



# INLAND EMPIRE PAPER COMPANY

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UTILITY AND TRANSPORTATION  
COMMISSION

April 23, 2008

Mr. Scott Rukke  
Washington Utilities and Transportation Commission  
1300 S. Evergreen Park Dr. S.W. P.O. Box 47250  
Olympia, WA 98504-7250

Reference: 2007 – Gas Pipeline Safety Audit PG-070010

Dear Mr. Rukke:

Inland Empire Paper Company (IEP) has addressed the three items discussed during your visit on March 12, 2008.

**1. IEP needs to detail the procedures on how to test for a shorted casing in section 3.11, Cathodic Protection.**

IEP has modified section 3.11 of its Operations and Maintenance Manual. We have added the wording "The test will consist of using a DC power source connected to the pipeline and using the casing as a ground bed. The DC current drain and the P/S CP voltage shift will be noted. A current drain of approximately 100ma and higher with a corresponding P/S CP voltage shift of less than .5 volts will indicate a shorted casing." See the enclosed update to section 3.11 of IEP's Operations and Maintenance Manual.

**2. IEP needs to add the timing of the copper sulfate reference check in section 3.11, Cathodic Protection.**

IEP has modified section 3.11 of its Operations and Maintenance Manual. We have added the wording "This accuracy check will be done annually and just prior to the April annual CP survey." See the enclosed update to section 3.11 of IEP's Operations and Maintenance Manual.

## Inland Empire Paper Company

Mr. Scott Rukke  
Page 2  
April 23, 2008

3. IEP has also modified the wording in section 3.09, "Inspection of Exposed Pipeline" to read "When underground piping is exposed, the piping will be inspected for adequate coating and a CP potential will be taken if the coating is damaged or missing."

The third item was not a requirement, but just a suggestion by the WUTC. The WUTC also brought up a question as to the true MAOP of IEP's gas line. In a separate letter to the commission, I am planning on explaining the circumstances of the pressure test conducted in 2005 and requesting the MAOP be left at 811 psi. If this request is denied, then IEP's manuals will be updated to read the correct MAOP of our gas line.

If you have any questions or concerns, please contact me at 509/924-1911.

Sincerely,



Kevin Davis  
Paper Machine Superintendent

### 3.11 CATHODIC PROTECTION

#### GENERAL

The 4-inch feeder main is cathodically protected by an impressed current system. The rectifier and ground bed are located just off Upriver Drive.

#### CRITERIA FOR CATHODIC PROTECTION

A minimum pipe-to-soil (P/S) voltage of  $-.85$  volts is the expected norm, using a copper sulfate half cell as a reference. Reference NACE standard SP0169-2007

#### FREQUENCY OF TEST

- Monthly - A CP voltage will be taken at a pipeline test station 50' south of WGPC meter station. The CP reading will be reported in consultant's monthly report.
- Bimonthly - The cathodic protection rectifier will be inspected six (6) times per year (with intervals not exceeding 2-1/2 months). DC volts and amperes readings will be reported in the monthly report.
- Annually - A pipe-to-soil voltage survey shall be made of all test points along the pipeline.

#### REMEDIAL ACTION - POSSIBLE SHORTED CONDITION

If the monthly CP reading at the pipeline test station near WGPC station is more positive than  $-.85$  volts, remedial action shall be taken within 10 days to restore a minimum P/S voltage of  $-1.00$  volts.

If the casing P/S voltage, taken annually, is more negative by  $.2$  volts from the previous survey, a shorted casing test shall be done. The test will consist of using a dc power source connected to the pipeline and using the casing as a ground bed. The dc current drain and the P/S CP voltage shift will be noted. A current drain of approximately 100ma and higher with a corresponding P/S CP voltage shift of less than  $.5$  volts will indicate a shorted casing. If a short is found, the ends of the casing will be exposed and insulating material will be inserted as needed. If this does not clear the short, the pipeline will be removed from the casing and reinserted with proper casing insulating spacers. The short will be cleared within 90 days.

### 3.11 Cathodic Protection (cont'd)

#### ATMOSPHERIC CORROSION

Atmospheric corrosion (corrosion pitting on above-ground gas system) will be reevaluated at intervals not exceeding three (3) years. If found, remedial action shall be taken within 90 days to control all pitting. Also see paragraph 4.07.

