MONSANTO INDUSTRIAL CHEMICALS CO.
St. Louis, Missouri

cc: C. L. Bradford
T. L. Gossage
J. F. Herber
L. R. Stark
W. R. Richard
J. G. Frederiksen
D. W. Stegen
H. R. Ford
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D. R. Hansen
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February 8, 1972

CALL REPORT NO. 1972-1

TEXAS EASTERN TRANSMISSION CORP.
Milam at McNeil
P. O. Box 1512
Shreveport, La. 71130

Date of Call: January 14, 1972

Present for Texas Eastern:
Walter Woods
A. B. Jarnagin
B. R. Purgitorio
E. P. Farmer
R. E. Moore
D. H. Sloan
E. C. Riall, Jr.
Jack Simpon
J. Y. Briggs

Present for Monsanto:
C. L. Bradford
D. W. Stegen
J. G. Frederiksen
R. E. Hatton

SUMMARY:

Texas Eastern Engineering and Operational personnel were informed that Turbinol 153 will no longer be available to them without signing a Special Agreement letter. Texas Eastern will not sign such a letter and has sufficient material to finish out the current season. However, they will change from Turbinol 153 to another fire resistant turbine lubricant and expressed a willingness to work with Monsanto. They will provide one or more test units, pending G.E. approval, to field trial our product and to gain some operating experience before their entire system is changed over from Turbinol 153.

DETAILS:

The purpose of this call was to review with Texas Eastern Engineering and Operating personnel the situation caused by the discontinuance of Turbinol 153. Previous contact had been made with the Purchasing Department and a copy of a proposed Agreement had been submitted.

Texas Eastern personnel had reviewed their lubricant supply situation and had determined they had at least sufficient Turbinol 153 to complete winter and summer operations. A more careful analysis will be made to determine the exact

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time of depletion. This will be done on a station-by-station basis and include transferring new fluid around as required. A desire was expressed to order a small amount of additional fluid if it could be obtained before the deadline of signing the Agreement letter. However this was not possible and no additional fluid was supplied to Texas Eastern following our visit.

The environmental situation with the PCB containing Turbinol 153 was discussed in detail. Texas Eastern stated that they would not sign the special Agreement letter. They felt they would be able to continue to operate for a sufficient period of time to make an orderly and satisfactory changeover to another fluid.

We were asked concerning our replacement fluid and reviewed our total phosphate ester program aimed at providing chlorine-free hydraulic fluids and lubricants. It was stated that information on a replacement product would be available in 1-2 weeks and would be supplied in terms of a comparison with Turbinol 153. It was pointed out that these are relatively new products and that we do not have a large background of service experience. They requested that we supply our test data as rapidly as possible.

One area of considerable concern was conversion procedures required to change from Turbinol 153 to any new product they select. Therefore, adequate data on compatibility between our new all phosphate ester fluid and Turbinol 153 must be obtained. It was their feeling that they could clean and drain their gas turbine units so that about 10% of the original fluid would remain in the system.

One necessary step before conversion is General Electric approval or at least acquiescence for the particular product to replace Turbinol 153. It was indicated that work is underway with General Electric, that they were aware of our phosphate ester program and had examined some samples of our material. Texas Eastern will also be in contact with General Electric to determine what mechanical changes may be made necessary in existing turbines. It was indicated that materials compatibility should be satisfactory but that the two fluids would have different densities and viscosities. Questions were asked concerning heat transfer characteristics since this is important in sizing coolers. It was emphasized by Texas Eastern that Monsanto should work very closely with General Electric to be sure that complete information exchange is obtained. In addition, they suggested contact with Clark, Cooper Bessemer, DeLaval and Westinghouse for their approval on our new fluids. The

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first three companies supply the natural gas compressors which are driven by the gas turbines, both using Turbinol 153 from a common reservoir. Westinghouse has supplied one gas turbine which is lubricated with Turbinol 153.

During the discussion, the Vice President of Engineering asked his people as to what steps would be involved in going back to petroleum fluids. Both Operating and Engineering personnel affirmed that fire resistance was the important characteristic and that they have no desire to use flammable lubricants at unmanned units. There also appeared to be a desire to cooperate with Monsanto on a new fire resistant product.

R. E. Hatton

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