



Montana Department of
ENVIRONMENTAL QUALITY

Memo

**Underground Storage Tank Section
of the Waste and Underground
Tank Management Bureau**
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To: Montana Licensed Inspectors

From: Brett Smith

Date: January 18, 2006

Re: Proper Completion of Compliance Inspection Reports – Piping Leak Detection

Implementing new tools sometimes requires some adjustments. Such is the case with the new compliance inspection forms. The program needs to clarify that interstitial sensors are not Electronic Line Leak Detectors (ELLDs). Page 7b line 2 of the new forms is meant to ask if a transducer is installed into the STP packer housing. If one is not, answer “no” (or leave blank) even if continuous line leak detection is provided by interstitial monitoring. Answer “yes” on line 6 if continuous interstitial monitoring is used to satisfy the 3.0-gph leak detection requirement.

The diagram on the next page should help to clarify what we need when inspecting double-walled piping systems.

We are also having problems reading your signatures. Please print your name on the first page of the inspection so that we know who did it. Illegible signatures with no legible identification of the inspector will be returned.

Leak Detection for Piping Page 7b

Pressurized piping systems require **two** methods of leak detection; at least one method from Set 1 and at least one method from Set 2. Pressurized piping systems include gravity flow and some siphon systems.

PRESSURIZED PIPING: A METHOD MUST BE SELECTED FROM EACH SET

Facility Name _____ Facility ID# _____

UST Information: If a question does not apply, leave it blank.

SET 1 - Choose one. Catastrophic (≥ 3.0 gph) product pipe leak detection.

| | MT TANK # |
|--|-----------|-----------|-----------|-----------|-----------|
| 1 Is the mechanical line leak detector (MLLD) present and operational?
Make and Model: | YES NO |
| 2 Is an electronic ALLD (ELLD) present and operational?
Make and Model: | YES NO |
| 3 Is the ELLD an Automatic Shut-Off Device? | YES NO |
| 4 Is the ELLD a Continuous Alarm System? | YES NO |
| 5 Has the MLLD or ELLD been tested for functionality at least annually or as instructed by manufacturer? | YES NO |
| 6 Is continuous interstitial monitoring used for line leak detection? | YES NO |
| 7 Are all sensors positioned to detect a 3-gph leak within an hour? (Sensor at low point on sump) | YES NO |

1 Is the mechanical line leak detector (MLLD) present and operational?
Make and Model:

2 Is an electronic ALLD (ELLD) present and operational?
Make and Model:

3 Is the ELLD an Automatic Shut-Off Device?

4 Is the ELLD a Continuous Alarm System?

5 Has the MLLD or ELLD been tested for functionality at least annually or as instructed by manufacturer?

6 Is continuous interstitial monitoring used for line leak detection?

7 Are all sensors positioned to detect a 3-gph leak within an hour? (Sensor at low point on sump)

SET 2 - Choose one. Precision test or monthly method.

8 Is an annual precision 0.1 gph Line Tightness Test (LTT) conducted?

9 Is the precision 0.1 gph LTT conducted by the electronic LLD?

10 Is the precision 0.1 gph LTT conducted using an NWGLDE approved method?

11 Indicate date and results of the most recent test.

12 Are monthly 0.2 gph electronic LLD tests conducted?

13 If question #12 is YES, are passing 0.2-gph ELLD tests available for the past 12 months?

14 If question #13 is marked NO, circle the months in which passing LD tests are NOT available. 1=January

1			2			3			4			5			6			7			8			9			10			11			12		
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12

15 Is the console accessible and functional?

16 If questions #8 and #12 are NO, check what monthly method is used. Complete the appropriate inspection page.

<input type="checkbox"/> VM	<input type="checkbox"/> GWM	<input type="checkbox"/> SIR	<input type="checkbox"/> ISM	<input type="checkbox"/> VM	<input type="checkbox"/> GWM	<input type="checkbox"/> SIR	<input type="checkbox"/> ISM	<input type="checkbox"/> VM	<input type="checkbox"/> GWM	<input type="checkbox"/> SIR	<input type="checkbox"/> ISM	<input type="checkbox"/> VM	<input type="checkbox"/> GWM	<input type="checkbox"/> SIR	<input type="checkbox"/> ISM	<input type="checkbox"/> VM	<input type="checkbox"/> GWM	<input type="checkbox"/> SIR	<input type="checkbox"/> ISM
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VM=Vapor monitoring SIR = Statistical Inventory Reconciliation
GW = Groundwater monitoring ISM= Interstitial Monitoring

Suction Piping Systems: Pipe all slopes toward tank and operates at less than atmospheric pressure with a suction pump located above the level of product in the tank. Underground piping from an aboveground tank, a higher elevation tank, or piping with a liquid trap, is not suction piping. "European" style suction has only one check valve, which is at the dispenser.

17 Does product piping qualify as European (safe) suction?

18 Does product piping qualify as US Suction?

19 Is a precision 0.1 Line Tightness Test conducted every three years? (Indicate date and results of most recent test.)

20 If question #19 is "NO," check what monthly method is used? Complete the appropriate compliance page.

<input type="checkbox"/> VM	<input type="checkbox"/> GWM	<input type="checkbox"/> SIR	<input type="checkbox"/> ISM	<input type="checkbox"/> VM	<input type="checkbox"/> GWM	<input type="checkbox"/> SIR	<input type="checkbox"/> ISM	<input type="checkbox"/> VM	<input type="checkbox"/> GWM	<input type="checkbox"/> SIR	<input type="checkbox"/> ISM	<input type="checkbox"/> VM	<input type="checkbox"/> GWM	<input type="checkbox"/> SIR	<input type="checkbox"/> ISM	<input type="checkbox"/> VM	<input type="checkbox"/> GWM	<input type="checkbox"/> SIR	<input type="checkbox"/> ISM
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Comments:

(Inspector's Initial) _____ (Date) _____ (Owner/Operator's Initial) _____ (Date) _____

If your system has double-walled piping with interstitial sensors only, do not answer these questions.

For double-walled interstitial systems, answer this question.

For double-walled interstitial systems, answer this question.

If your double-walled piping system is NOT pressurized, answer ONLY these four questions, then complete page 8b.

When inspecting a double-walled pressurized piping system with only interstitial sump sensors, use the form in this manner:

- Start by filling out question 6. Unless an MLLD or PLLD (or WPLLD or TS-LLD) is installed in the STP packer, do not fill out questions 1-5.
- Answer question 7 as it relates to interstitial sensors.
- Answer questions 15-16. Do not answer questions 8-14 unless a third-party tightness test is done annually or a PLLD is also installed on the piping system. You will then need to complete Page 8b.

If the system is not pressurized but involves European or US suction piping, DO NOT answer any of the questions 1-16. Only answer questions 17-20. You will then need to complete Page 8b.