#### FAULT CURRENT REVIEW FROM ELECTRIC TRANSMISSION LINES

Each new or rebuilt electric transmission line crossing or paralleling the 4-inch feeder main will be evaluated for possible electric current discharge or induced onto the 4-inch feeder main. It will also be evaluated for possible static voltage induced on the 4-inch feeder main.

Special attention to the following will be made:

- 1) If the electric transmission line parallels within 200 yards.
- 2) If the line structures' towers have a grounding mate (counter poise).
- 3) The operating and design voltage.
- 4) Distance between the towers and the pipeline.
- 5) Soil resistivities.
- 6) The testing for electric interference currents will be done with the line operated normal load.
- 7) A report of each test will be kept on file.

#### CP VOLTMETER ACCURACY CHECK

Two CP voltmeters readings will be compared to each other. The DC voltage readings must be within 2% of each meter, otherwise the meters will be sent out for calibration. This accuracy check will be done annually and just prior to the April annual CP survey.

#### COPPER SULFATE REFERENCE CELL ACCURACY CHECK

Two cells will be placed in a plastic container of tap water with a high impedance voltmeter connecting the two cells. The voltage difference between the cells must not exceed 40 mv. If greater than 40 mv, the cells must be cleaned and retested. This accuracy check will be done annually and just prior to the April annual CP survey.

### 3.11 Cathodic Protection (cont'd)

#### STRAY CURRENT CHECK

If a P/S voltage reading indicates unusual characteristics indicating possible stray current. An attempt to identify the stray current source must be done within 90 days. A bond to the source should be avoided. A magnesium ribbon or anode bed is recommended with a directional current blocking device.

#### RISER PIPING GROUND LINE CORROSION CONTROL

Riser piping will be inspected every 3 years for ground line corrosion and adequate ground line protective coating. If the pipe wrapping is found to be lost or missing, the pipe will be cleaned, primed, and wrapped with an approved gas pipe wrapping 6" above the ground line and below the ground to an acceptable pipe wrapping. The pipe wrapping will be completed within 90 days.

#### PIPE SUPPORTS INSULATION CHECK

Supports will be checked for adequate electrical isolation every 3 years. If the support's P/S potential is within -200 mv of the pipe's P/S potential, the support insulation shall be replaced.

#### RECORD KEEPING

The voltmeter and copper sulfate cell accuracy checks will be recorded in the annual CP report. All instrument checks and pipeline reports will be kept on file for the life of the pipeline.

### 3.09 INSPECTION OF EXPOSED PIPELINE

#### GENERAL

During the excavation activity, if there is reason to believe that the pipeline could be damaged by the excavation activity, Company personnel will inspect the gas piping as frequently as necessary during and after the activities to verify the integrity of the pipeline.

#### INSPECTION OF EXPOSED PIPELINE - CORROSION & COATING DAMAGE

When underground piping is exposed the piping will be inspected for adequate coating and a CP potential will be taken if the coating is damaged or missing. Inadequate coating on the exposed pipe will be repaired. A CP potential more positive than -1000 mv will be investigated before the ditch is backfilled. An exposed pipe report will be made and kept for the life of the pipeline.

#### INSPECTION FOR INTERNAL CORROSION

Whenever any section of the pipeline is removed for any reason, the internal surface shall be inspected for internal corrosion.

#### SUPPORTING EXPOSED PIPELINE

The 4-inch pipeline should be supported every 15 feet in open excavations with belts or netting in such a manner as to not damage the pipe coating.

#### BACKFILLING EXPOSED PIPING

Before backfilling is permitted around the gas pipeline, it shall be inspected by Company personnel. If any kinks, scratches, gauges, dents, or corrosion pits are found, they shall be taken care of per Spec. 3.04. Where another utility crosses under or over the gas pipeline, the gas pipeline should be given a second coating wrap. The existing coating shall be cleaned, primed, and then wrapped. The second wrap will help minimize corrosion causing stray currents. Backfilling shall be done in such a manner so that it will not induce any stress in the pipe. Do not allow any objects (such as rocks) to rest on the pipe or coating. If necessary, pad the pipe with six inches of sand or similar material around the pipe. A minimum clearance of 12 inches, where possible, is required by code between the gas pipeline and any other utility facilities. Backfill under pipe is to be compacted.