTATION CENTER BLDG.
LEXINGTON, KENTUCKY 40506-0281

November 1, 1995 H.2.140

Mr. J.E. Pritchett
President
Superior Products International II, Inc.
6459 Universal Avenue
Kansas City, MO 64120

Subject: Field Performance of **Rust Grip** Paint on Kentucky Transportation Cabinet Test Beams

Dear Mr. Pritchett:

In September 1993, we applied test patches of **Rust Grip** paint on two test beams at the Kentucky Transportation Cabinet bridge steel storage yard at Frankfort, KY. That work is part of an on-going series of field application/performance tests for a coatings evaluation program we are conducting for the Transportation Cabinet.

Your paint was applied to several salvaged scrap bridge beams. The beams possessed coatings of weathered lead-based alkyd paint and exhibited extensive corrosion on both the flanges and webs. Several days prior to painting, we cleaned the test surfaces on those beams by washing them using a hand-pump sprayer. That was the only surface preparation provided.

Three coats of **Rust Grip**, were applied by brushing to two test patches each consisting of about 10 ft^2 areas. Where old, loose paint was encountered, we simply continued brushing with your paint and attempted to incorporate the old paint chips into the new coats of paint. We also worked the paint into exposed edges of the existing paint and into rusted areas. The paint cured rapidly in our ambient applications allowing short re-coat times. The 3 coats of paint were applied over an 8-hour day.

The **Rust Grip** brushed on very easily. With proper brushing technique, it readily flowed under exposed edges of existing paint and wicked into surface rust. The paint dried to a hard, stable finish and had an attractive appearance similar to the old aluminum alkyds. A exposed edges of the existing paint were suitably penetrated and sealed and paint chips removed during brushing were securely tacked to the beam surfaces by the new paint. The first coat of paint had coalesced with existing surface rust and formed a viable substrate for subsequent topcoating. The paint had very effective penetrating qualities similar to epoxy penetrating sealants (but without the pot-life limitations).

As you are aware, the Kentucky Transportation Cabinet is a technical leader in bridge maintenance painting by overcoating. The Transportation Cabinet approach is unusual in that employs minimal surface preparation (typically limited to a 3,500 psi power wash and wet wiping where residual chalking is detected). Mechanical surface preparation is only used to remove pack rust.

One benefit of that approach is low project costs (in the range of $1.50/ft^2$ for projects conducted this year). To achieve that cost savings, the Transportation Cabinet relies on coatings with exceptional application qualities that provide the necessary penetration and sealing to be applied over the marginal substrates provided by the Transportation Cabinet surface preparation specifications. Good paint and close inspections will provide excellent overcoating projects that should easily last 10-15 years.

Rust Grip has superior application qualities characteristic of moisture-cure polyurethane paints. As previously discussed, Transportation Cabinet officials consider application characteristics to be vital for successful overcoating using their minimal surface preparation specifications. Typically, the Transportation Cabinet requires brushing on any existing substrate, but permits rolling or spraying on succeeding coats to reduce project painting costs.

We have periodically inspected the **Rust Grip** test patches. We have compared them to similar test patches of 10 other paint systems applied to those beams during the same month using the same application procedure. **Rust Grip** has shown no signs of deterioration over the past 24 months. That is remarkable when one considers the marginal substrates employed. We consider your paint to be a superior performer and intend to employ it on an experimental bridge maintenance painting project in the near future.

Sincerely,

Theodore Hopwood II, P.E.

UNIVERSITY OF KENTUCKY

COLLEGE OF ENGINEERING

KENTUCKY TRANSPORTATION CENTER
CE/KY TRANSPORTATION CENTER BLDG.
LEXINGTON, KENTUCKY 40506-0281

October 22, 1997 H.2.533

Mr. J.E. Pritchett
President
Superior Products International II, Inc.
6459 Universal Avenue
Kansas City, MO 64120

Subject: Performance of Superior Products Aluminum-Pigmented Moisture Cure Polyurethane Paint

Dear Mr. Pritchett:

Recently, I had the opportunity to inspect the overcoating test patches we placed on old bridge steel in the Kentucky Department of Highways bridge yard at Frankfort in 1993. At that time, Mr. David Williams of Superior Products assisted with the application. We brushed on 3 coats of **RustGrip** on a substrate composed of old paint and rust on an I-beam. Prior to coating application, the substrate had been prepared by washing with water applied at low pressure and, subsequently, wiping the substrate with a rag.

At the same time, we applied some 15-20 other paint systems from various coatings manufacturers in a similar manner. Periodically, I have reviewed the performance of all the coating systems applied. Until this year, most of the coatings systems performed satisfactorily. However, now we are beginning to see some failures. I want to appraise of the fact that the **RustGrip** coating is one of the best performing systems.

As you know, we have an experimental overcoating project using your paint on a bridge at Danville, KY. It was completed several weeks ago and I have not had a chance to inspect it. When I am able to do so, I will send you some photographs for reference purposes. Based upon the performance of your paint in the bridge yard, I anticipate that we will experience excellent performance on the experimental overcoating project.

Sincerely,

Theodore Hopwood II

Theodore Hopwood II, P.E.

C: Bill Calhoun