

RECORD OF REVISIONS

Rev	Date	Description	POC	RM
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>

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

Chapter 17	<u>Pressure Safety POC and Committee</u>
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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 required¹.
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.

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

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

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

FM01

Pressure System Certification Status Form	
(Place this form in pressure system documentation package when completed)	
System ID No.:	Excluded System: Yes <input type="checkbox"/> No <input type="checkbox"/>
Other System Identification Name (or Number):	
System Location (TA-BLDG-Room):	- - (Not applicable if mobile)
Mobile System "T" Number:	(Not applicable if mobile)
System Contents (N ₂ , AR, etc.):	(Do not list if Classified)
System Fluid Category (FS1, FS2, FS3):	
System Design Pressure:	
System Design Temperature Minimum	
System Design Temperature Maximum	
PRD Set Pressure(s)	
Applicable ASME B&PVC Section for System:	Applicable B31 Code for system:
System Owner:	Phone/Pager:
Last Re-certification (MM/DD/YY):	
Next Re-certification (MM/DD/YY):	
Reviewer Name:	

Notes:

Approval Signature List:	Printed Name & Z #	Signature	Date
FOD PSO Certification			
CPSO Certification			

FM02

PRV Recall Summary Sheet

System Name and ID No.:								
Pressure Relief Device Component Number	Manufacturer	Model Number	MAWP (PSIG)	Set Pressure (PSIG)	Test date	Due Date	PRV Test Lab Report #	Flow check procedure or Calculation Number

Approval Signature List:	Printed Name & Z #	Signature	Date
FOD PSO Certification			

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^{2,3}

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

² 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.

³ For ML-1 or ML-2 initiate an NCR

FM06

Tubing and Piping Data Sheet¹

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"/> 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		
					<input type="checkbox"/> Yes	<input type="checkbox"/> No		

Approval Signature List:	Printed Name & Z #	Signature	Date
FOD PSO Certification			

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

FM07

Pressure System Component List *						
Pressure system documentation package I.D. Number:						
System Location (TA-BLDG-Room): - -						
Component I.D.	Manufacturer	Model Number	Material (316S.S., Brass, etc.)	MAMP	Soft Goods Material(s) ¹	Code Stamp (U, UV, etc.) ²

* This form accomplishes configuration control requirements, allows for quick viewing of system piping component characteristics and to ensure adequate pressure relief has been provided. Components found on this form must be found on the system drawing, and visa-versa.

FM08

Relief Device Placement Verification Record¹

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)

Approval Signature List:	Printed Name & Z #	Signature	Date
FOD PSO			
FOD PSO verification After action completed or verified			
System Owner Sign when corrective action is complete			

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

FM09

Thrust Consideration Data Sheet ¹

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 ² (lbs)

Approval Signature List:	Printed Name & Z #	Signature	Date
FOD PSO Certification			

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

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

FM10

System Schematic (Sample)

Sketch the pressure system. Sketch should be an accurate representation of the physical relief system layout with dimensions. Use additional sheets as needed. Do not sketch multiple relief systems on a single sheet. CAD drawings may be attached to this sheet.¹

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

¹ Using software such as ABZ, Inc. DFS DesignNet or similar software prints for validation of relief device capacity is also acceptable in place of hand or CAD sketches, provided the variables used in the model are attached to this document, and the software has been validated and verified (V&V)