PLAINTIFF'S EXHIBIT

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Western Engineering Dep't
Garfield, Utah
December 20th, 1945

RECEIVED
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MR. R. D. BRADFORD, MANAGER,

El Paso, Texas

Dear Sir: FLUES AND ROOFS - EL PASO

Mr. Schultz stopped in yesterday and gave me a copy of his December 12th report on your flues and roofs.

With the exception of No. 2, his recommendations for the flue tops appear to be as good as anything we know about up to this time.

I can't go along with him on No. 2 and believe that removing any mortar beyond that which brushing and blowing will dislodge is a waste of time and money and that goes double for any repointing with neat cement cream.

So far as the roofs are concerned I certainly can't see spending nearly $10.00 a square on cleaning and coating an old corrugated steel roof when you should be able to put on a new one for very little more. Garfield paid $6.99 a square for 20 gauge corrugated sheets last Summer and $5.00 a square would be more than ample to purchase the necessary fasteners, remove the old steel and replace with new.

The climate in the Southwest is so different from the Intermountain or Coast country with which I am familiar that I am not really competent to make recommendations as to exactly what you should do at El Paso or Hayden.

Clear back in the twenties when El Paso was boosting for Turnerizing I satisfied myself that it was no good for this country.

I also kept roof records at Garfield for a number of years and decided that over any extended period of time corrugated iron cost more than any other type of roof we used. The limited rainfall at El Paso will undoubtedly result in a much longer life for corrugated steel but I am wondering if the hot sun doesn't also make it necessary to paint oftener so that maintainance costs between replacements may be higher though replacement will not have to be done as often.

Any plant that hasn't done so will be fully repaid if they will make a roof map, mark on it as closely as they can determine the date the various roofs were applied and then keep a record of painting, repair and replacement cost for a long enough period to be able to predict the comparative costs of different types of roofs. It required 8 or 10 years years here and might take a little longer there.

Regardless of what comparative costs might be, I don't believe corrugated steel is a proper material for a Power House roof where leaks can cause serious damage. I believe either 2" x 6" T&G sheathing with a first class built-up asbestos roof or else corrugated transite should be used. For the present I would rule out the built-up roof on account of the impossibility of obtaining kiln dried T&G lumber. If dried 2" x 6" or even 2" x 8"

could be obtained from torn down army installations and then made into T&G, that would be satisfactory.

There is a comparatively new corrugated roofing material on the market that appears to have considerable promise and I would suggest that you contact Bob Muse who replaced Stewart at San Francisco, and see if any trouble has developed with it at Selby. If not I think it would be desirable for you to at least put on a reasonable sized test section of roof.

Many years ago Garfield had Robertson's Asbestos Protected Metal on the entire Reverb and Converter Building. It was a complete, costly failure due to the fact that any puncture of the outer asphalt and asbestos coatings allowed the steel core to rust and it wasn't unusual to find sections as large as a square where the steel was entirely eaten away but the two asbestos covers were still in place and looked like a perfectly good roof.

About two years ago I saw some samples of a type of asbestos protected metal with the asbestos coatings apparently fused to the metal core so that it all acted like a unit. The surface was flecked with what looked like minute particles of mica and the manufacturers claimed that no painting would ever be required and that there was no possibility of the bond between the coating and the steel ever being broken.

It looked very good, costs much less than corrugated transite and I believe Muse installed a fair quantity of it at Selby. It is too soon to arrive at any absolute conclusions regarding its life but the freedom from the necessity of painting would more than justify the additional cost over corrugated iron provided their claims regarding the permanent bond are confirmed by experience and I believe two years is long enough to make reasonably certain about that point.

Yours truly,

C. C. BURT