

**RECORD OF REVISIONS**

<b>Rev</b>	<b>Date</b>	<b>Description</b>	<b>POC</b>	<b>RM</b>
0	9/17/2014	Initial issue. Supersedes forms associated with Section I Rev 3.	Ari Ben Swartz, <i>ES-EPD</i>	Larry Goen, <i>ES-DO</i>
1	4/15/2015	Removed signatures from forms and incorrect citations from FM10	Ari Ben Swartz, <i>ES-EPD</i>	Larry Goen, <i>ES-DO</i>
2	3/15/2016	Removed footnote 3 referencing ML1 and ML2 on FM04. Fixed footnoting errors	Ari Ben Swartz, <i>ES-EPD</i>	Larry Goen, <i>ES-DO</i>

**Contact the Standards POC for upkeep, interpretation, and variance issues.**

<b>Chapter 17</b>	<a href="#"><u>Pressure Safety POC and Committee</u></a>
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This document is online at <http://engstandards.lanl.gov>

**Pressure Safety Forms FM01 - FM10**

1. The appended forms are samples, provided to illustrate the minimum information required<sup>1</sup>.
2. The information shall be managed as a record and must comply with LANL P1020-1 *Laboratory Records Management*, and P1020-2, *Laboratory Document Control*. Normally this information will be placed in the PSCS database and then EDMS.
3. Any spreadsheet-based or individual Word forms posted online with this chapter may be used in lieu of these samples.

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<sup>1</sup> As such may be revised for format or to reduce required information with POC and Standards Manager approval as an admin change.

FM01	Pressure System Certification Status Form
FM02	PRV Recall Summary Sheet
FM03	Code Non-Compliance Log
FM04	Minor Non-Compliance Log
FM05	Flexible Pressure Element Visual External Examination
FM06	Tubing and Piping Data Sheet
FM07	Pressure System Component List
FM08	Relief Device Placement Verification Record
FM09	Thrust Consideration Data Sheet
FM10	System Schematic

Additional direction on how the forms are used, and what is specifically required to document a pressure system, is provided in the following attachments to ADMIN-1:

ADMIN-1-2	Form Directions
ADMIN-1-3	Existing (Legacy) Pressure System Documentation Requirements
ADMIN-1-4	New Pressure System Documentation Requirements





## FM03

### Code Non-Compliance Log\*

System ID No.:			
System Description			
Page ____ of ____			
Description	Code Requirements (Section, Chapter & Paragraph)	Closure & Rationale	Closure date & LANL PSO Signature & Z #

\* Examples are: Undersized relief device, wrong set pressure on relief device, weld repairs without “R” stamp, component MAWP less than design system pressure, un-supported piping, unknown materials used in construction, unknown design pressure, failure to perform and document code required inspections and testing, etc.

## FM04 Minor Non-Compliance Log<sup>1</sup>

System ID No.:				
System Description				
Page ____ of ____				
Description	Requirement (LANL Document, Section & Paragraph)	Closure & Rationale	Closure date & Initials	
			Owner	FOD PSO

<sup>1</sup> Examples of minor non-compliances are: Relief device past recall due date, in-service inspections past due date, chipped paint, lack of flex-hose restraints, leaking fittings, surface anomalies, identification tags, schematics do not match physical layout, mud dauber nests in relief valve discharge ports.



# FM06

## Tubing and Piping Data Sheet<sup>1</sup>

System ID No.:	Drawing #				Date		
Components that tubing/Piping section is located between. (eg. MV-4 & PI-3) <i>This is N/A if all piping/tubing is the same size and type throughout entire system</i>	Tubing Material (SS, CU, CS, etc.)	Tubing Spec./Grade (316-A26, 304L-A358, etc.)	OD (in.)	ID (in.)	Seamless		Max Operating Temp °F
					<input type="checkbox"/>	<input type="checkbox"/>	
					<input type="checkbox"/> Yes	<input type="checkbox"/> No	
					<input type="checkbox"/> Yes	<input type="checkbox"/> No	
					<input type="checkbox"/> Yes	<input type="checkbox"/> No	
					<input type="checkbox"/> Yes	<input type="checkbox"/> No	
					<input type="checkbox"/> Yes	<input type="checkbox"/> No	
					<input type="checkbox"/> Yes	<input type="checkbox"/> No	
					<input type="checkbox"/> Yes	<input type="checkbox"/> No	

<sup>1</sup> This data sheet accomplishes the requirements found in ASME B31.3, Paragraph 323.1.3



## FM08

### Relief Device Placement Verification Record<sup>1</sup>

This form is to be maintained in the pressure system documentation package.

1) Perform system review. Identify placement of all components in the pressure system in relationship to a pressure relief device. Can any components be isolated from a pressure relief device? (i.e., can a valve be closed which blocks flow path to a relief device?)

Yes  No

List below all the components that can be isolated from a pressure relief device. ( attach sheets as necessary)

a) \_\_\_\_\_ b) \_\_\_\_\_ c) \_\_\_\_\_ d) \_\_\_\_\_  
 e) \_\_\_\_\_ f) \_\_\_\_\_ g) \_\_\_\_\_ h) \_\_\_\_\_

2) Is the MAWP, of any of the identified components, less than the system source supply pressure?

Yes  No

If yes, list components below, and re-design system to provide over pressure protection for the listed components.

Component I.D.	Manufacturer	Model	MAWP (psig)

<sup>1</sup> This data sheet accomplishes the requirements of ASME B31.3, Paras. 301.2.1 & 301.2.2

## FM09

### Thrust Consideration Data Sheet <sup>1</sup>

Use for all manual valves, nozzles, relief devices, solenoid valves, (etc.) in a system that discharge to the ambient surroundings.

Component Identification String	Fluid	I.D. of nozzle/tubing at discharge (inches)	Maximum source pressure (psig)	Maximum surge or sustained thrust (lbf)	Type of restraint Mechanism ( if any installed)	Maximum loading restraint can withstand <sup>2</sup> (lbs)

<sup>1</sup> This data sheet accomplishes the requirements of ASME B31.3, Paragraph 301.5.5, 322.6.2 & Appendix G

<sup>2</sup> As determined by manufacturers' documentation, finite element analysis, calculations, catalog description, etc.

# FM10

## System Schematic (Sample)

Sketch the pressure system

System I.D. Number	Relief Device Component I.D.	Sketcher/Evaluator Name	Date