## APPENDIX C-9

### MECHANICAL AND ELECTRONIC LINE LEAK DETECTORS PERFORMANCE TESTS

| Facility Name: | | | Owner: | | |
|---|---|---|---|---|---|
| Address: | | | Address: | | |
| City, State, Zip Code: | | | City, State, Zip Code: | | |
| Facility I.D. #: | | | Phone #: | | |
| Testing Company: | | | Phone #: | | Date: |

This data sheet can be used to test mechanical line leak detectors (MLLD) and electronic line leak detectors (ELLD) with submersible turbine pump (STP) systems. See PEI/RP1200 Sections 9.1 and 9.2 for test procedures.

| | | | | | | |
|---|---|---|---|---|---|---|
| Line Number | | | | | | |
| Product Stored | | | | | | |
| Leak Detector Manufacturer | | | | | | |
| Leak Detector Model | | | | | | |
| Type of Leak Detector | ☐ MLLD ☐ ELLD | ☐ MLLD ☐ ELLD | ☐ MLLD ☐ ELLD | ☐ MLLD ☐ ELLD | ☐ MLLD ☐ ELLD | ☐ MLLD ☐ ELLD |
| **MLLD (ALL PRESSURE MEASUREMENTS ARE MADE IN PSIG)** | | | | | | |
| STP Full Operating Pressure | | | | | | |
| Check Valve Holding Pressure | | | | | | |
| Line Resiliency (ml) (line bleed back volume as measured from check valve holding pressure to 0 psig) | | | | | | |
| Step Through Time in Seconds (time the MLLD hesitates at metering pressure before going to full operating pressure as measured from 0 psig with no leak induced on the line) | | | | | | |
| Metering Pressure (STP pressure when simulated leak rate 3 gph at 10 psig) | | | | | | |
| Opening Time in Seconds (the time the MLLD opens to allow full pressure after simulated leak is stopped) | | | | | | |
| Does the STP pressure remain at or below the metering pressure for at least 60 seconds when the simulated leak is induced? | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No |
| Does the leak detector reset (trip) when the line pressure is bled off to zero psig? | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No |
| Does the STP properly cycle on/off under normal fuel system operation conditions? | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No |
| A "No" answer to either of the above questions indicates the MLLD fails the test. | | | | | | |
| **ELLD (ALL PRESSURE MEASUREMENTS ARE MADE IN PSIG)** | | | | | | |
| STP Full Operating Pressure | | | | | | |
| How many test cycles are observed before alarm/shutdown occurs? | | | | | | |
| Does the simulated leak cause an alarm? | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No |
| A "No" answer to the above question indicates the ELLD fails the test. | | | | | | |
| Does the simulated leak cause an STP shutdown? | ☐ Yes ☐ No ☐ NA | ☐ Yes ☐ No ☐ NA | ☐ Yes ☐ No ☐ NA | ☐ Yes ☐ No ☐ NA | ☐ Yes ☐ No ☐ NA | ☐ Yes ☐ No ☐ NA |
| **Test Results** | ☐ Pass ☐ Fail | ☐ Pass ☐ Fail | ☐ Pass ☐ Fail | ☐ Pass ☐ Fail | ☐ Pass ☐ Fail | ☐ Pass ☐ Fail |
| **Comments:** | | | | | | |

Tester's Name (print)_____ Tester's Signature _____