

PI-74-0103

Office of the Secretary of Transportation  
Washington, D.C. 20590

Original letter before  
Inserting last paragraph  
As requested by TGC-20

Mr. Ted L. Canfield  
Cathodic Protection Service  
Service Division  
P.O. Box 66387  
Houston, TX 77006

Dear Mr. Canfield:

This responds to your letters of February 25 and April 11, 1974, in which you refer to the surface potential survey method for locating areas of active corrosion on bare Dresser-coupled lines. Your comments related to Advisory Bulletin No. 72-8, dated August 1972, which stated our opinion that the two-electrode "leap-frogging" surface potential survey method will not provide useful information in determining where active corrosion is taking place on Dresser-coupled pipelines (insulated joints).

Basically, you raise the same issues discussed in previous correspondence with Mr. Doremus of your firm. (Enclosed are a letter from Mr. Doremus dated November 2, 1972, and our response of January 3, 1973.) Our position as stated then is that the "leap frogging" surface potential survey method may be used successfully to located areas of active corrosion on electrically continuous pipelines.

Your letter addresses bare Dresser-coupled lines without distinguishing between those which have insulated joints and those which do not. If you can determine beforehand that a Dresser-coupled line does not have insulated joints, then we see no problem with using the "leap-frogging" method to detect active corrosion. However, where a line is known to contain insulated joints or there is insufficient information to determine whether or not the joints are insulated, then we hold to our opinion that the "leap-frogging" method would not be useful.

Sincerely,  
Joseph C. Caldwell  
Director  
Office of Pipeline Safety

Catholic Protection Service  
P.O. Box 66387  
Houston, Texas 77006

April 11, 1974

Department of Transportation  
Office of the Secretary  
Washington, D.C. 20590

Attention: Mr. Joseph C. Caldwell, Director  
Office of Pipeline Safety

Gentlemen:

Inasmuch as we have not yet received any acknowledgement of our letter dated February 25, 1974 (copy of which is attached) we are wondering whether this communication might possibly have gone astray and had not yet been received by your.

Should such be the case, please let us know so that we may resubmit this correspondence. In the event you have received our original correspondence, we are, quite naturally, anxious to hear from you concerning the information and suggestions therein.

Very truly yours,  
CATHODIC PROTECTION SERVICE  
Ted L. Canfield  
Partner

February 25, 1974

Department of Transportation  
Office of the Secretary  
Washington, D.C. 20590

Attention: Mr. Joseph C. Caldwell, Director  
Office of Pipeline Safety

Gentlemen:

We have recently been informed that one of the corrosion service firms has stated to potential clients that, "the surface potential survey method is neither valid nor approved by DOT as a means of determining locations for "hot spot" protection on bare Dresser-coupled lines."

Apparently, this statement is premised on a statement set forth by DOT in Advisory Bulletin No 72-8 dated August 1972, as follows:

OPS Interpretation:..."The Office of Pipeline safety does not feel that the use of the two-electrode "leap-frogging" surface potential survey method will provide any useful information in determining where active corrosion is taking place on Dresser-coupled pipelines (insulated joints).  
"...there are other types of electrical equipment that will do this job...Otherwise, areas of active corrosion on Dresser-coupled pipelines can only be determined by a study of corrosion and leak history records or leak detection surveys."

We wish to take issue with the general inference or interpretation of this statement to the effect that, "surface potential survey, when properly conducted, is not a valid survey for determining "hot spots" on Dresser-coupled piping." We further submit to you that the surface potential survey, when properly conducted and interpreted and when followed by accurate anode installation by location, is indeed the most practical and efficient means of corrosion mitigation in connection with bare Dresser-coupled lines.

In support of the above statement, we wish to point out that we have been utilizing our surface potential survey procedure and subsequent "hot spot" protection for corrosion control on bare Dresser-coupled lines for 15+ years. As a result, there is available a considerable amount of substantiative performance date on such lines which indicates that this approach is indeed a highly accurate means of corrosion detection and a highly efficient means of corrosion mitigation for bare Dresser-coupled piping. Therefore, we wish to be afforded the opportunity to make this information and knowledge available to DOT for evaluation in order to forestall what could be considered as a blanket indictment of this approach. Such an indictment, even though misconstrued would, we feel, be a disservice to the many operators who still number Dresser-coupled lines within their systems.

In addition, we offer to conduct a field demonstration of our surface potential survey technique on bare Dresser-coupled piping and then expose representative locations on the line upon completion of the survey to substantiate our interpretation of the data. We would propose to conduct this demonstration, hopefully as soon as possible, at such location and time that would be convenient for your representative(s) to observe the entire procedure. We could make available, if agreeable with you, arrangements with some of our clients for a segment of line for demonstration purposes, or, if you prefer, we would be quite willing to survey a segment of bare Dresser-coupled line which you might choose and for which you would make arrangements with the owner company.

If it would be of any assistance in expediting some action along the lines set forth above, we would be quite willing to pay the transportation and subsistence costs involved with your representative being present at the location of the proposed field survey.

Should you not see fit to become involved with the observance of such a test survey, we would then request the opportunity for our personnel to meet with you in the near future in Washington, or at a location of your choosing, for the purpose of discussing with your our surface potential survey procedure and interpretation criteria, as well as performance data on Dresser-coupled systems which have been subjected to the surface potential survey and "hot spot" protection approach.

We are enclosing for your information a copy of a paper presented by our Mr. LeRoy A. Bash at the South Central Regional NACE Conference held in Fort Worth last year. We feel this paper will be of interest to you and to the industry when it's published, as it constitutes a very through insight into the theory supporting intelligent use of the refined surface potential survey procedure being used by our firm.

Since this matter is of extreme importance to us and we feel of importance to the industry as a whole, we are looking forward to hearing from you in the very near future.

Very truly yours,  
CATHODIC PROTECTION SERVICE  
Ted L. Canfield  
Partner