



# Memo

**Underground Storage Tank Section  
of the Waste and Underground  
Tank Management Bureau**  
PO Box 200901  
Helena, MT 59620-0901  
Phone 406-444-5300  
Fax 406-444-1374

To: Montana Licensed Inspectors  
From: Brett Smith  
Date: February 1, 2006  
Re: Compliance Inspection Reports – Auto Dialer Documentation

---

The department's new inspection forms do not ask for some information we need if a facility is operating while unmanned and does not have automatic shutdown capabilities. We have neglected to ask if the system has an auto dialer.

Until the department prints new forms, we ask that inspectors to supply this information. We will contact you if the information is not evident on the inspection report.

The clearest way to supply the information is as follows:

- For those auto dialers that are connected to a PLLD or ELLD, document on Page 7b line 4 of the existing form the existence and use of an auto dialer for pressurized piping leak detection alarm notification. Answer this question and write in "auto dialer" on Line 4 is used to satisfy the "within one hour" leak detection alarm notification requirement.
- For those auto dialers that are connected to double-walled interstitial sensors, document on Page 8b line 6 of the existing form the existence and use of an auto dialer for double-walled piping leak detection alarm notification (pressurized, US suction or European suction). Answer this question and write in "auto dialer" on Line 6 is used to satisfy the leak detection alarm notification requirement.

The diagram on the next page should help to clarify what we need when inspecting piping systems with auto dialers.

Thank you for your help,  
Brett Smith,  
UST Program

# Leak Detection for Piping

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 ( $\geq 3.0$  gph) product pipe leak detection.

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

If your system has an auto dialer that is used to notify an operator or other responsible person of an alarm condition AND the auto dialer is attached to a PLLD or ELLD, answer this question and write in "auto dialer" after the text.

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

8 Is an annual precision 0.1 gph Line Tightness Test (LTT) conducted?	YES NO	YES NO	YES NO	YES NO	YES NO																																																												
9 Is the precision 0.1 gph LTT conducted by the electronic LLD?	YES NO	YES NO	YES NO	YES NO	YES NO																																																												
10 Is the precision 0.1 gph LTT conducted using an NWGLDE approved method?	YES NO	YES NO	YES NO	YES NO	YES NO																																																												
11 Indicate date and results of the most recent test.																																																																	
12 Are monthly 0.2 gph electronic LLD tests conducted?	YES NO	YES NO	YES NO	YES NO	YES NO																																																												
13 If question #12 is YES, are passing 0.2-gph ELLD tests available for the past 12 months?	YES NO	YES NO	YES NO	YES NO	YES NO																																																												
14 If question #13 is marked NO, circle the months in which passing LD tests are NOT available. 1=January	<table border="1"> <tr><td>1</td><td>2</td><td>3</td></tr> <tr><td>4</td><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td><td>9</td></tr> <tr><td>10</td><td>11</td><td>12</td></tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	<table border="1"> <tr><td>1</td><td>2</td><td>3</td></tr> <tr><td>4</td><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td><td>9</td></tr> <tr><td>10</td><td>11</td><td>12</td></tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	<table border="1"> <tr><td>1</td><td>2</td><td>3</td></tr> <tr><td>4</td><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td><td>9</td></tr> <tr><td>10</td><td>11</td><td>12</td></tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	<table border="1"> <tr><td>1</td><td>2</td><td>3</td></tr> <tr><td>4</td><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td><td>9</td></tr> <tr><td>10</td><td>11</td><td>12</td></tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	<table border="1"> <tr><td>1</td><td>2</td><td>3</td></tr> <tr><td>4</td><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td><td>9</td></tr> <tr><td>10</td><td>11</td><td>12</td></tr> </table>	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																																																															
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?	YES NO	YES NO	YES NO	YES NO	YES NO																																																												
16 If questions #8 and #12 are NO, check what monthly method is used. Complete the appropriate inspection page. VM=Vapor monitoring SIR = Statistical Inventory Reconciliation GW = Groundwater monitoring ISM= Interstitial Monitoring	<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																																																												

