



Southwest Region,
Office of Pipeline Safety

2320 LaBranch, Suite 2116
Houston, Texas 77004
Phone: (713) 718-3746
Fax: (713) 718-3724

U.S. Department
of Transportation

Research and
Special Programs
Administration

LETTER OF CONCERN

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

November 19, 1996

Mr. Mark Rohr
Vice President, Operation
Oxy Petrochemical Inc.
5005 LBJ Freeway
Dallas, Texas 75244

CPF No. 46516-C

Dear Mr. Rohr:

On July 23 and 24, 1996, a representative of the Southwest Region, Office of Pipeline Safety (OPS), pursuant to Chapter 601 of 49 United States Code, conducted a pipeline safety inspection of Oxychem Pipeline (OXY) in Lake Charles, Louisiana.

Records were reviewed in your Pearland office and field inspections were conducted at the unit location. During the field review, we witnessed cathodic protection field tests being conducted. Specifically, we observed Oxy's Lead Technician as he read the rectifier outputs (driving voltage and current output) and conducted pipe-to-soil potential measurement. We are concerned regarding our observations, as follows.

First, we noted that the technician used the rectifier meters to record the driving voltage and current output. When he was asked to verify the rectifier meters by using his portable voltmeter, he indicated that he did not know how to use the meter to verify the rectifier meters. Our experience is that over time the current output meters are not reliable and that the current should be measured by recording the voltage drop across the calibrated shunt and converting this to current. Typically the shunt is located on the front panel of the rectifier and this measurement is not difficult nor time consuming to perform. The conversion is sometimes seen as troublesome by field personnel but it only involves multiplying the measured voltage drop by the ratio of the shunt's rating $\{I_{\text{current output}} =$

$V_{\text{voltage drop}} (\text{Current}_{\text{shunt rating}} \div \text{Voltage}_{\text{shunt rating}})$. Finally, a tech charged with the responsibility of monitoring and operating a cathodic protection system should be able to use a portable voltmeter.

A second concern arose after the technician was asked to perform a pipe-to-soil potential measurement at what appeared to be a cased road crossing with a vent installation. The potentials measured utilizing two test leads at a test station were almost identical, indicating a probable shorted casing. When queried the Lead Technician responded that there may not be a casing, or that the leads may have been connected incorrectly. The pipeline drawings were later reviewed and it was confirmed that the crossing was cased. A capable cathodic protection technician should be able to discern that a crossing is cased by observing that vents had been installed. Moreover, pipeline operators should have a listing of the cased crossings or knowledge of their locations should be tested for electrical isolation.

Furthermore, while conducting the record inspections in your Pearland district office, we observed from the rectifier logs that some voltage and current data had not been recorded. For example, the rectifier logs did not have the following: 1) At Hwy. 27, data was missing for the months of October through December and 2) the Gum Cove Road log did not have the data for the month of December, 1994. Although this data was included in the records kept in the field office and this complied with the code requirements, these logs provide key data for monitoring the effectiveness of the cathodic protection system. This data is important because it is used to monitor any changes in the driving voltage and the protective current output, an indicator that trouble shooting the system may be required to keep the system operating as required. We also noted recording errors when reviewing this data. Our analysis indicated differences in the current output in the data from the rectifier logs and the Pearland district office records. Although the differences were usually small, this indicates a lack of attention to detail.

We brought to the attention of local management our concerns with the quality of OXY's cathodic protection monitoring and the casual attitude of management, particularly since the second leading cause of reportable accidents on pipelines is corrosion.

We are satisfied that you will give our concerns your immediate attention and will continue with your efforts to operate safe pipelines. If we can answer any questions or be of any help, please call us at (713)718-3746.

Sincerely,

James C. Thomas, Director
Southwest Region
Office of Pipeline Safety

cc: Gene Roberson