May 10, 1974

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 relate 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 locate 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 surface potential survey 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.

While we are of the opinion that the surface potential survey method by itself is not useful in the circumstances described, we would consider any further information or technical reports which bear upon the accuracy of that conclusion.

Sincerely,

Joseph C. Caldwell
Director
Office of Pipeline Safety

Enclosures

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Original letter before
inserting last paragraph
as requested by TGC-20.

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Joseph C. Caldwell
Director
Office of Pipeline Safety

Enclosures

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CATHODIC PROTECTION SERVICE

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 you.

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

Enclosure

MEMORANDUM

April 9, 1974

SUBJ: Proposed letter to Mr. Canfield re: Surface potential survey method

FROM: Assistant General Counsel for Regulations, TGC-20

TO: Director, Office of Pipeline Safety, TES-30

We have reviewed your proposed letter responding to the letter from Mr. Ted Canfield concerning your previous published interpretation of the acceptability of the surface potential survey method for determining whether active corrosion is taking place on Dresser-coupled pipelines.

We do not concur in your proposed response for the following reasons: First, although you state that you do not desire to become engaged in the sanctioning of methods of compliance with your performance oriented regulations, this is precisely the effect of leaving outstanding your August 1972 condemnation of the surface potential survey method published in Advisory Bulletin No. 72-8. Second, while your published comments were denominated an "interpretation" of OPS regulations, they may be argued to constitute a rule-making action not in accordance with the requirements of the Administrative Procedure Act (5 U.S.C. 551). While interpretative rules are those which clarify the requirements of a rule or regulation, your "interpretation" of August 1972 appears to have stated not what the regulations require but rather what OPS believes satisfies this requirement. This is more in the form of a rule-making action than an interpretation, as you have effectively defined the term "electrical survey" to exclude the two-electrode "leap-frogging" surface potential survey method.

We recommend that as a minimum you agree to permit Mr. Canfield to meet with OPS and present his case. In the alternative, we suggest you treat the letter as a petition for rule making and publish a notice of proposed rule making proposing a definition of the term "electrical survey". This latter alternative would have the added benefit of resolving this matter in a manner fully in accord with the requirements of the Administrative Procedure Act.

In order to avoid similar situations in the future, your office should refrain from publishing any opinion relating to acceptable methods of compliance with the requirements of your published regulations. Only clarifications of the

requirements expressed in your regulations should be the subject of any OPS interpretation.

Stephen L. Grossman

CATHODIC PROTECTION SERVICE

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 data 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, is 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 you 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 thorough 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