**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?	YES NO	YES NO	YES NO	YES NO	YES NO
18 Does product piping qualify as US Suction?	YES NO	YES NO	YES NO	YES NO	YES NO
19 Is a precision 0.1 Line Tightness Test conducted every three years? (Indicate date and results of most recent test.)	YES NO	YES NO	YES NO	YES NO	YES NO
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

Comments: \_\_\_\_\_

(Inspector's Initial) \_\_\_\_\_ (Date) \_\_\_\_\_ (Owner/Operator's Initial) \_\_\_\_\_ (Date) \_\_\_\_\_

## Interstitial Monitoring for Double Walled Pipes

**INTERSTITIAL MONITORING for PIPES** must be conducted and recorded at least once a month.  
Use this page for liquid probes/sensors AND manual methods (sticking or visual).

(NOTE: Federal standards requiring an ALLD (mechanical or electronic) for catastrophic leak detection may be implemented at a later date.)

Facility Name		Facility ID#														
Make of monitor (required):		Model of monitor (required):														
<b>UST Information: If a question does not apply, leave it blank.</b>		<b>MT TANK #</b>	<b>MT TANK #</b>	<b>MT TANK #</b>	<b>MT TANK #</b>	<b>MT TANK #</b>	<b>MT TANK #</b>	<b>MT TANK #</b>	<b>MT TANK #</b>	<b>MT TANK #</b>	<b>MT TANK #</b>					
1	Is ISM used as the primary method of leak detection for the double-walled product pipe?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
2	Is the product pipe's interstitial space monitored on a continuous basis?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
3	Are console operational checks documented for the past twelve months?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
4	If question 3 is marked "NO", circle the months in which operational checks are NOT documented?  1 = January	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
		4	5	6	4	5	6	4	5	6	4	5	6	4	5	6
		7	8	9	7	8	9	7	8	9	7	8	9	7	8	9
		10	11	12	10	11	12	10	11	12	10	11	12	10	11	12
5	Will the leak detection system shut off the flow of fuel in the event of a release?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
6	Will the leak detection system trigger a continuous alarm in the event of a release?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
6a	Are records available showing each sensor has been tested annually for operability?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
7	Is the product pipe's interstitial space monitored manually on a monthly basis?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
8	Do any of the monitor results indicate liquid in the interstice? If yes, please identify the month(s) and tank.															
9	Are product pipe leak detection records available for the past twelve months?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
10	If question # 9 is marked "NO", circle the months in which leak detection test records are NOT available?  1 = January	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
		4	5	6	4	5	6	4	5	6	4	5	6	4	5	6
		7	8	9	7	8	9	7	8	9	7	8	9	7	8	9
		10	11	12	10	11	12	10	11	12	10	11	12	10	11	12
11	Is the product pipe trench lined with an approved impervious artificial membrane to achieve secondary containment?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
12	If monitoring the product pipe trench, are the wells clearly marked and secured?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
13	Are product pipeline leak detection records available for the past 12 months?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
14	If question # 13 is marked "NO", circle the months in which leak detection records are NOT available.  1 = January	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
		4	5	6	4	5	6	4	5	6	4	5	6	4	5	6
		7	8	9	7	8	9	7	8	9	7	8	9	7	8	9
		10	11	12	10	11	12	10	11	12	10	11	12	10	11	12
15	Is product pipe leak detection equipment accessible and functional?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
16	Do any containment sumps have product in them?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
17	Do any containment sumps have water in them such that leak detection is impacted?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO					
Comments:																
(Inspector Initial)		(Date)		(Owner/Operator Initial)				(Date)								

If your system has an auto dialer that is used to notify an operator or other responsible person of an alarm condition AND the auto dialer is attached to interstitial sensors for double-walled piping, answer this question and write in "auto dialer" after the text.

SUBMIT ORIGINAL TO DEQ WITHIN 15 DAYS OF COMPLETION OF THE INSPECTION

MDEQ NOV/05